The Uniform Electronic Transactions Act in a Global Environment

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I. INTRODUCTION

There are a number of inescapable truisms about electronic commerce. First, electronic commerce is here to stay and will be playing an increasing role in the conduct of trade and business both domestically and internationally. In 1999, worldwide business-to-business e-commerce reached $145 billion, with North America accounting for 63 percent ($91 billion in revenue). By 2004, the worldwide number is projected to surpass $6.8 trillion, with North America accounting for only 39 percent ($2.84 trillion). Second, electronic commerce...
commerce, which makes distances irrelevant and borders invisible, is truly global in nature. Third, the exponential growth in electronic commerce has created a situation where lawmakers cannot ignore the enormous amounts of activity taking place electronically, and are being pressed to exert control over that activity by creating laws governing Internet and other electronic commerce activity. Fourth, given the international nature of electronic commerce, any attempt by a sovereign to exercise its power over electronic commerce will be challenged for creating impermissible barriers to domestic and international trade. These challenges and attacks on attempts by sovereigns to exercise control over Internet activity can readily be seen in cases of recent sovereign efforts ranging from German attempt to control pornography by prosecuting CompuServe, to actions of the Attorney General of Minnesota in attempting to police gambling, to Utah’s legislation in the area of digital signatures. Indeed, an important criterion in the evaluation of local laws on electronic commerce is its impact on and reaction at the global level.

Where does the Uniform Electronic Transactions Act (“UETA”) fit into that scheme? On one level, the UETA may appear to be the least desirable response to global electronic commerce. It is neither a proposal for enactment on the international level, nor a proposal for enactment by individual nation states; rather it is a proposal for en-
 enactment on a much lower level – by individual states within one nation state. Thus, it arguably represents the decision of the smallest entity – the lowest sovereign at the lowest level. This appears to run contrary to the international, cross-border nature of electronic commerce leading to a type of "atomism" where every entity enacts its own individualized legal framework.

Methods can be found, however, for assuring that the localized enactment of the UETA will not conflict with the need for a uniform legal framework on the international level. First, national uniformity is a prerequisite if international uniformity is ever to be achieved. Thus, the UETA should, to the extent possible, be enacted without amendments. If amendments are made, there is an obvious risk of imposing additional barriers to electronic commerce, making the conduct of interstate (and international) business through electronic means more difficult. Recognizing this need, on June 30, 2000, Congress enacted the Electronic Signatures in Global and National Commerce Act ("E-Sign Act" or "E-Sign"). To discourage non-uniform amendments, and to assure uniformity across state boundaries, the act provides that state enactments of the UETA would prevail over E-Sign.

Unfortunately, uniform enactment of the UETA does not assure uniform interpretation of its provisions. While uniform rules make conflicts issues irrelevant (or at least minimize the need to resolve them), a lack of uniformity in interpretation allows these types of difficult cross-border issues to re-surface. For that very reason, in the context of such domestic legislation as the Uniform Commercial Code, there is a statutory mandate to assure uniformity of interpretation among the states. Indeed, the desirability of uniform interpretation of the UETA among enacting states is already recognized in the sub-


10. U.C.C. § 1-102(2)(c) (1991); see generally Julian B. McDonnell, Definition and Dialogue in Commercial Law, 89 NW. U. L. REV. 623 (1995) (noting that, in addition to the UCC requirement of uniformity, state legislatures are generally deferential to the drafters of the Code because of the inherent complexity in commercial transactions); see also Ford, Inc. v. Ford Motor Credit Co., 940 F.2d 1507, 1510 n.3 (11th Cir. 1991) (reasoning that, to ensure continued uniformity, the court would use the most current code interpretation unless it directly contradicted applicable state law). But see Benjamin Geva, Symposium: Is the UCC dead or alive and well?, 29 LOY. L.A. L. REV. 1035 (1996) (arguing that on a global scale uniformity of commercial law is impractical because of the basic differences between legal systems).
stantive provisions of the act. For this reason, the UETA should be uniformly interpreted among the states enacting it.

National uniformity, however, does not guarantee international uniformity. In order to achieve international uniformity, similar legislation should be adopted by all countries, and that legislation should be interpreted similarly. In other words, those enacting and interpreting the act have an obligation to recognize the global origins and influences in the drafting of the UETA, and the extent to which the UETA is indebted to international factors. In 1996, the United Nations gave its final approval to the Model Law on Electronic Commerce drafted by the United Nations Commission on International Trade Law ("UNCITRAL"). Drafting of the UETA began in 1997, and was to a large extent based on the UNCITRAL text completed the prior year. Consequently, to assure cross-border harmony and uniformity in the legal framework applicable to electronic commerce, the UETA should be interpreted not only to be uniform within the United States but also to be uniform among the nation-states that have adopted the Model Law.

The notion that the UETA should be interpreted with due deference to its origin in the Model Law and that weight should be given to interpretation of the Model Law and its progeny in other nation-states may appear, at first glance, to be a relinquishment of sovereignty. Arguably, bodies outside our borders would be "establishing" laws for our domestic application. This drastically overstates the situation. First, the state has not abdicated rule-making power at all; rather, it has affirmatively exercised rule-making power in the enactment of the UETA. Thus, what is at issue is not relinquishing "rule-making" in traditional form, but instead recognizing the persuasive value that exists in others' interpretations of the same (or simi-

11. U.C.C. § 1-102(2)(c); see Ford, Inc. v. Ford Motor Credit Co., 940 F.2d 1507, 1510 n.3 (11th Cir. 1991) (reasoning that, to ensure continued uniformity, the court would use the most current code interpretation unless it directly contradicted applicable state law); see also U.S. v. Wegematic Corp., 360 F.2d 674, 676 (2d Cir. 1966) (holding that the UCC would be considered a source of "federal" law of sales); cf. Ogden Martin Systems of Indianapolis, Inc. v. Whiting Corp., 179 F.3d 523 (7th Cir. 1999) (affirming the belief that Indiana's version of the UCC should be interpreted liberally in conformity with other jurisdictions).


lar) statutory texts. Second, the concept of according persuasive value to interpretations by other sovereigns is not a new concept in common law countries. Indeed, the virtue of the common law is its flexibility: the ability to find the value in doctrines developed in other legal systems and to adapt those doctrines for internal application. Third, the concept of "uniform" interpretation of statutory texts across jurisdictional boundaries is not a new one in the United States. With the adoption of "uniform" legislation, and in particular the Uniform Commercial Code, state legislatures have enacted statutory texts that urge state courts, in interpreting that legislation, to have due regard for interpretations of similar texts elsewhere. Of course, in much of this uniform legislation, the "uniformity" that is sought is uniformity among the states in the United States, whereas here the "uniformity" sought is among nation-states as well. Nonetheless, the practice is sufficiently well recognized to demonstrate that giving precedential weight to interpretations from other jurisdictions is not per se an objectionable relinquishment of sovereignty.

Uniform interpretation on the international level is not an entirely new concept. With the introduction of the United Nations Convention on the Sale of Goods, which has been ratified by and is the law of the United States, countries have been encouraged to consider how that body of law is interpreted in the courts of other jurisdictions. To this end, the United Nations Commission on International Trade Law has established a program of gathering, synthesizing, and making available all the cases decided under that convention. There is, admittedly, a key distinction between interpretations of the Convention and interpretations of the Model Law: courts interpreting the Convention, whether located in the United States or in Asia, will be


15. The program is called CLOUT or Case Law on UNCITRAL Texts. According to UNCITRAL the purpose of the system is to "promote international awareness of the legal texts formulated by the Commission and to facilitate uniform interpretation and application of those texts." UNCITRAL, Case Law on UNCITRAL Texts (CLOUT), at http://www.unicitral.org/en-index.htm. At present, the program covers the Convention on the Limitation Period in the International Sale of Goods (New York, 1974), and as amended by the Protocol of 1980; the United Nations Convention on Contracts for the International Sale of Goods (Vienna, 1980); the UNCITRAL Model Law on International Commercial Arbitration (1985); and the United Nations Convention on the Carriage of Goods by Sea, 1978 (Hamburg). The system will also cover other model laws as they are implemented by the states; thus, the system may eventually include the Model Law on Electronic Commerce. For more information on CLOUT, see http://www.unicitral.org/en-index.htm.
interpreting the same statutory text.\textsuperscript{16} Courts interpreting the "Model Law," however, will not be interpreting the same document (the Model Law as completed by UNCITRAL and adopted by the UN General Assembly) but will rather be interpreting the document as enacted within a given jurisdiction with any corresponding changes or additions.

Nonetheless, the Model Law itself adopts the course exemplified domestically in our own Uniform Commercial Code by specifically providing: "In the interpretation of this Law, regard is to be had to its international origin and to the need to promote uniformity in its application."\textsuperscript{17} The UETA also urges construction of its provisions "to facilitate electronic transactions consistent with other applicable law" and "to effectuate its general purpose to make uniform the law . . . among States enacting it."\textsuperscript{18} Although the statutory text of the UETA is arguably ambiguous as to whether uniformity among nation-states is covered as well as uniformity within the United States, the Official Comments to that section clarify that the purposes and policies of the act include promoting the "uniformity of the law among the states (and worldwide)."\textsuperscript{19} To the extent sovereignty remains a concern, however, it should be stressed that electronic commerce represents a challenge, if not a threat, to traditional concepts of sovereignty in other ways that in fact may be ameliorated by according weight to others' interpretations of the Model Law. Countries are struggling with their ability, on both the jurisprudential level\textsuperscript{20} and the practical level,\textsuperscript{21} to control and regulate electronic commerce activities. Al-

\textsuperscript{16} It is true that there are different versions of the convention in all of the official languages of the United Nations; nonetheless, the texts are intended to be identical in substance, and in the event of any conflict between versions, the English language version controls.

\textsuperscript{17} Compare MODEL LAW art. 3(1) with UCC § 1-102. According to the Guide to Enactment, this provision of the Model Law was inspired by article 7 of the United Nations Convention on Contracts for the International Sale of Goods. Its goal is to limit domestic courts from adopting purely domestic interpretations of Model Law provisions that have been enacted as part of domestic legislation. Electronic Commerce Guide to Enactment of UNCITRAL Model Law on Electronic Commerce, 7 TUL. J. INT'L & COMP. L. 251, 265-66 (1999).

\textsuperscript{18} UETA §§ 6(1), (3).

\textsuperscript{19} UETA § 6, Official Comment 1 (emphasis added).

\textsuperscript{20} One of the larger questions that has been raised in the context of the Internet, for example, is the ability of countries to regulate activities that occur in cyberspace. In 2000, the American Bar Association, under the leadership of the Cyberspace Committee of the Section of Business Law, released a two-year study of the jurisdictional problems that pervade electronic commerce on the Internet. See http://www.abanet.org/buslaw/cyber.

\textsuperscript{21} For example, many U.S. agencies are confronting the need to adapt their exercise of regulatory powers to accommodate electronic commerce, where activities traditionally regulated by the governmental entity are being carried on electronically. See In-
though some have argued that it is necessary to develop a "law of cyberspace" to accommodate this new activity, or to develop a new universal regulatory regime which operates irrespectively of traditional jurisdictional boundaries, countries are understandably loath to surrender their rule-making power over such activity. It is important, however, for states (both nation-states and the United States) to recognize the inherent limitations that exist over the sovereign exercise of power in cyberspace.

One way for countries to simultaneously transcend those limitations on their sovereignty (at the same time gaining respect for exercising their sovereignty) is by recognizing that they are exercising that sovereignty within a global framework. In other words, countries must accept the fact that pure isolationism is no longer possible, and that the responsible way to exercise sovereignty is by recognizing the impact of that sovereignty on the global marketplace. Domestic laws are but part of an overarching tapestry, created by the laws of all jurisdictions, covering the world of electronic commerce. To assure a "seamless web," countries must acknowledge that their laws are part of a coherent whole, with similar goals and objectives shared by all sovereigns. The result is to give strength to the tapestry — thereby giving strength to the individual nation states' exercise of their own sovereignty.

The United States has played a critical role on the global level in the development of electronic commerce. Similarly, it has been a player on the international level in attempts to develop a coherent global legal framework for electronic commerce. Yet, to be a "true [i.e., fair-minded, honest or acceptable] leader," the United States must acknowledge that sometimes it is the follower and that it can learn from the experiences of other countries and international organizations.

A court that accepts the precept that "due deference" should be given to others' interpretations of the Model Law will need to confront the issue of what deference is "due." When interpreting the UETA, therefore, it is important to understand both its genesis and the extent to which it is based upon comparable provisions in the UNCITRAL Model Law. Part II of this article explores the origins of

ternal Revenue Restructuring and Reform Bill, H.R. 2676, 105th Cong. (1998) (enacted), http://www.bmck.com/ecommerce/congress.htm (declaring a tax return filed electronically to be treated as though it were a signed paper return); see also Electronic Signatures in Global and National Commerce Act, Pub. L. No. 106-229, 114 Stat. 464 (introduced as Millennium Digital Commerce Act) (proposal to require all federal agencies to report to the Office of Management and Budget and Secretary of Commerce any provision of law administered by the agency that inhibits electronic commerce).

the UETA in the Model Law, and in turn examines the influence of the Model Law on enacted and proposed legislation in other countries. Part III goes into an extensive comparison of the provisions of the Model Law and of the UETA, examining first the basic principles on which each is based, the scope of each, and the treatment that each gives to the legal requirements imposed by other law. Part III also examines the areas in which the UETA and the Model Law diverge, and also the incursions each makes into the area of negotiability in an electronic environment. Finally, Part IV examines selected areas not covered by either the UETA or the Model Law, which still remain barriers to electronic commerce.

Placing the UETA in a global framework, however, and considering its relationship with the Model Law, is only the first step. It is equally important for the statutory texts of other nations to be placed in a global framework. This requires, in each instance, that provisions drawn from the UNCITRAL Model Law without substantial modification (and therefore potentially precedential) be identified, as well as those which contain substantive changes or modifications that would necessitate different interpretations than their Model Law predecessors. That, however, requires those with the knowledge and insight on the development of individual countries' laws to record for posterity the process leading to the enactment of their domestic legislation.

II. UETA IN A GLOBAL FRAMEWORK

A. International Source of the UETA: The UNCITRAL Model Law on Electronic Commerce

The UETA project, which began in 1997 and completed in 1999, had its source in large part in the Model Law on Electronic Commerce, completed by the United Nations Commission on International Trade Law and approved by the United Nations General Assembly in 1996. The process that led to the promulgation of both products reveals that each has been built upon similar assumptions and basic principles. Indeed, the development of law in the United States on electronic commerce generally, and the development of electronic commerce law internationally, have been intimately intertwined.

23. See supra note 7.
24. See generally, Boss, supra note 13 at 1956-63. Thus, the evolution of Model Law has been influenced by legal developments in the United States. See id. at 1947-52. Also, commercial law in the United States has been influenced by the Model Law. See id. at 1956-63. The influence of the Model Law on the UETA is also apparent. See id. at 1963-68.
The relationship between domestic and international developments in the area of electronic commerce may best be described as symbiotic: each level feeds on and nourishes the other in a process that will likely continue for some time. The open question, of course, is whether the symbiosis will result in products that are sufficiently similar to advance the goals of uniformity between domestic and international initiatives, allowing electronic commerce to maximize its potential by extending across national boundaries without running into impediments thrown up by incompatible national legal systems.25

Numerous factors have contributed to the symbiotic process,26 but undoubtedly the most important is the global nature of electronic commerce.

The form of both products is instructive. While UNCITRAL used the device of the Model Law, the sponsors of the UETA27 used the device of a uniform law. In each case, there was a recognition that (i) individual states will adopt the proposed law; (ii) the courts of those states will interpret the law; (iii) although the state may make modifications to the model or uniform law to accommodate peculiarities of that state’s law, uniformity is best served by minimal changes; and (iv) uniformity is also served by encouraging the courts in each state, when interpreting the model or uniform law, to take into account its interpretation in other venues.28

B. The Influence of the Model Law Internationally

The Model Law has already been adopted (in some form) by a number of countries including Argentina,29 Australia,30 Bermuda,31

25. Id. at 1934.
26. Examples include the relative state of development of law, the timing of the processes, the globalization of commerce and the evolution of new commercial practices. See id. at 1946.
27. See The National Conference of Commissioners on Uniform State Laws (NCCUSL). See also http://www.nccusl.org. (providing background on the conference, and references to other products).
28. For a more detailed discussion of the choice of a model law by UNCITRAL, see Boss, supra note 13 at 1953-54.
Columbia,32 France,33 Hong Kong,34 Korea, Mexico, India,35 Ireland,36 the Philippines,37 Singapore,38 and Slovenia.39 The Uniform Law Conference of Canada adopted the Uniform Electronic Commerce Act as of September 30, 1999,40 which has already been enacted by several Ca-

35. India's Electronic Commerce Act, which has been approved by the Cabinet but has not yet been enacted, is available at http://commn.nic.in/doc/ecact1.htm. Major parts of India's legislation are drawn from the UNCITRAL Model Law. In addition, the legislation draws upon the Singapore Electronic Transactions Act (which is turn based on the Model Law) and the UNCITRAL uniform rules on electronic signatures for provisions dealing with secure electronic records and signatures, and the implementation of public key infrastructures. The Indian legislation also cites as a source for some of its provisions the UETA; consequently, even where UETA provisions differ from the Model Law, courts interpreting the UETA may still look at the law of other nations that have based their electronic commerce legislation on the UETA to see how they have interpreted comparable provisions. The Indian legislation may indeed invite such comparisons: it provides that its provisions should be liberally construed to promote its underlying policies, one of which is to "establish uniform rules and standards regarding the authentication and integrity of electronic records." Id. at pt. I § 3(0).
nadian provinces; it too may be viewed as a domestic implementation of the Model Law.

Many of the countries that have enacted or are considering enactment of the Model Law specifically recognize in their legislation the importance of uniformity.\textsuperscript{41} The comments to one piece of proposed legislation observed: "The Act presents a logical and coherent approach to resolving issues raised by electronic commerce and, where possible, seeks to preserve uniformity among the approaches to electronic commerce legislation taken by various countries."\textsuperscript{42}

Of course, the process of Model Law enactment is not yet complete, and many countries are still in the process of developing electronic commerce legislation; the Model Law will undoubtedly continue to be a source in that process.\textsuperscript{43}

Even in countries which have not yet adopted the Model Law or other electronic commerce legislation, it is possible (and likely) that the Model Law will nonetheless be influential. Such countries and their courts may well look to the Model Law and its enactments in other countries as demonstrating an emerging consensus on the rules appropriate for electronic commerce, and consequently adopt those rules for use on a case-by-case basis.\textsuperscript{44} The drafters of the Model Law in fact invite use of the Model Law "as a tool for interpreting" existing international conventions and instruments.\textsuperscript{45}

In the United States, the influence of the Model Law is evident not only in the provisions of the UETA, but also in other legislative and non-legislative products, as well as in the development of United States foreign policy. A major tenet of the Clinton Administration was to encourage the growth of electronic commerce and the creation of a "global legal framework" to govern electronic commerce.\textsuperscript{46} In its first major initiative in the emerging area of electronic commerce, the administration specifically recognized the contributions being made by UNCITRAL in the field.\textsuperscript{47} As a result, the United States and several of its major trading partners have entered into memoranda of under-

\textsuperscript{41} See, e.g., India Electronic Transactions Act § 3 (stating that the act is to be liberally construed to promote its purposes and policies, including elimination of barriers to electronic commerce and the establishment of uniform rules and standards for authentication and integrity of electronic records.)

\textsuperscript{42} Id. § 3, cmt.

\textsuperscript{43} For a summary of activities by country, as well as links to pending legislation, visit one of the following web sites: http://www.ilpf.org; http://www.bakerinfo.com/ecommerce; http://www.mbc.com.

\textsuperscript{44} Boss, supra note 13, at 1955.

\textsuperscript{45} Guide to Enactment para. 5.

\textsuperscript{46} See The White House, Framework, supra note 22.

\textsuperscript{47} See id.
standing adopting as their major principles those articulated in the UNCITRAL Model Law and urging enactment of its provisions. The UNCITRAL Model Law has become the basis of products, such as a project by the United States Agency for International Development (USAID) aimed at providing a legal framework for electronic com-


merce for developing countries attempting to enter the digital age. The recently enacted E-Sign legislation has adopted the UNCITRAL Model Law as the template for future U.S. action on the international level, urging its adoption to remove paper-based barriers to electronic commerce, as well as recognizing the importance of the UETA to developing a coherent domestic approach to electronic commerce. Businesses as well have joined the effort, encouraging governments to enact the UNCITRAL Model Law "as soon as possible."

III. COMPARISON OF THE UETA AND THE MODEL LAW

To say that all interpretations of the Model Law should influence interpretations of the UETA is an overstatement; the analysis is a bit more complicated. First, it must be determined what UETA provisions in fact emanate from the Model Law; only where there is a direct relationship is uniform interpretation critical. Second, there may be situations where provisions in the UETA, although based on the comparable Model Law provisions, contain differences in language. In these cases, it is important to determine whether the changes are solely of a grammatical or linguistic, but nonetheless non-substantive, nature. Alternatively, the language may reflect a considered rejection of the Model Law formulation for policy reasons, in which case it is important to understand those policy reasons. Before examining the specific provisions, however, it is important to understand the extent to which the UETA and the Model Law accept and are built upon the same fundamental policies and principles.

A. General Principles

1. Minimal and Procedural

One of the most striking characteristics of both the UETA and the Model Law is their minimalist nature. Rather than attempting to regulate or to set forth specific rules for the conduct of electronic commerce, the UETA and the Model Law are geared primarily toward removing existing barriers to the conduct of commerce electronically, thereby assuring that electronic trade may proceed, without imposing

any additional requirements. The theory behind a minimalistic approach is threefold. First, the drafters recognized that although electronic commerce is new, existing legal rules and principles may well be adapted to accommodate electronic commerce with minimal tinkering. Once these slight adjustments are made, existing laws may readily be applied. Fundamental reconstruction of our existing legal framework, or creation of an entirely new legal framework, is not necessary if the focus is simply the removal of barriers to electronic commerce. Second, the technologies used in electronic commerce and the business implementations of those technologies are rapidly changing. A minimalist approach is inherently more flexible and capable of accommodating these new technologies and implementations. More rule-bound or specific legislation runs the risk of quickly becoming outdated or obsolete, or may inhibit new technological developments or implementations. Third, as electronic commerce is global in scope, minimalist legislation permits countries to quickly find common denominators and agree upon common rules. The adoption of specific, detailed rules (particularly where there is disagreement as to what those rules should be) carries the risk of divergence in applicable rules from jurisdiction to jurisdiction, creating potential barriers to cross-border trade and creating uncertainty in cross-border transactions. The working assumption is that the removal of barriers to electronic commerce, particularly in its early stages, is best effected by merely removing barriers to the conduct of electronic trade and recognizing the validity of doing business electronically, without the imposition of additional requirements or strictures which may have the impact of stultifying the growth of electronic commerce.

The minimalist and procedural approach to electronic commerce legislation is by no means the only possible or existing legislative approach. Prior examinations of pending and enacted electronic commerce legislation (both domestic and international) have categorized two approaches: the minimalist, supportive approach of the Model Law and UETA, and a more prescriptive, regulatory approach

52. See, e.g., UETA, Prefatory Note ("Another fundamental premise of the Act is that it be minimalist and procedural," and further observing that the fundamental principles of the act are "preservation of freedom of contract, technology-neutrality and technology-sensitivity, minimalism, and avoidance of regulation.").


adopted in some jurisdictions.\textsuperscript{55} The latter approach goes beyond mere removal of barriers to the establishment of a new legal framework for electronic commerce. Again, both the UETA and the Model Law take the same approach: removal of the legal obstacles to the use of electronic communications and removal of any uncertainties as to their legal effect or validity.\textsuperscript{56}

The drafters of the UETA adopted another policy inherently related to minimalism: the concept that the UETA was procedural and not substantive in nature.\textsuperscript{57} The Act is intended to defer to substantive law to the extent possible,\textsuperscript{58} to avoid adopting any additional barriers to or unmerited biases in favor of electronic commerce. Again, this was the approach of the drafters of the Model Law, who noted that the Model Law was “intended to provide essential procedures and principles for facilitating” electronic commerce, providing merely a “framework” law which would be supplemented by other bodies of law.\textsuperscript{59} The commentary to both products (and the products themselves) frequently reminds the reader that the answers to many questions are to be found not in their provisions but in otherwise applicable substantive law.\textsuperscript{60} The most demonstrable result of the application of these two principles is that both products are relatively short\textsuperscript{61} and of general applicability.\textsuperscript{62}

\textsuperscript{55} For an interesting attempt to “rate” the various electronic signature and digital signature enactments, see \textit{An Analysis of International and Digital Signature Implementation Initiatives}, ILPF (Sept. 10, 2000), available at http://www.ilpf.org/digsig/report_IEDSII.htm.

\textsuperscript{56} Guide to Enactment para. 2; UETA § 6, cmt. 1 (providing that the purpose is to eliminate barriers to electronic commerce and validate and authorize the use of electronic records and electronic signatures).

\textsuperscript{57} See UETA, Prefatory Note (1999 Annual Meeting Draft). As the Prefatory Note to the 1999 Annual Meeting Draft observed: “[T]he policy [was] that this Act should be a procedural statute, affecting the underlying substantive law of a given transaction only if absolutely necessary in light of the differences in the media used.” \textit{Id}.

\textsuperscript{58} Examples of deference to other substantive law are evident in (1) the meaning and effect of “sign” under existing law (§ 7); (2) the method and manner of displaying, transmitting, and formatting information (§ 104); (3) rules of attribution (§ 108); (4) the law of mistake (§109); and (5) rules of contract formation (§ 113).

\textsuperscript{59} Guide to Enactment paras. 13-14.

\textsuperscript{60} For example, the UETA makes it clear that “[w]hether an electronic record or electronic signature has legal consequences is determined by this [Act] and other applicable law.” UETA § 5(e) (emphasis added). The Model Law warns in Article 14(7), defining dispatch and receipt, that “this article is not intended to deal with the legal consequences that may flow . . . from that data message.” MODEL LAW art. 14(7). See also Guide to Enactment paras. 61, 78.

\textsuperscript{61} The Model Law contains only seventeen articles, and the UETA contains only 21 sections.

\textsuperscript{62} See discussion \textit{infra} Part III.B.
2. Functional Equivalence (Paper and Non-paper) and Non-discrimination

Neither the UETA nor the Model Law totally equates electronic documents and signatures with paper-based documents and signatures, as they could have done by simply redefining what constitutes a writing or a signature for all purposes. Rather, both adopt what has been termed a "functional equivalent" approach: the drafters considered what underlying objectives or functions were served by the paper-based requirements and then determined how those objectives or functions could be satisfied in an electronic environment. The concept of "functionalism" as a basic principle was most clearly articulated during the drafting of the Model Law. Nonetheless, the principle was also a talisman during the UETA drafting process.

Once the functional equivalence between a paper document and an electronic document has been established, a related principle comes into play: there should be no discrimination against the electronic document (or signature or contract) on the basis that it is in electronic rather than paper form. This related principle of "non-discrimination" is evident in the wording of many of the provisions of both the Model Law and the UETA, particularly those which provide that an electronic record, signature or contract may not be denied legal effect or enforceability solely because they are in electronic form. Indeed, an official comment to the UETA, in discussing such a provision, observes: "This section sets forth the fundamental premise of this Act: namely, that the medium in which a record, signature, or contract is created, presented or retained does not affect its [sic] legal significance." The Model Law Guide to Enactment calls it a "fundamental principle that data messages should not be discriminated against, i.e., that there should be no disparity of treatment between data messages and paper documents."

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63. See Guide to Enactment paras. 15-18. The annotation to the Canadian Uniform Electronic Commerce Act states that the principal effect of this approach is to turn questions of capacity ("can I do this electronically?") into questions of proof ("have I met the standards?"). See supra note 17; see also Gregory, supra note 40 at 428-29.
64. See, e.g., UETA § 12 cmt. 1 (noting, in the context of the treatment of an original, that "this section continues the theme of establishing the functional equivalence of electronic and paper-based records").
65. MODEL LAW arts. 5, 11; UETA § 7.
66. UETA § 7 cmt. 1.
67. Guide to Enactment para. 46.
3. Technology and Implementation Neutrality

In addition to eliminating discrimination between paper and electronic communications, both the Model Law and the UETA adopted the principle that there should be no discrimination made in the statutory provisions between the various types of electronic technologies that might be utilized.68 This concept – that of technology neutrality – was seen as an integral part of a statutory text which was intended to be “consistent with reasonable practices concerning electronic transactions and with the continued expansion of those practices.”69 This principle of “technology neutrality” gives the statutory provisions the flexibility needed to accommodate a variety of existing technologies,70 as well as both foreseeable and unforeseeable technological developments.71 This is consistent with the goals of these measures: to both support and validate transactions entered into with existing technologies, as well as to promote and encourage the implementation of new information technologies.72

Not only are both the Model Law and UETA flexibly designed to accommodate new technologies, they are also deliberately designed to adapt to new and different implementations of those technologies. “The provisions of this Act validating and effectuating the employ of electronic media allow the courts to apply them to new and unforeseen technologies and practices. As time progresses, it is anticipated that what is new and unforeseen today will be commonplace tomorrow.”73 Consequently, certain provisions are designed in such a way that their requirements may be satisfied where either the technology or the methods of implementation of that technology satisfy the applicable criteria.74 The drafters took care to avoid sanctioning either a specific technology or a particular business implementation. These concepts of technology and implementation neutrality have been car-

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68.  See, e.g., UETA § 301 reporter’s note 4 (1998 Annual Meeting Draft) (“This section is technology neutral - it neither adopts nor prohibits any particular form of electronic signature.”); Guide to Enactment para. 8 (“More generally . . . as a matter of principle, no communication technique is excluded from the scope of the Model Law since future technical developments need to be accommodated.”).

69.  UETA § 6(2) (emphasis added).

70.  For example, it is not limited to the use of digital signatures as some legislation was, but instead could embrace other techniques of authentication, such as biometrics.

71.  See Guide to Enactment para. 31.

72.  Guide to Enactment para. 43; UETA § 6(2) (speaking of the “continued expansion” of practices involving electronic technologies).

73.  UETA § 6 cmt. 2.

74.  A good example in each are those provisions dealing with originals and record retention requirements. MODEL LAW arts. 8, 10; UETA § 12. See discussion infra Part III.B.2.
ried over and recognized federally in the recently enacted E-Sign legislation.75

4. Party Autonomy

The concepts of party autonomy and freedom of contract are embedded in both the UETA and the Model Law, in recognition that the area of commerce generally is built on contractual arrangements between parties.76

Thus, the UETA provides that the effect of any of its provisions may be varied by agreement.77 This is subject to four limited exceptions in the UETA. First, the right to withdraw consent to conducting the transaction electronically may not be waived by agreement.78 Second, provisions protecting an individual who makes an error in dealing with an electronic agent may not be varied by agreement.79 Third, requirements applicable to the provision of information in writing (e.g., that it be sent in a prescribed format, that it be capable of retention by the recipient, and that the sender not inhibit printing or downloading) may not be varied unless the other law that sets forth the requirement permits variation by agreement.80 Lastly, a person who is aware that an electronic record was not actually sent or received may not invoke the rules determining when an electronic record is deemed sent or received. This rule cannot be varied by agreement except to the extent permitted by other law.81 The limited exceptions to the ability to vary the Act by agreement are thus all provisions designed to protect persons doing business electronically.

In the latter two cases,82 variation of the UETA provisions is not allowed unless other substantive law, upon which the provisions are based, similarly permits variation.83 In each case, the requirements of the underlying substantive law are viewed as protective provisions. Consequently, the theory of the UETA is to not allow displacement of those protective provisions unless the substantive law allows such

75. See E-Sign § 102(a)(2)(A)(ii) (invalidating any state law which discriminates in favor of or against a specific type of technology, method or technique of creating, storing, receiving, or authenticating electronic records or electronic signatures).

76. Indeed, in each case the concept of "agreement" may be broadly interpreted to include bilateral or multilateral agreements between the parties, as well as variation by systems rules agreed to by the parties. See Guide to Enactment para. 45; UETA § 5 and cmts 1-7.

77. UETA § 5(d).

78. Id. § 5(c).

79. Id. § 10(4).

80. Id. §§ 5(d), 8(d).

81. Id. § 15(g).

82. See supra notes 80-81 and accompanying text.

83. See UETA § 8 cmt. 6; UETA § 15 cmt. 7.
displacement. The two other non-variable provisions similarly involve protective provisions: the section stating that the right to withdraw consent to the conduct of business electronically cannot be waived, and the section giving limited relief to individuals in the event of errors during the course of an automated transaction. Although the latter rule may not be varied by agreement, it can be rendered inapplicable if an error prevention or correction procedure is in place. This is consistent with the policy of encouraging the parties to eliminate or minimize the risk of errors, rather than simply reallocating the risk that arises from such errors.

The Model Law recognizes party autonomy as well, but it also contains some limitations, albeit slightly different ones than the UETA. The parties have the unqualified right to vary the provisions of the Model Law dealing with the communication of data messages (the formation and validity of contracts, attribution, acknowledgment of receipt, and time and place of dispatch and receipt). To the extent these rules govern the private relationship between two parties, acknowledging the right to vary provisions is in accord with the notion of freedom of contract. With regard to what may be viewed as "legal requirements" imposed upon the parties by governing law (e.g., writing, signature, original, admissibility and record keeping requirements), the Model Law allows variation only if other law permits modification by agreement. Thus, while the Model Law does not give the parties the right to vary the requirements of other law, it does recognize that the right to modify may exist under other law. This deference to "other law" arises from the recognition that some jurisdictions view those rules going to the form of the transaction as "mandatory [in] nature since they generally reflect decisions of public policy." These form requirements may be an attempt to protect parties to a transaction, or alternatively, the result of independent determinations as to administrability, etc. Where the deference exhibited by the Model Law is for the domestic law of the United States, there should be uniformity of sorts between the two proposed laws and substantial latitude accorded the parties to contractually agree.

84. Although one cannot waive the right by agreement, it may be possible to find the right waived under other applicable legal principles such as waiver and estoppel. This is consistent with the notion that the UETA does not displace, but merely supplements, other substantive law.

85. See UETA § 10(4) (stating that error correction and mistake provisions giving an individual relief in event of an error in an automated transaction where there is no opportunity for error prevention or correction may not be varied by agreement).

86. See infra note 336 and accompanying text.

87. MODEL LAW art. 4(1).

88. Id. art. 4(2).

89. Guide to Enactment paras. 21, 44.
on applicable rules. If, however, cases involve deference to the law of another country, which is not as hospitable to freedom of contract, cases limiting parties' rights to alter the provisions of the Model Law should be of limited precedential weight.

B. Scope

The policy behind both the UETA and the Model Law is to remove barriers to electronic commerce. Rather than remove barriers on a piecemeal basis, both the UETA and Model Law proceed on the assumption that removal is best accomplished through legislation that (i) covers as many legal barriers as possible; (ii) does not distinguish between international as opposed to domestic, or commercial as opposed to consumer, transactions; and (iii) applies to the widest variety of transactions. The Model Law applies to "any kind of information in the form of a data message used in the context of commercial activities." The scope of the section is broad. The UETA applies to "electronic records and electronic signatures relating to a transaction." Despite the variations in wording, both products have similar views about the propriety of a broad scope.

The broad scope of both Acts is both explained and justified by the underlying policies of minimalism. Quite simply, the more generic the legislation, the easier it is to apply the legislation to a wide variety of situations. Studies of prior legislation in the electronic commerce area have demonstrated that detailed, prescriptive legislation has generally been limited in scope, while minimalist, supportive legislation has tended to be of wider application. In this regard, the broad sweeping provisions of both the Model Law and the UETA demonstrate a common approach to the problem of adapting existing legislation and regulation for electronic commerce. In each case, the theory is to permit and enable the use of electronic commerce across the board, without amending every applicable individual statute and regulation. There may well be, of course, cases where the existing statute or regulation is not amenable to application in an electronic environment; additionally, there may be cases where the application of the UETA or Model Law would be inappropriate. The theory of both, however, is to presume that existing laws are amenable to elec-

90. MODEL LAW art. 1.
91. UETA § 3(a).
93. For a discussion on how the UETA and the Model Law treat exclusions, see infra p. 347.
tronic commerce until proven otherwise, rather than presuming existing laws are inadaptable to electronic commerce.

1. Domestic / International Application

The UETA is a domestic instrument, intended for domestic enactment by the states; the Model Law is an international instrument recommended by an international body for enactment on a global level. Nonetheless, neither document distinguishes between international and domestic transactions, but rather by their terms apply to both. Although the Model Law recognizes that some states may choose to limit the applicability of the Model Law to international electronic commerce, the Commission wisely noted in the Guide to Enactment that the goals of the Model Law could only be met if the application of the Model Law was as wide as possible. This is in large part because of the difficulty in distinguishing between purely domestic and international communications. Similarly, the UETA has a broad scope, and applies equally to domestic and international transactions (as long as the law of the enacting U.S. state applies). Thus, both the UETA and the Model Law recognize the reality that, in cyberspace, the distinctions between international and domestic trade are becoming blurred.

2. Consumers

Neither the Model Law nor the UETA was drafted with “special attention being given to” consumer issues, yet in neither case are consumer transactions excluded from the coverage of the legislation. In each case the drafters concluded that consumer activity, as well as commercial activity, might benefit from the general validation of electronic commerce, and that the distinction between the two is specious and troublesome. Consumer interests are nonetheless still important under each product. The Model Law, for example, observes in a footnote that it does not override consumer protection laws. The UETA

94. For example, in a footnote the Model Law suggests the following for those states that might wish to limit the scope: “This Law applies . . . where the data message relates to international commerce.” MODEL LAW art. 1, n.*. Even with that suggested language, the law may pick up purely domestic messages if they somehow have an international relationship.
95. Guide to Enactment para. 29.
96. Id. para. 27.
97. MODEL LAW art. 1, n.**. The Guide to Enactment notes that the Model Law was drafted without specific regard to consumer issues, and further, that consumers were not excluded as application of the Model Law in certain situations might in fact benefit consumers. Nonetheless, legislators are advised to consider whether to cover consumers in enacting the Model Law. Guide to Enactment para. 27.
does not specifically mention consumers, an obvious tactical decision that the statute is a procedural statute only and that any substantive protections should be determined by other law. Nonetheless, there is an ability for states to specifically exclude transactions (including consumer transactions) from the coverage of the UETA. More importantly, there are several provisions in the UETA that, although of general applicability, were clearly motivated by the desire to protect consumers and other similarly situated parties, provisions which give the UETA more of a consumer tone than is present in the Model Law. The UETA only applies if there is an agreement. A special section covers requirements that information be “provided” or “delivered” in writing (a frequent form of consumer protection) and makes clear that additional requirements on writings (e.g., that they be sent first-class mail) are still in force. That same section imposes additional requirements where information must be provided in writing: The electronic record must be capable of retention by the recipient at the time of receipt and the sender may not inhibit the ability of the recipient to either print or download the record. Another section provides individuals, including consumers, with relief from messages that resulted from their own errors, and this relief goes beyond that available un-

98. For a discussion of the procedural nature of the UETA, see discussion supra Part III.A.1. The failure of the UETA to specifically mention consumers has caused concerns in some states. For example, California, in enacting the UETA, put in place extensive consumer protection provisions. CAL. CIV. CODE §§ 1633.3, .8 to .16 (West Supp. 2001). In contrast, when Pennsylvania enacted the UETA, it added only limited consumer protection provisions. PA. STAT. ANN. tit. 73, §§ 2260.901 to .903 (Supp. 2000). The controversy surrounding the application of the UETA in the consumer context implicates the theory on which the UETA is built. Consumer advocates argue that the UETA, in allowing records to satisfy writing requirements, eliminates consumer protections inherent in many writing requirements. Those opposing non-uniform amendments to the UETA in turn respond that the UETA does nothing more than establish an equivalency between records and writings, and leaves substantive consumer protection laws intact. They further assert that non-uniform amendments such as those introduced in California, while of a salutary intention, result in the erection of barriers to electronic commerce that do not exist in a paper world. The consumer debate about the desirability of specific protection provisions in the UETA was, of course, resolved to a considerable degree by the passage of the E-Sign legislation which included its own consumer provisions. See E-Sign §101(c). The present debate is now, in the United States, the extent to which these consumer provisions apply in states that have enacted the UETA, and the extent to which states may expand upon them in their enactment of the UETA. See, e.g., Patrician Brumfield Fry, A Preliminary Analysis of Federal and State Electronic Commerce Laws, available at http://www.nccusl.org/uniformact_articles/uniformacts-article-uesta.htm (last visited Mar. 8, 2001); Meehan & Beard, supra note 8.

99. UETA § 3(b)(4).
100. Id. § 5(b); see also infra p. 302.
101 UETA § 8; see also infra pp. 340-41.
102. UETA § 8(a).
der traditional legal doctrines such as mistake. Thus, not only does the UETA recognize the importance of consumer interests protected under other "consumer protection legislation," but it also incorporates consumer protection features into the Act itself.

The federal E-Sign legislation, passed by Congress in the summer of 2000, contains a number of additional consumer protective provisions. The relationship between these consumer provisions and those in the UETA is, of course, a separate inquiry.

3. Commercial Activity vs. Transaction

As noted above, the application of the Model Law is triggered by the presence of "commercial activity," whereas the application of the UETA is triggered by the presence of a "transaction." The different terms result in a situation where each product is at once broader and narrower than the other. First, the UETA is limited to the existence of a "transaction," whereas the Model Law applies to any "activity" whether or not a transaction is present. The Model Law makes that clear in a footnote, where the Commission observes that "[t]he term 'commercial' should be given a wide interpretation" covering contractual and non-contractual commercial activity of a very broad range. In that regard, the Model Law is broader than the UETA.

Conversely, the Model Law's limitation to commercial activity does not at first glance have any counterpart in the UETA, which applies to the use of any electronic records or signatures "relating to a transaction." There is a limitation, however, in the definition of "transaction," which is defined as "an action or set of actions occurring between two or more persons relating to the conduct of business, commercial, or governmental affairs." Thus, the UETA covers more than just commercial transactions; it picks up business transactions and governmental transactions as well. It is the latter category of

103. Id. § 10; see also infra pp. 341-43.
104. See supra p. 297.
105. MODEL LAW art. 1, n.***. ([Commercial transactions include, but are not limited to] any trade transaction for the supply or exchange of goods or services; distribution agreement; commercial representation or agency; factoring; leasing; construction of works; consulting; engineering; licensing; investment; financing; banking; insurance; exploitation agreement or concession; joint venture and other forms of industrial or business cooperation; carriage of goods or passengers by air, sea, rail or road.) Id. This footnote is modeled on the use of the term "commercial" in the UNCITRAL Model Law on International Commercial Arbitration.
106. UETA § 3(a).
107. Id. § 2(16).
transactions that makes the UETA "broader" than the Model Law. The reference to "governmental affairs" makes it clear that communications with and within government entities would be covered. Indeed, the UETA contains three separate sections dealing with (i) creation and retention of electronic messages by governmental entities, (ii) acceptance and distribution of electronic records by governmental agencies, (iii) and interoperability. At the same time, it is clear that the general provisions of the Act dealing with such things as writings and signatures apply equally to governments and private entities. The expansion of the Model Law's provisions to governmental activity that is illustrated by the UETA may also be found in other national implementations of the Model Law.

4. Specific Exclusions

In one important area, however, the UETA is arguably narrower than the Model Law. The Model Law applies to all commercial activities. The UETA, on the other hand, has excluded certain commercial activities from coverage on two grounds: first, the existing or proposed law already accommodates electronic commerce; second, the appli

108. The Model Law would arguably include "business" transactions within its definition of commercial, which would include "joint venture and other forms of industrial or business cooperation." MODEL LAW art. 1, n.****.
109. UETA § 17.
110. Id. § 18.
111. Id. § 19. For a discussion of these governmental provisions, see discussion infra Part III.F.6.
112. At one stage, the provisions of the UETA pertaining specifically to governments were contained in a separate part of the act. Eventually the Drafting Committee concluded that government use of electronic records and signatures was already covered by the general provisions of the Act, and that a separate part for governments was not necessary. Ultimately, the separate "part" for governments was eliminated.
113. Two good examples are the Australian Electronic Transactions Act of 1999 and the Canadian Uniform Electronic Commerce Act, both of which include governmental activity within their coverage. Singapore's Electronic Transactions Act also has provisions on governmental use of electronic documents. See supra notes 128-293 and accompanying text.
114. For example, Articles 5 (Letters of Credit) and 8 (Investment Securities), and Revised Article 9 (Secured Transactions) of the Uniform Commercial Code address electronic transactions within the specific contexts of those articles. All three of these articles were revised within the past five years. By contrast, Article 2 (Sales) and 2A (Leases), as well as general UCC provisions in Section 1-107 (allowing discharge of claims by "written" waivers) and 1-206 (imposing a "writing" requirement for non-goods sales transactions), were not excluded from coverage because, as of the time of finalization of the UETA, those articles had not been revised to accommodate electronic transactions. See UETA § 3(b)(2). The Uniform Computer Information Transactions Act (UCITA) also contains its own electronic contracting provisions which have to a great degree been harmonized with those in the UETA. UETA § 3(b)(3). Drafts of the UCITA, revised Article 2, as well as other products of the National Conference of Commissioners on Uniform
cation of the UETA principles to that body of law is questionable, or (in the limited case of wills and testamentary trusts) the policy issues involved in urging change were perceived as too substantial. It should be noted, however, that the exclusion of wills and testamentary trusts in the context of the UETA may be somewhat excessive, as a "will" arguably is not a transaction — a set of actions occurring between two or more persons relating to the conduct of business, commercial, or governmental affairs. Rather, it is a unilateral declaration of intent effective only upon death. Other unilateral documents such as health care directives would similarly fall outside the scope of the UETA even absent any specific exclusion. This short list of excluded transactions in the UETA is nonetheless much narrower than was originally contemplated. This was in large part the result of an extensive study conducted by a task force advising the Drafting Committee, which concluded that existing law governing some areas suggested for exclusion actually contained few writing or signature requirements, or contained requirements which could be adequately addressed by the proposed statute.

In addition to carving out certain areas from coverage, the UETA also allows states to enact specific exceptions to the scope of the Act. However, a legislative note regarding additional exclusions makes clear the Drafting Committee's conclusion that additional exclusions other than those specified in the uniform act itself are undesirable.

The Model Law, by contrast, does not include any exceptions whatsoever; as long as a transaction falls within the articulated scope,
it is presumably covered. The Model Law, however, does anticipate that enacting states will make exceptions, \textsuperscript{121} but does not itself specify what those exceptions should be. Moreover, the Guide to Enactment urges restraint on states wishing to limit the scope of the law. For example, the Model law states: "The objectives of the Model Law are best served by the widest possible application . . . ."\textsuperscript{122}

The Model Law recognizes that attempting to distinguish between transactions in electronic commerce (e.g., between international and purely domestic) would be practically difficult and would end up creating a serious obstacle to electronic commerce by the creation of dual legal regimes.\textsuperscript{123}

5. Consent

The application of the Model Law is triggered by the presence of a data message used in the context of commercial activity. Consequently, once commercial activity is present and an electronic message or record is involved, the provisions of the Model Law are triggered. By contrast, the UETA is more limited. The Act only applies to transactions in which both parties have agreed to communicate electronically.\textsuperscript{124} The severe restriction this places on the scope of the UETA is undeniable. This provision, introduced somewhat late in the drafting process,\textsuperscript{125} was an attempt to respond to concerns that the act

\textsuperscript{121} The approach of the two Acts to exceptions are different. The UETA permits the states, in section 3, to specify to which statutes the UETA as a whole is inapplicable. \textit{Id.} \S 3(b). By contrast, the Model Law permits the states, in each individual provision, to specify those requirements to which the provision does not apply. \textit{See, e.g., Model Law} arts. 6(3), 7(3), 8(4), 11(2), 12(2), and 15(5).

\textsuperscript{122} Guide to Enactment para. 9.

\textsuperscript{123} \textit{Id.} para. 29.

\textsuperscript{124} UETA \S 5(a).

\textsuperscript{125} The consent requirement first appeared in the 1999 Annual Meeting Draft of the UETA. Prior drafts, notably the March 1999 Draft, did not contain such a consent requirement. Instead, the March Draft simply provided that "[t]he use of an electronic record or electronic signature in a transaction must be reasonable." UETA \S 104(b). The notes to that section provided:

Since the fundamental purpose of this Act is to remove barriers to electronic commerce, the use of electronic records and signatures must be generally available. To permit a person to refuse electronic records when the circumstances indicate that the person is capable and willing to use electronics, would itself raise unwarranted barriers to electronic transactions. Therefore, it must be relatively easy to establish that a person has acquiesced in the use of electronic records. That in turn requires that an objective standard for use be established. A standard of reasonableness based on the context and circumstances surrounding use, which would include any statements or agreements of the parties, seems the most flexible approach. It has been noted that reasonable may be spelled I-a-w-e-s-u-i-t, and that the use of a reasonableness standard introduces a level of uncertainty that will itself create barriers to
could be read as allowing one party to a transaction to unilaterally start sending messages electronically, binding the recipients to those messages, even when the recipient was either unable or unwilling to receive messages in electronic form. Moreover, under the UETA, consent to conduct a transaction electronically can be withdrawn, and the right to withdraw consent may not be waived by agreement.\textsuperscript{126} Recognizing the severity of such a requirement of consent, the UETA Drafting Committee resisted the suggestion that such an agreement had to itself be demonstrated by a “signed writing” and instead opted for a broad definition of the type of agreement that would suffice. “Whether the parties agree to conduct a transaction by electronic means is determined from the context and surrounding circumstances, including the parties’ conduct.”\textsuperscript{127} Consequently, if one party goes on-line and orders goods electronically, that conduct under the circumstances is virtually certain to be found to constitute an agreement to do business electronically. Consent also can be found by a person’s participation in a system for electronic trading.

The approach adopted in the UETA, while not found in the Model Law, has gained acceptance internationally. For example, the Canadian UECA contains a similar provision requiring consent and at the same time allows consent to the use of electronic documents to be inferred.\textsuperscript{128} Similarly, the Australian Electronic Commerce Act limits the application of many of its sections to situations where a person consents; for example, if the law requires that a person receive certain

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\textsuperscript{126} Id. § 104(b) n.2.

\textsuperscript{127} Id. § 104(b). The consent provisions of the UETA cover both consumer and non-consumer transactions. While the desire to accord some level of protection to unsuspecting parties was of course involved in the drafting of the UETA consent provisions, the E-Sign legislation dealt more specifically with the requirement of consent in consumer transactions. See E-Sign § 101(c).

\textsuperscript{128} Id. § 5(b).

\textsuperscript{128} UECA, supra note 40, § 6(1) (“Nothing in this Act requires a person to use or accept information in electronic form, but a person’s consent to do so may be inferred from the person’s conduct.”). The consent requirement applies only to Part I of the UECA, which applies to the provision and retention of writings. It does not apply to the parts of the UECA dealing with the communication of electronic documents and the carriage of goods.

Also like the UETA, the UECA does not require anyone to use or accept electronic documents. UETA § 5.
information in writing, he must consent to receiving it electronically.\footnote{129}{See, e.g., Australian Electronic Transactions Act §§ 9(1)(d), 9(2)(d). Just as "agreement" is broadly interpreted, consent under the Australian act included "consent that can reasonably be inferred from the conduct of the person concerned." Id. § 5(1).} For Australian governmental entities, however, no consent need be given because the presumption is that there is consent. Although neither the UETA nor its Canadian and Australian counterparts directly address the issue, the consent requirements in all three can be construed to allow a party to condition its consent to accept documents electronically if they meet certain technological requirements.

The consent requirement has generated some concern in some circles that basing the validity of electronic commerce on the presence of consent amounts to the erection of a new barrier to electronic commerce. Such an argument is based on a misinterpretation of the impact of the UETA. If an electronic record is sent without obtaining prior consent of the other party, nothing in the UETA provides that the record is unenforceable or invalid. Rather, the matter is left to other law, so no additional barriers are in fact created.

To the contrary, the UETA may arguably provide a basis for sustaining the validity of an electronic message even without consent. Consider the following scenario. Two parties orally agree to a contract which, under the applicable Statute of Frauds, requires a "writing" signed by the party against whom the contract is to be enforced. Party A breaches, and Party B brings an action on the contract. A, of course, raises the Statute of Frauds, but during discovery B learns of an electronic message generated by A (and either sent to another or stored on A's own system) which confirms the existence of the contract. Clearly, if A and B had consented to conducting their transaction electronically, the electronic message would be sufficient to satisfy the Statute of Frauds.

In the absence of consent, thus, the argument continues that the UETA, which establishes that the electronic record and electronic signature are the functional equivalents of a writing and signature for purposes of the Statute of Frauds, is inapplicable. Moreover, one could argue that the exclusion of this situation from the UETA means that the record here should not suffice to satisfy any writing requirements. This result would completely undermine the purposes of the UETA. The UETA was drafted to eliminate old barriers in most situations, and not to create new barriers in others. There is no reason to believe that the UETA drafters, by failing to cover certain situations within the ambit of the UETA, intended to limit the reach of the principles set forth in the UETA to covered situations, or to imply con-
trary results in those uncovered cases (e.g., where consent is arguably lacking or the transaction is excluded from coverage). Consequently, the question might be asked whether the lack of consent in this situation raises any important policy concerns militating towards failing to recognize the electronic record. The role of the consent requirement is to protect persons, who are unable to or who choose not to do business electronically against having to send or receive messages in electronic form. The role of the consent requirement was not to address situations where “sending” or “receiving” of electronic messages was not involved, creating another technical “defense” on the part of a person trying to avoid his contractual obligation. In this situation, where the transaction itself was not to be created or performed electronically, and where neither party was obligated to send or receive messages in electronic form, application of a requirement of agreement is meaningless.\(^{130}\) Lastly, the goal of uniformity is defeated if other laws dealing with such transactions are not themselves uniform.

C. Terminology

Before getting into the substance of the provisions of the UETA and the Model Law, it is necessary to recognize that the terminology used by each varies slightly. The Model Law speaks of “data messages”\(^{131}\) whereas the UETA speaks in terms of “electronic records,”\(^ {132}\) both referring to information (in the case of data messages) or records generated, sent, received or stored by electronic means.\(^ {133}\) The UETA’s choice of “record” over “message” is the result of several factors. First, prior legislation promulgated by the National Conference had used the term “record” as a term of art to refer to information “inscribed on a tangible medium or that is stored in an electronic or other medium

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130. One could argue, of course, that agreement can be given retroactively, and that while A agreed to some electronic records at the time A created them, B agreed to them when B tried to introduce them into evidence. That, however, would put inordinate strain on the concept of agreement. Alternatively, one might argue that A is “estopped” from raising the requirement of consent. Or one could argue that the defense of “no consent” is only available to the person against whom the electronic record is being asserted. Whatever the technical argument, the same result should follow and the electronic message should be held to satisfy the Statute of Frauds.

131. MODEL LAW art. 2(a).

132. UETA § 3(a).

133. There are several non-substantive differences. The UETA adds “created” and “communicated” to the list of adjectives, but it is questionable what they add to “generated” and “sent.” The Model Law includes not only electronic but also similar means; the UETA defines “electronic” to include “technology having electrical, digital, magnetic, wireless, optical, electromagnetic, or similar capabilities.” UETA § 2(5). In both cases, the theory was to make the list as all inclusive as possible; there was no intent to have any substantive differences flow.
and is retrievable in perceivable form.” 134 The term “message,” on the other hand, was without any such history. Indeed, the Guide to Enactment recognizes that the term “record” might be used in some jurisdictions. 135 Second, the UETA found the term “message” arguably misleading; whereas the term commonly denotes information sent from one person to another or information communicated in some manner, both the terms “data message” and “electronic record” were intended to include information that was never sent or communicated, but was simply “stored” in electronic form. While many of the provisions of both the Model Law and UETA apply to communications, the provisions on record retention, for example, were clearly intended to cover situations where information was generated and stored but never sent or communicated. 136

Thus, the intent of the drafters appears to be that the terms are interchangeable. 137 Indeed, the very first memorandum from the reporter for the UETA to the Drafting Committee stated that “[a]s a general proposition, the terms ‘electronic record,’ ‘electronic message,’ and ‘data message’ are interchangeable in the models.” 138 A good example is the treatment of the writing requirement by the two proposed laws; here, superficial differences exist between the Model Law and the UETA, which disappear upon closer analysis. The Model Law provides that a data message satisfies any writing requirement “if the information contained therein is accessible so as to be usable for subsequent reference.” 139 By contrast, the UETA provides simply that “an electronic record” satisfies any legal requirement of a writing, 140 and superficially does not seem to add any accessibility criterion. Nonetheless, by using a defined term, “record,” rather than “data message,” the UETA incorporates the requirement, found in the definition, that information stored electronically be “retrievable in perceivable form.” 141 Thus, the legal principle, that a record satisfies a writing requirement, becomes “information . . . that is stored in an electronic or other medium and is retrievable in perceiv-


136. Id. (“The notion of a ‘data message’ is not limited to communication but is also intended to encompass computer-generated records that are not intended for communication. Thus, the notion of ‘message’ includes the notion of ‘record.’”).

137. Indeed, the UCITA uses the term “electronic message” rather than the term “electronic record.” UCITA, supra note 114.

138. Memorandum from D. Benjamin Beard, Reporter, to Drafting Committee for Electronic Communications in Contractual Transactions (Apr. 10, 1997).

139. MODEL LAW art. 6(1).

140. UETA § 7(c).

141. Id. § 2(13).
able form" satisfies any legal writing requirement. There are, admittedly, differences in the terminology used ("retrievable in perceivable form" as opposed to "accessible so as to be usable for future reference"), but it is not evident that they would (or should) lead to different results in similar situations.

Arguably, the use of "record" in the UETA results in narrower application than the Model Law; to constitute a record under the UETA, a message must, at some point in time, be stored in an electronic medium and be retrievable. No such requirement is placed on a data message under the Model Law. Nonetheless, in most the instances where the term appears in the Model Law, it is clear that some storage is an inherent part of the operation of the section. For example, the Model Law speaks of an "original" of a data message,\textsuperscript{142} the admissibility of a data message into evidence,\textsuperscript{143} and the retention of data messages;\textsuperscript{144} all of these concepts presume that the message is in some way stored or retained and is now being accessed for future use. In the chapter on communication of data messages, however, that is not true. Presumably, then, a contract may be formed under the Model Law by electronic communications that are not stored or accessible, while under the UETA the contract formation provisions are limited to instances where the communications are "records"\textsuperscript{145} and consequently were at some stage stored and accessible. The distinction, however, may be somewhat metaphysical, as some have argued that even information in "RAM" has been stored, albeit in a transient manner, and consequently all information sent electronically is at some point stored in an electronic medium.

D. Legal Requirements

Both the UETA and the Model Law establish the general proposition that the use of electronic communications technologies in conducting transactions should not affect their legal validity and enforceability. Thus, the Model Law provides that information shall not be denied legal effect, validity or enforceability solely on the grounds that it is in the form of a data message.\textsuperscript{146} Similarly, the UETA provides that an electronic record or signature may not be denied legal effect or enforceability solely because it is in electronic form.\textsuperscript{147} Both

\textsuperscript{142} Model Law art. 8.
\textsuperscript{143} Id. art. 9.
\textsuperscript{144} Id. art. 10.
\textsuperscript{145} UETA § 11.
\textsuperscript{146} Model Law art. 5.
\textsuperscript{147} UETA § 7(a). The failure of the UETA to mention "validity" along with legal effect and enforceability should be viewed solely as a non-substantive change based on
provisions were intentionally worded in the negative to make it clear that there might be other reasons (apart from form) for denying legal effect or validity to the electronic records.\textsuperscript{148} The treatment of both the writing and signature requirements are good illustrations of the minimalist and procedural approach.\textsuperscript{149}

The UETA states, in one place, the simple proposition that “a record or signature may not be denied legal effect or enforceability solely because it is in electronic form,”\textsuperscript{150} mirroring the Model Law pronouncement that “[i]nformation shall not be denied legal effect . . . solely on the grounds that it is in the form of a data message.”\textsuperscript{151} The UETA continues that a contract may not be denied legal effect or enforceability solely on the grounds that an electronic message was used in its formation,\textsuperscript{152} again mirroring a similar Model Law provision.\textsuperscript{153} The Model Law contains a third validation provision stating that “a declaration of will or other statement shall not be denied legal effect . . . on the grounds it is in the form of a data message.”\textsuperscript{154} The Model Law provision was added at a late stage in the drafting process, on the theory that the provision on the conclusion of contracts might not cover unilateral declarations of will or statements (such as notices of termination) that went not to the conclusion of the contract but to the performance of contractual obligations. The Guide to Enactment recognized, however, that this rule was merely a specific illustration of the general principle of non-discrimination against the use of electronic communications.\textsuperscript{155} It was on this basis – that the provision was duplicative and unnecessary in light of the general principle – that it was not carried over into the UETA.

1. Writing Requirements

With regard to “writing requirements” in the law, both the Model Law\textsuperscript{156} and the UETA\textsuperscript{157} establish that data messages, or electronic re-
cords, may satisfy those requirements. The key in each case is whether there is some memorialization of the information which can be resorted to in the future. In those cases, the function of the writing requirement (to preserve information for future reference) has been met.

The UETA's provision, which can be traced back to the Model Law,\textsuperscript{158} contains two arguably significant changes. First, the Model Law includes situations where the law requires a writing as well as situations where the law provides consequences if the information is not in writing.\textsuperscript{159} The theory of the drafters of the Model Law is that often the law does not state that a writing is required, but provides for different consequences in the absence of a writing. The drafters of the UETA at a late stage in the drafting process concluded that there was no real difference between the two situations and that the simpler formulation was adequate. An example discussed by the UETA Drafting Committee was the Statute of Frauds. On its face, the Statute of Frauds\textsuperscript{160} does not require a writing, but simply provides that certain contracts are unenforceable unless there is a signed writing or some other exception applies. Despite its verbal formulation, however, the Statute of Frauds is commonly cited as an example of the legal imposition of a writing requirement as a precondition to enforceability of the transaction. Thus, the typical Statute of Frauds would be adequately addressed by the UETA's provision without the additional language found in the Model Law. The ostensible difference in the wording between the two formulations should not yield any difference in results.\textsuperscript{161}

A second, and more subtle, distinction between the Model Law and the UETA is that the Model Law allows a data message to satisfy

\textsuperscript{158} See Boss, supra note 13. The origins of the UETA in the Model Law are evident in the structure of the two provisions. Compare the UETA's language, "[i]f a law requires a record to be in writing" with the Model Law's, "[w]here the law requires information to be in writing." UETA § 7(c); MODEL LAW art. 6(1). There are many grammatical differences between the two provisions, most included in the UETA to make it more readable and consistent with American English usage. The two main substantive changes are discussed in the text.

\textsuperscript{159} MODEL LAW art. 6(2).

\textsuperscript{160} A good example is that applicable to the sale of goods. U.C.C. § 2-201.

\textsuperscript{161} It should be noted that, although the UETA generally focuses on legal requirements (e.g., "if a law requires a record to be in writing") and does not address situations where the law simply provides different consequences if a certain factor is absent (thus eschewing the Model Law formulation, e.g., "or where the law simply provides consequences for the information not being in writing"), it deviates from that approach in one area: originals. UETA § 12(d). It is doubtful, however, whether the retention of that language in the originals provision makes any substantive difference; retention of that language in that section is more likely merely an oversight in the conforming and drafting process.
writing requirements only if the information in the message "is accessible so as to be usable for subsequent reference." As noted earlier, although the UETA appears to state that an electronic record satisfies the writing requirement without imposing any additional criteria, there are additional criteria in the UETA in the definition of a record, which requires that the information be "stored in an electronic or other medium and . . . [be] retrievable in perceivable form." Thus, the real issue is whether the condition in the Model Law that the information be accessible so as to be usable for subsequent reference is the same as the condition in the UETA that the information be retrievable in perceivable form. Commentary on the Model Law addresses in part the question of whether the two formulations articulate the same concept:

That notion is expressed in Article 6 in terms that were found to provide an objective criterion, namely that the information in a data message must be accessible so as to be usable for subsequent reference. The use of the word "accessible" is meant to imply that information in the form of computer data should be readable and interpretable, and that the software that might be necessary to render such information readable should be retained. The word "usable" is not intended to cover only human use but also computer processing.

Although one could arguably equate "retrievable" and "accessible," the bigger problem is whether "perceivable form" is the same as "usable for subsequent reference." The above commentary on the Model Law makes it clear that its formulation requires readability and interpretability. The UETA's focus on "perceivability" leaves open the argument that something can be perceived (i.e., seen) even though it cannot be read or interpreted. Moreover, while the Model Law commentary clarifies that the concept of "use" includes use by computers as well as by humans, it could be argued that the UETA's "perceivability" requirement requires that it be perceivable by a human. As it does not appear from any of the legislative history behind these various formulations that the drafters thought that their choice of language affected the resolution of either of these arguments, these differences may in the long run turn out to be academic.

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162. MODEL LAW art. 6(1).
163. UETA § 7(c).
164. Id. § 2(13).
165. Guide to Enactment para. 50.
2. Signature Requirements

The Model Law and the UETA treat signature requirements in a slightly different manner. The Model Law provides that a signature requirement may be met if (a) a method is used to identify the signer and to indicate approval of the information in the data message; and (b) the method is as reliable as was appropriate for the purpose.\footnote{166} The UETA allows a signature requirement to be satisfied by an “electronic signature.”\footnote{167} Thus, the definition of an electronic signature becomes critical; it means “an electronic sound, symbol, or process attached to or logically associated with a record and executed or adopted by a person with intent to sign the record.”\footnote{168} A juxtaposition of these two approaches reveals several critical differences.

First, consistent with its “functional equivalency approach,”\footnote{169} the Model Law attempts to identify the purpose and function of the signature requirement and articulates those in the statutory text. The functions of the signature requirement that were considered were: “to identify a person; to provide certainty as to the personal involvement of that person in the act of signing; [and] to associate a person with the content of the document.”\footnote{170} It was recognized that a signature could perform a variety of functions, including attesting to “the intent of a party to be bound by the content of a signed contract; the intent of a person to endorse authorship of a text; the intent of a person to associate with the content of a document written by someone else; the fact that, and the time when, a person had been at a given place.”\footnote{171} Of all these functions, two were eventually placed into the text: the function of identifying the signer and indicating approval of the information.

A similar attempt was made in the drafting of the UETA: to identify functions of a signature and reproduce those in the statute.\footnote{172} It became apparent, however, that the critical question as to what function a signature performed depended upon the intent of the person so signing. An example sometimes cited was that of the person “signing” a contract with an X. The “X” is not sufficiently unique to identify the person, and indeed the person may well have used that symbol to avoid later identification; nonetheless, the X may well have been appended with the intent to adopt the terms of the writing. In

\begin{itemize}
  \item \textit{Model Law} art. 7(1).
  \item \textit{UETA} § 7(d).
  \item \textit{Id.} § 2(8).
  \item Guide to Enactment paras. 15-18.
  \item \textit{Id.} para. 53.
  \item \textit{Id.}
  \item \textit{Id.}
  \item \textit{See, e.g., UETA} § 102(2) (Mar. 1998 Draft).
\end{itemize}
that case, the X could serve as a signature under other law. Thus, the requirement of the Model Law that the signature both identify the signer and signify approval was considered too onerous. In addition, the Model Law formulation, by focusing on what it determines are the "two basic functions of a signature," failed to recognize other functions of a signature (e.g., that the signature may have been affixed with the intent to establish authenticity, or simply to show that the writing was shown to the signer at a point in time). As a result, the UETA finessed the problem by saying that where there were sounds, symbols or processes attached to an electronic record, the question was whether they were placed there with intent to sign. The result is to look at the circumstances leading up to the purported signing, and then determine whether the requisite intent was there under those circumstances. By in essence deferring to other law for the requisite "intention" in the context of an electronic signature, the UETA avoids adopting requirements for electronic signatures that do not already exist in a paper-based environment. In addition, the UETA approach emphasizes that the fundamental characteristic of any signature is the intention with which it was made. This evolution from the Model Law to the UETA can be viewed as an important improvement to the Model Law's provisions. Indeed, the UETA is not the only piece of legislation to take that step; the Canadian UECA similarly requires that the electronic signature be made or adopted "in order to sign a document." This approach, however, has not been followed in all countries.\footnote{175}

Thus, the Model Law requires that the signature be used to indicate the person's "approval of the information" contained therein, while the UETA only requires intent to sign. How significant a differ-

\footnote{173. Guide to Enactment para. 56.}

\footnote{174. UECA § 1(b) "[E]lectronic signature' means information in electronic form that a person has created or adopted in order to sign a document and that is in, attached to or associated with the document." As with the UETA, the UECA incorporates this intent element as part of its definition of an "electronic signature." \textit{Id.}}

\footnote{175. The Australian Electronic Transactions Act follows the Model Law formulation. The English Electronic Communications Bill, while not adopting the Model Law concept of signature, eliminates any required showing of intent. \textit{See United Kingdom Department of Trade and Industry, at http://www.dti.gov.uk/cii/elec/ecbill.pdf.} Section 7 of the bill makes electronic signatures "admissible in evidence in relation to any question as to the authenticity of the communication [with which it is associated] or its integrity." \textit{Id.} § 7. For these purposes, it defines an electronic signature as "so much of anything in electronic form as (a) is incorporated into or otherwise logically associated with any electronic communication or electronic data; and (b) purports to be so incorporated or associated for the purpose of being used in establishing the authenticity of the communication or data, the integrity of the communication or data, or both." \textit{Id.} This means an electronic signature may suffice to establish source or integrity without a showing of actual intent. All that is necessary is that the necessary purpose appear from the use of the electronic signature. \textit{Id.}}
ence this is may depend upon the interpretation that is given to the Model Law. There are those who interpret the approval language in the Model Law as meaning an intention to be linked with the signed document in some way (whether it be to verify content, document that one has seen the information, or adopt the content as one's own), rather than as a strict interpretation of approval in the intent-to-be-bound sense. If the former rather than the latter interpretation is adopted, then the Model Law and the UETA are not as far apart as it might seem.

The second major difference between the Model Law and the UETA is that the former requires the signing method used to be "as reliable as was appropriate for the purpose . . . ." The UETA imposes no such requirement: as long as there is an electronic signature attached to the record with the requisite intent, nothing further need be shown.

Several reasons may be advanced for the deviation of the UETA from the Model Law. First, under most domestic law in the United States, signature requirements may be satisfied by a variety of means without any test of reliability. For instance, the Uniform Commercial Code defines a signature broadly to include typewriting and symbols — methods which often are not as reliable as handwritten signatures. To the extent that any symbols would suffice under legislation like the Code, the UETA is merely following suit by allowing electronic symbols to suffice without additional indicia of reliability. Second, the drafters of the UETA recognized that the reliability of signatures is frequently demonstrated by external indicia of reliability (e.g. requirements that the signature be affixed in the presence of witnesses or that the signature be notarized). The UETA does not displace those requirements and thus these other reliability factors must still be present. Third, the UETA recognizes that the question is not simply whether a document was signed, but whether it was signed by the person from whom it purports to originate (i.e., whether it is attributable to that person) and whether it was appended with the requisite intent to sign. Under the UETA, the burden is on the proponent of the message to prove attribution. In carrying that burden of proof, the proponent will at that stage need to show the re-

176. MODEL LAW art. 7(1)(b).
177. See U.C.C. § 1-201(39).
178. It does, however, allow for electronic notarization and acknowledgment. UETA § 11. See discussion infra Part III.F.4.
179. UETA § 9(a). This is in contrast to the Model Law which allows the proponent, in certain instances, to shift the burden of proof to the purported signer to show it did not sign and creates an irrebuttable presumption of signing in other instances. MODEL LAW art. 13. See discussion infra Part III.D.7.
liability of the method of signing and the reliability of the association between the purported signature and the signed text in order to prove attribution. Where there is no question as to the identity of the signer (i.e., the purported signer takes responsibility for the message), there is no need to inquire into the relative “reliability” of the signature method used. Last, the UETA recognizes that there is a difference between what the law may require in the way of a signature before lending its enforcement powers to the transaction and what the parties may require as a matter of good business practices. Thus, some companies may require signatures where the law requires none, and likewise may require signatures to be countersigned or notarized even though the law does not, simply to reduce business risks.

3. Record Retention Requirements

Both the UETA and the Model Law allow the retention of electronic records and data messages to satisfy record retention statutes.180 The provisions parallel one another, although they are not identical.

The Model Law requires that the information contained in the data message be “accessible so as to be usable for subsequent reference.”181 This language, therefore, basically tracks the requirements for a “writing” under the Model Law.182 The UETA has a similar requirement: that the electronic record “remains accessible for later reference.”183 The requirement of continuing accessibility implies that the party retaining the record must provide for technology obsolescence by updating and migrating information to developing systems.184 Earlier drafts of the UETA required that the information be “usable” in addition to being accessible for future reference, but this language was dropped on the theory that the language was unnecessary. The requirement that there be a record means that the information must be retrievable in perceivable form, which is tantamount to saying the information must be usable. Thus, there should be no dif-

180. UETA § 12(a); MODEL LAW art. 10.
181. MODEL LAW art. 10(1)(a).
182. MODEL LAW art. 6(1). It should be remembered that the use of the term “record” in the UETA, as opposed to the term “data message,” results in the imposition of a requirement (found in the definition of “record”) that the information be stored in an electronic record and be “ retrievable in perceivable form.” UETA § 2(13). See also discussion supra Part III.C (discussing the relationship between the UETA’s definition of a record and the Model Law’s provisions on writings).
183. UETA § 12(a)(2).
184. UETA § 12, cmt. 3. Neither the Model Law nor the UETA state how long the information must remain available or accessible for later reference. That element is supplied by the record retention laws themselves.
ferences in the interpretation of this prong of the test for record retention.

The Model Law imposes a second requirement for record retention: that the information be retained in the format in which it was generated, sent or received, "or in a format which can be demonstrated to represent accurately the information generated, sent or received."\textsuperscript{185} The UETA uses similar, but not identical language. It requires that the record "accurately reflect[] the information set forth in the record after it was first generated in its final form as an electronic record or otherwise."\textsuperscript{186}

Several key differences may be noted. First, the Model Law allows record retention requirements to be met if the data message is saved in the format in which it was generated, sent or received. This language is not included in the UETA, but that should not result in any substantive difference between the two provisions. An argument can be made that whenever an electronic message is sent, received or stored, its format changes. Consequently, it is doubtful whether it is ever possible to retain a message "in the format in which it was generated."\textsuperscript{187} As the Guide to Enactment notes, "It would not be appropriate to require that information be stored unaltered, since usually messages are decoded, compressed or converted in order to be stored."\textsuperscript{188} If, indeed, the message was retained in its original format and has not been altered in any way, then a fortiori, the second part of the test has been met: it accurately represents the information. As a result, the different formulations should not yield a different result.

Second, the UETA appears to introduce a temporal element when it speaks of the electronic record accurately reflecting the information "set forth in the record after it was first generated in its final form."\textsuperscript{189} This language has its origins in the Model Law — not in the Model Law's provisions on record retention, but in its provisions on originals.\textsuperscript{190} Thus, the UETA recognizes that requiring record retention and requiring an original share a common basis: the search for an accurate reflection of the information. The Model Law has a different focus. It asks whether the format of the message is that "in which it was generated, sent or received."\textsuperscript{191} Thus, the Model Law recognizes that a message may be generated at point one, sent at point

\textsuperscript{185} Model Law art. 10(1)(b).
\textsuperscript{186} UETA § 12(a)(1).
\textsuperscript{187} Model Law art. 10(1)(b).
\textsuperscript{188} Guide to Enactment para. 73.
\textsuperscript{189} Id. art. 8(1)(a) (requiring a reliable assurance as to the integrity of the information "from the time when it was first generated in its final form, as a data message or otherwise" in order to satisfy the requirements of an original).
\textsuperscript{190} Id. art. 10(1)(b).
\textsuperscript{191} Id. art. 10(1)(b).
two, and received at point three. In determining the format of the message, and presumably the accuracy of the information, the question is whether the data message being retained is that which was generated, that which was sent, or that which was received. The articulation in the UETA raises the possibility that the critical time – when the record was first generated in its final form – might be interpreted to mean point one (when the record was first generated) and would exclude when the record was sent or received. This is not the only possible interpretation of the UETA language, however. Alternatively, this language (“first generated in its final form”) could be interpreted to mean “in its final form as a sent message” or “in its final form as a received message” or even “first generated as a copy.” The latter interpretation is preferable. It recognizes that record retention laws themselves differ. They may require either that originals be kept or that copies be kept, and they may require that documents received be retained. So, if the law requires retention of information received, it should suffice if the retaining party shows that the information retained accurately reflects the information at the time of receipt. To require the retaining party to show that the information accurately reflects the information as generated and sent by the sender would impose a burden on the retaining party far exceeding that imposed under other applicable law. A better reading of the UETA is that, when the section speaks of “first generated in its final form,” the question is what final form is at issue: the form as generated, as sent, or as received. In that way, the Model Law and the UETA can be construed similarly, and no additional burdens are placed as a result of using electronic technologies.

Indeed, it is not clear that the drafters of the UETA intended a substantive difference in this context. Up until the end of 1998, the record retention provisions of the UETA mirrored those of the Model Law. At its fall meeting, the UETA Drafting Committee decided that: (1) the concept of accuracy (as reflected in the record retention requirements) was equally applicable to requirements of an “original”; and (2) indeed the concept of “accuracy” rather than “integrity” might be a better test for an original in light of the use of the former term in the law of evidence. Consequently, the decision was made to combine the two provisions on record retention and originals. The March 1999 Draft treated the two in the same provision, and in so doing adopted some of the language from “original” in the provisions dealing with

192. See supra p. 314.
193. UETA § 12(1).
194. See UETA § 206(a) (Oct. 1998 Draft).
record retention.¹⁹⁵ In combining the two provisions, the temporal language was apparently carried over without any consideration as to whether a substantive change from the Model Law was intended. If that is the case, then these two provisions should be interpreted as expressing the same basic rule in different language and, therefore, should be applied to achieve the same result.

The Model Law contains one last record retention requirement that has no UETA counterpart. Information must be retained that enables the identification of the origin and destination of the data message, and the date and time of dispatch and receipt.¹⁹⁶ This requirement that transmittal information be retained appeared in early drafts of the UETA, but was eliminated in one of the last drafts.¹⁹⁷ The omission of this requirement from the UETA may be justified on the grounds that the requirement does not bear on the fundamental question of whether the record accurately reflects the original information.¹⁹⁸ Moreover, the general records retention law at issue will specify what needs to be retained. If that law requires retention of identifying information, then that information needs to be retained whether the record is electronic or paper. If, on the other hand, the law does not require the retention of such identifying information, then the UETA will not otherwise impose such a requirement.

The UETA approach (which does not itself impose any requirement of retention of transmittal information) is actually consistent with one of the basic principles underlying the Model Law: users of electronic commerce should not be subject to “more stringent stan-

¹⁹⁵. See UETA § 111 (Mar. 1999 Draft). Indeed, the reporter’s explanatory comments regarding the change to this section focus only on the accuracy issue, making no mention of the temporal issue:

This section has been revised to include the critical elements for retention discussed at the February, 1999 meeting. Subsection (a) requires accuracy and the ability to access at a later time. The requirement of accuracy is derived from the Uniform and Federal Rules of Evidence. The requirement of continuing accessibility addresses the issue of technology obsolescence and the need to update and migrate information to developing systems. The other requirements in former subsection (b) have been deleted based on comments that they were unnecessary and did not advance the cause of accuracy.

*Id.*, reporter’s notes. See also UETA § 12, Official Comment 3.

¹⁹⁶. MODEL LAW art. 10(1)(c). There is a qualification: if there is no transmittal information, it need not be retained. The Model Law speaks of retaining “such information, if any” that provides transmittal details. The record holder need not retain information if it does not have at the time the information is retained.

¹⁹⁷. The language, which was carried in the January 1999 draft, was eliminated in the March 1999 Draft. See UETA § 111 (Mar. 1999 Draft).

¹⁹⁸. These requirements were deleted “based on comments that they were unnecessary and did not advance the cause of accuracy.” UETA § 111 (Mar. 1999 Draft), note 1.
standards... than in a paper-based environment." If the law does not require retention of a paper envelope in which a document was received, then the UETA does not require retention of transmittal information normally found on that envelope. In that context, the Model Law requirement that such identifying information be retained may be viewed as a digression from its fundamental nondiscriminatory approach. The Model Law drafters, however, justified this digression with the following observation:

Subparagraph (c), by imposing the retention of the transmittal information associated with the data message, is creating a standard that is higher than most standards existing under national laws as to the storage of paper-based communications. However, it should not be understood as imposing an obligation to retain transmittal information additional to the information contained in the data message when it was generated, stored or transmitted, or information contained in a separate data message, such as an acknowledgment of receipt.

The Model Law, however, like the UETA, does make it clear that there is no obligation to retain "any information the sole purpose of which is to enable the record to be sent," communicated, received or stored.

Both the UETA and the Model Law recognize that the services of a third party may be used to satisfy record retention requirements. The UETA goes beyond the Model Law by setting out a specific provision on record retention requirements for checks (requiring that information on both the front and back be retained), a provi-

199. Guide to Enactment para. 16.
200. Id. para. 74.
201. UETA § 12(b); MODEL LAW art. 10(2). There are some minor differences in the verbal formulations; the UETA speaks of enabling the record to be sent, communicated, or stored, and the Model Law speaks of sent or received. The concept of "receipt" under the Model Law is undoubtedly encompassed within the UETA's use of the word "communicated." A bit more troubling is the absence of the term "stored" in the Model Law. It would be strange, however, to interpret the Model Law as not requiring information enabling dispatch or receipt but requiring information enabling storage. Thus, the two provisions should not be interpreted differently.
202. UETA § 12(c).
203. MODEL LAW art. 10(3).
204. UETA § 12(e). This provision is noteworthy in two regards. First, one could say that the provision is unnecessary because if one retains checks, one must retain the information on both sides of the check. Second, as the Drafting Committee recognized, this subsection, to the extent it provided an "industry specific" rule, was a departure from the generalized nature of the uniform act. Nonetheless, its inclusion was justified on the perceived need for clarity regarding the application of the UETA to checks, an issue pressed by representatives of the Federal Reserve Board during the course of the discus-
sion allowing future legislation to impose greater requirements for record retention, and a provision allowing government entities to specify additional retention requirements for records within their jurisdiction.

4. Originals

Although both the UETA and the Model Law allow electronic records or data messages to satisfy requirements that the "original" of information (e.g., the "original" invoice) be presented or retained, the approaches utilized by the two proposed laws differ. The Model Law has two requirements. First, there must be a reliable assurance as to the integrity of the information from the time of its creation. Second, where the information is to be presented (e.g., to a court), it must be capable of being displayed. To the extent that the UETA's definition of a record includes a requirement that the information be "retrievable in perceivable form," the UETA and the second requirement in the Model Law (capable of being displayed) are similar, although the UETA is arguably broader. As for the first requirement of the Model Law (the integrity of the information), the drafters of the UETA chose instead to focus on the accuracy of the information. "So long as there exists reliable assurance that the electronic record accurately reproduces the information, this section continues the theme of establishing the functional equivalence of electronic and paper-based records." The choice between the two words, "accuracy" and "integrity," which arguably mean the same thing, was explained as a decision to follow the definition of an "original" in both the Federal Rules of Evidence and the Uniform Rules of Evidence: "[i]f data are stored in a computer or similar device, any printout or other output

sions. According to the Prefatory Note to the UETA, a Federal Reserve Bank of Boston study found more than 2500 different state laws requiring retention of canceled checks. UETA, Prefatory Note.

Id. § 12(f).

Id. § 12(g).

Both speak of the requirement that information "be presented or retained in its original form." UETA § 12(d); MODEL LAW art. 8.

MODEL LAW art. 8(1)(a) ("[T]here exists a reliable assurance as to the integrity of the information from the time when it was first generated in its final form, as a data message or otherwise."). Indeed, for a while the UETA drafts considered two options, one based on integrity and the other on accuracy, as alternatives. See UETA § 205 (1998 Annual Meeting Draft).

Id. art. 8(1)(b).

UETA § 12 cmt. 1.

"Accuracy" is defined as exactness; exact conformity to truth, or to a rule or model." WEBSTER'S NEW TWENTIETH CENTURY DICTIONARY: UNABRIDGED 14 (2d ed. 1978). "Integrity" is defined as "the quality or state of being complete; wholeness; entireness; unbroken state." Id.
readable by sight, shown to reflect the data accurately, is an 'original.'

Having determined that "accuracy" was the critical element for record retention purposes, the UETA Drafting Committee observed that in the Model Law, accuracy was an element of the requirements for an "original" document. Thus, the UETA combined the treatment of record retention (which hinges on accuracy of information) with the treatment of originals. It picked up the Model Law requirement of an original, and included it in its own requirements for record retention. It then provided that if a record is retained in accordance with the UETA requirements for record retention (i.e., if it accurately reflects the information as it was first generated in its final form), then it satisfies any requirement of an "original.

The UETA Drafting Committee struggled with the concept of an electronic "original," noting the incongruity in the application of that concept in an electronic environment. Moreover, the committee recognized that the issue was not one of the "originality" of the information so much as the accuracy of the information. Thus, the UETA drafting committee chose to follow the precedent in the rules of evidence, which treat electronically stored data as the "original" if it can be shown to reflect the data accurately.

The provisions dealing with record retention and with originals appeared in separate sections of the UETA until the January 1999 draft when they were combined into one section. The essential requirements of accuracy of the information were carried over from the record retention procedures. At first, the requirements originating in the Model Law's provisions on record retention, and in particular the requirements that identifying information be retained, were also car-

213. Model Law art. 8.
214. This requirement is that there be a "reliable assurance as to the integrity of the information from the time when it was first generated in its final form." Id. art. 8(1)(a).
215. Thus, record retention requirements mandate that the record "accurately reflects the information set forth in the record after it was first generated in its final form as an electronic record or otherwise." UETA § 12(a)(1).
216. Id. § 12(d).
217. Comment 2 of section 12 of the UETA states: "It may be argued that the original exists solely in RAM and, in a sense, the original is destroyed when a copy is saved to a disc or to the hard drive." UETA § 12 cmt. 2.
218. Id.
220. The evidentiary rule 1001(3) states that "if data are stored in a computer or similar device, any printout or other output readable by sight, shown to reflect the data accurately, is an 'original.'" Fed. R. Evid. 1001(3); Unif. R. Evid. 1001(3).
221. See UETA § 113 (Jan. 1999 Draft) (now UETA § 12).
ried over as an attribute of accuracy, but these provisions were eventually eliminated.222

5. Evidence

Both the UETA and the Model Law cover the admissibility of electronic records into evidence, although the UETA's approach is much more streamlined – and short. Under both the UETA and the Model Law, an electronic record or data message may not be excluded from evidence "solely because it is in electronic form"223 or "on the sole ground that it is a data message."224 The UETA stops there, while the Model Law goes further.

First, the Model Law provides that the message may not be excluded on the grounds that it is not an original, "if it is the best evidence that the person adducing it could reasonably be expected to obtain."225 This language was not included in the UETA for several reasons. First, in most (if not all) cases, if the record accurately portrays the information, it will be treated as an original under the UETA.226 Second, under the rules of evidence in the United States, where the original of a document is unavailable a party will be allowed to introduce "best evidence" as to the information contained therein.227 Thus, even without this Model Law language, the same result would and should occur in the United States.228 This approach has been followed in other countries such as Canada.229

The second key difference is that the Model Law goes on to say that "[i]nformation in the form of a data message shall be given due evidential weight,"230 and proceeds to lay out what factors should be

222. Id.
223. UETA § 13.
224. MODEL LAW art. 9(1).
225. Id. art. 9(1)(b).
226. UETA § 12(d) ("If a law requires a record to be presented . . . in its original form . . . that law is satisfied by an electronic record retained in accordance with subsection (a).")
227. FED. R. EVID. 1003 (admissibility of duplicates); 1004(2) (admissibility of other evidence of contents where original not obtainable).
228. At the time, the National Conference was considering amendments to its Uniform Rules of Evidence (1998), available at http://www.ncuesl.org/uniformactsummaries/uniformactssaturoe88surof1999.htm.
229. There is a possible question as to whether the Model Law's rule (allowing the electronic record in if it is the "best evidence") impels the record holder to destroy paper originals of documents that have been converted to electronic form, to avoid the argument that the paper records are the best evidence. The Canadian Uniform Electronic Evidence Act avoids this problem by allowing the best evidence rule to be satisfied for electronic records in a different way, without any examination of originality.
230. MODEL LAW art. 9(2).
taken into account in determining evidential weight. Although this language was in earlier drafts of the UETA, it was ultimately eliminated for several reasons. First, the provision was viewed by some as unnecessary, as adding nothing to the basic principle that evidence is given the weight it deserves. Others viewed the provision as an improper intrusion upon the rules of evidence – particularly when another project was underway under the auspices of the sponsor of the UETA (the National Conference of Commissioners on Uniform State Laws) examining the rules of evidence.

6. Formation and Validity of Contract

The UETA and the Model Law are in agreement that a contract should not be denied legal effect and enforceability solely because an electronic record was used in its formation. The Model Law additionally states the proposition that offers or acceptances may be expressed through the use of data messages. This concept is inherent in the general rule, so its omission from the UETA is inconsequential. The drafters of the Model Law recognized that the more particularized discussion of electronically communicated offers and acceptances might be superfluous in some countries (as merely stating the obvious). But the provision was included "in view of the remaining uncertainties in a considerable number of countries as to whether contracts can validly be concluded . . . [when] the data messages expressing offer and acceptance are generated by computers without immediate human intervention, thus raising doubts as to the expression of intent by the parties."

To address the question of automatically generated messages, the UETA included a provision dealing specifically with contract formation in automated transactions. This provision builds upon the

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231. A subsection dealing with the weight to be given to electronic records was carried in drafts up until March 1999 when the subsection was placed into brackets. UETA § 112 (Mar. 1999 Draft). According to the reporter's notes to the draft, the language was to focus the attention of the committee to the propriety of statutorily directing a court on the matters to be considered in determining the persuasive effect of evidence. Id.

232. Uniform Law Conference of Canada, Uniform Electronic Evidence Act (1996), available at http://www.law.ualberta.ca/alr/ulc/current/eeeaact.htm. The Canadian Uniform Law Conference took the same view as the National Conference – that nothing should be said in the UEEA as to the weight to be accorded electronic evidence, on the grounds it was covered by the evidence act.

233. UETA § 7(b).

234. MODEL LAW art. 11.

235. See Guide to Enactment para. 76.

236. Id.

237. UETA § 14.
concept established in the Model Law — that valid contracts may result even though the offers and acceptances are generated not by humans but by computers. In elaborating upon that concept, the UETA introduces two new notions: the notion of an automated transaction\textsuperscript{238} and the notion of an electronic agent.\textsuperscript{239} By introducing these new concepts (which are discussed more at length below),\textsuperscript{240} the UETA builds upon the Model Law provision and provides more detailed rules applicable to these types of transactions. This applies whether or not the parties agreed to a security procedure.

7. Attribution

The most critical area where the UETA departs from the Model Law’s provisions is in the area of attribution — when an electronic record or data message is held to come from the purported sender. Indeed, this area is probably the most controversial area of all, having provoked the most discussion both domestically and internationally.\textsuperscript{241} The debate is easy to understand: should the law retain traditional rules which place the burden on the person seeking to enforce a record (in this case an electronic record) to show who created or sent that record, or should the law establish a new rule in the electronic arena?

The Model Law deals with attribution by first stating that a data message is that of a person if he or his agent sent it.\textsuperscript{242} Although this rule follows existing law at the outset, the Model Law goes beyond existing law in the paper-based world by creating a rule of attribution, as well as a rule of negligence. First, the Model Law regards a message as that of the purported originator if the recipient applied a security procedure previously agreed to by the recipient to ascertain the sender’s identity.\textsuperscript{243} In large part, this portion of the Model Law’s attribution procedures appear to be a variation on the theme of party autonomy: if the parties agreed to do business in a certain manner, and agreed to be bound by messages sent according to agreed procedures, the law will recognize that agreement. The appearance is deceptive, however. The section only requires that the parties agree to

\textsuperscript{238} An automated transaction is one conducted or performed in whole or in part by electronic means, in which the actions of the computer are not reviewed by an individual. UETA § 2(2).

\textsuperscript{239} An electronic agent is defined as “a computer program or an electronic or other automated means used independently to initiate an action or respond to electronic” messages without human review or intervention. UETA § 2(6).

\textsuperscript{240} See discussion infra Part III.F.5.

\textsuperscript{241} For an overview of the debate within the context of the UETA and the uniform law process, see Amelia H. Boss, Searching for Security in the Law of Electronic Commerce, 23 NOVA L. REV. 583 (1999).

\textsuperscript{242} MODEL LAW art. 13(1)-(2).

\textsuperscript{243} Id. art. 13(3)(a).
use specified security procedures; it is not necessary that they also agree to be bound by messages they did not in fact send if those procedures are followed. A consumer, for example, might be assigned a certain PIN number and agree to use that number in transactions, without recognizing that he or she will be bound by any use of that PIN. Thus, what started as a technological decision turns into a legal decision. To complicate matters, the Model Law allows the purported sender to avoid the attribution rule only if it promptly notifies the recipient of the message in enough time to give the recipient the ability to protect itself. Even if the purported sender was able to show that a computer hacker actually sent the message (or that a PIN number was stolen), under the Model Law it appears as if the message could still be attributable to the purported sender. Thus, two questions are raised: what is required to make out a case of attribution, and what is necessary or sufficient to defend against the claim of attribution?

The Model Law also imposes liability on the purported sender based on a negligence theory. If the message, while not that of the purported sender, was sent by someone who was able to gain access to the sender’s identification method because of his relationship with the purported sender (including the purported sender’s agent), the purported sender is also bound. The assumption is that the purported sender enabled the sending of the message. The purported sender can only escape liability by promptly notifying the recipient of the fraud, or by demonstrating that the recipient knew or should have known about the fraud.

It can be argued that in the area of attribution, the UETA is more faithful to the underlying policies of minimalism (including deference to other substantive law) than the Model Law because the former refuses to set up a new rule for electronic communication. The UETA states, for purposes of electronic records, the same rule that exists for communications whatever the medium: the electronic record is attributable to a person “if it was the act of the person.” Moreover, attribution “may be shown in any manner.” While no special rule is created for electronic messages, the UETA does advise that

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244. Id. art. 13(4)(a).
245. Id. art. 13(3)(b).
246. The notice must give the recipient time to act accordingly. Id. art. 13(4)(a).
247. Id. art. 13(4)(b).
248. UETA § 9(a).
249. Id.
250. The UETA states, “[t]his section does not alter existing rules of law regarding attribution.” Id. § 9 cmt. 1.
security procedures may be relevant to a determination of attribution.\textsuperscript{251}

Initial drafts of the UETA were in fact based on the attribution provisions of the Model Law, and at times, even went further than the Model Law in creating presumptions concerning when a person would be bound in an electronic environment.\textsuperscript{252} Ultimately, however, the UETA rejected the notion that any one thing (e.g., the implementation of a security procedure or the manner in which a fraudster obtained access) shifts the burden of proof on attribution from the person attempting to enforce the message (the recipient) to the purported sender. Likewise, it rejected the notion that negligence in and of itself is a grounds for establishing liability. Two other countries, Australia and Canada, have reached the same result. The Australian Electronic Transactions Act contains only a minimal attribution procedure which is very similar to that in the UETA.\textsuperscript{253} However, the Canadian Uniform Electronic Commerce Act is completely silent on the attribution issue.\textsuperscript{254}

Despite the clear departure of the UETA from the Model Law’s provisions on attribution, the Model Law provision regarding security procedures (and its interpretation) may nonetheless be a source for interpretation of the UETA. What the UETA rejected was the creation of presumption and liability rules, providing simply that attribution “may be shown in any manner.”\textsuperscript{255} The ultimate goal is, of course, a demonstration that the purported sender sent the message. What may be of guidance is the application of the attribution rules of the Model Law when a security procedure is utilized; the UETA itself recognizes the importance of security procedures in any attribution issue. It provides:

The inclusion of a specific reference to security procedures as a means of proving attribution is salutary because of the unique importance of security procedures in the electronic environment. In certain processes, a technical and technologi-
cal security procedure may be the best way to convince a trier of fact that a particular electronic record or signature was that of a particular person. In certain circumstances, the use of a security procedure to establish that the record and related signature came from the person's business might be necessary to overcome a claim that a hacker intervened. The reference to security procedures is not intended to suggest that other forms of proof of attribution should be accorded less persuasive effect. It is also important to recall that the particular strength of a given procedure does not affect the procedure's status as a security procedure, but only affects the weight to be accorded the evidence of the security procedure as tending to establish attribution.\textsuperscript{256}

The last sentence of this official comment is critical. Unlike the Model Law, where the mere existence and use of an agreed security procedure establishes attribution, the issue is more fact intensive under the UETA. Thus, the strength of the security procedure and the weight to be accorded it in any determination of attribution may well vary; so may the type and weight of evidence that would in turn demonstrate the record was not sent by the purported sender.

On the other hand, the Model Law's liability-based attribution provision was clearly rejected by the drafters of the UETA. This obviously does not preclude a court from applying the substantive law of negligence. Nonetheless, the Model Law rule based on liability (lack of reasonable care giving the fraudster access to the instrument of fraud) shows that the drafters of the Model Law and the UETA reached a very different policy decision about whether mere negligence was sufficient to establish that a person should be held bound to a communication it did not send. Thus the Model Law should not be resorted to in establishing a different negligence rule which was affirmatively rejected by the UETA.\textsuperscript{257}

8. Dispatch and Receipt of Electronic Records

Many rules of law, such as those dealing with the applicable law in a cross-border situation, turn on a determination of where or when an offer or acceptance was sent or received. In an electronic environment, determining where an electronic record was sent or received can be problematic. The party purporting to send the message may be

\textsuperscript{256} Id. at § 9 cmt. 4.

\textsuperscript{257} A similar liability rule existed in prior drafts of the Uniform Computer Information Transactions Act (UCITA), but there were ultimately eliminated from the draft that was finally approved by the National Conference of Commissioners on Uniform State Laws. See supra note 114.
in one location; its computer terminal or input device may be in another location; the electronic agent who actually initiates the communication may be in a different location; and the mainframe or server from which the message is sent to the recipient may be in a different location yet again. Thus, the drafters of both the Model Law and the UETA deemed it important to clarify where and when an electronic communication was sent and received (or, in the words of the Model Law, dispatched or received). Like virtually all the rules in both products, this provision is not a substantive rule of law; indeed, the substantive rules regarding contract creation or conflicts continue to apply. The present provisions are merely intended to assist in the application of those substantive rules in an electronic environment.

i. Time of Sending or Dispatch

The first questions to be resolved are when is an electronic record sent and when is it received? There are many possible answers to these questions: (1) when the sender hits the “send” button on her computer; (2) when the record travels to the sender’s server; (3) when it leaves the sender’s server and begins it travels via the Internet; (4) when it reaches the recipient’s server; (5) when it is tagged and placed in the recipient’s mailbox; (6) when the recipient is notified that the message has been received; (7) when the recipient accesses the messages; (8) when the recipient opens the message; or (9) when the recipient reads the message. With regard to the time of sending and the time of receipt, the Model Law and the UETA have parallel provisions.

Under the Model Law, an electronic message is deemed sent “when it enters an information system outside the control of the originator.” More than simply hitting the send button is required; the message must be out of the control of the sender. The UETA retains the central requirement that the electronic message enter a system outside the control of the sender, but makes four notable changes in the provision.

First, the UETA recognizes that the quoted language may not adequately deal with the situation where both the sender and the recipient of the message are part of the same information processing system. This might be the case, for example, where two individuals are on the same intranet or the same public system such as aol.com or mindspring.com. Consequently, it adds a provision providing that an

258. MODEL LAW art. 15(4).
259. MODEL LAW art. 15(1). The section also covers the situation where the message is sent by an agent of the sender, and says the message is sent when it enters an information system outsider the control of that agent. Id.
electronic record is sent in such a situation when the record "enters a region of the information processing system . . . which is under the control of the recipient."\textsuperscript{260} This change fills a gap left by the Model Law. Indeed, the UETA may well be used as precedent in countries adopting the Model Law who are confronted with such a situation as a logical extension of the control concept which is the key to the Model Law rule.

The next three changes arguably do more than merely fill an inadvertent gap. The UETA requires that for an electronic record to be deemed sent it must be addressed properly,\textsuperscript{261} it must be addressed to a system from which the recipient is able to retrieve the record,\textsuperscript{262} and it must be "in a form capable of being processed" by the recipient's system.\textsuperscript{263} All these additions were intended to protect a recipient against a sender's claims that an electronic message was sent when it was neither properly addressed nor in a form the sender could retrieve or use.

These additions obviously raise crucial questions about the relationship of these requirements to the Model Law. One could argue that the drafters of the Model Law never intended a message sent to an incorrect address to be deemed to be sent under the Model Law. In a paper-based world, a communication sent to the wrong address, and never received by the addressee, would undoubtedly be treated as a nullity. Indeed, the Uniform Commercial Code contains such a requirement in its definition of the term "send."\textsuperscript{264} The Restatement (Second) of Contracts provides a similar rule: "An acceptance sent by mail or otherwise from a distance is not operative when dispatched, unless it is properly addressed and such other precautions taken as are ordinarily observed to insure safe transmission of similar messages."\textsuperscript{265} Consistent with the notion that the Model Law is procedural

\textsuperscript{260} UETA § 15(a)(3).
\textsuperscript{261} UETA § 15(a)(1). This does not mean that a message sent to the wrong address is a nullity; it only means that the sender cannot take advantage of the UETA rules concerning when a "sending" occurred. If the message was in fact received by the intended recipient (as might be the case if the address was corrected), it would be effective anyway. See RESTATEMENT (SECOND) OF CONTRACTS § 67 (providing that acceptance sent to wrong address is nonetheless effective if received within reasonable period of time).
\textsuperscript{262} Id. There is an interpretational issue buried in this language: should a sender who properly addresses a record to the electronic address designated by the recipient bear the risk that the recipient is unable to retrieve the document from that system? It may make sense to impose such a requirement on the sender if he does not use an address designated by the recipient, but merely an address that the recipient uses for electronic receipt of such records. The language of UETA § 15(a)(1) imposes the retrievability requirement in both cases, however.
\textsuperscript{263} UETA § 15(a)(2).
\textsuperscript{264} U.C.C. § 1-201(38).
\textsuperscript{265} RESTATEMENT (SECOND) OF CONTRACTS § 66.
and supplements existing law, the Guide to Enactment notes that where "dispatch" already has an established meaning under domestic law (e.g., it must be properly addressed), the Model Law is intended to supplement and not displace national rules.266 Thus, decisions under the Model Law might well reach the same result as under the UETA.

The problem of the recipient's ability to retrieve and process the electronic record is a different issue. The key under the Model Law is "entry" into an information system. "Entry" refers to "when it becomes available for processing within that information system."267 Thus, under the Model Law, availability for processing, not the ability to process, is determinative. The Guide to Enactment specifically discusses the absence of any requirement that the message be intelligible or usable:

The Model Law does not intend to overrule provisions of national law under which receipt of a message may occur at the time when the message enters the sphere of the addressee, irrespective of whether the message is intelligible or usable by the addressee. . . . It was felt that the Model Law should not create a more stringent requirement than currently exists in a paper-based environment, where a message can be considered to be received even if it is not intelligible for the addressee or not intended to be intelligible to the addressee (e.g., where encrypted data is transmitted to a depository for the sole purpose of retention in the context of intellectual property rights protection).268

Thus, under the Model Law, the focus is on timing. The message enters a system when it is available for processing, whether or not it can in fact be processed. Under the UETA, on the other hand, whether the recipient was able to retrieve the record from the system, and whether it was in a form that the system could process, are elements of the requirement that the sender properly address the message and send the message in an acceptable form. To the extent that the Model Law defers to national law on the "processability" issue and this national law is sensitive to the form in which messages are sent, there is arguably no inconsistency between the UETA and the Model Law. Nonetheless, there could be situations under the Model Law and not the UETA where the sender of a message sends it in a format completely unusable to a recipient who was intended to be able to re-

267. Id. at para. 103.
268. Id.
ceive and process that message. The argument would be that the message may have indeed been sent under the Model Law, but that the message should not be given legal effect or validity under other substantive law because of its unusable form.\textsuperscript{269} Although national law would control on that issue, ideally an international consensus will develop on assessing the acceptability of such messages.

ii. Time of receipt

Both the Model Law and the UETA start with the same basic and fundamental rule: where a recipient has designated an information processing system for receipt of electronic records, receipt occurs when the electronic record enters that system.\textsuperscript{270} It is not necessary that the recipient know that the message was received, and there is no additional requirement that the recipient actually read or even access the message. If it reaches the recipient's "mailbox," receipt has occurred. This appears to be consistent with non-electronic rules governing receipt. The Restatement (Second) of Contracts, for example, says a writing is received "when the writing comes into the possession of the person addressed, or of some person authorized by him to receive it for him, or when it is deposited in some place which he has authorized as the place for this or similar communications to be deposited for him."\textsuperscript{271}

The UETA expands this basic rule to include information processing systems used by the recipient "for the purpose of receiving electronic records or information of the type sent" as well as systems actually designated by the recipient.\textsuperscript{272} The drafters of the UETA were concerned about allowing the recipient of electronic records to retain control over where they would be sent and received. Indeed, this rule represents a different aspect of the notion of party autonomy and consent:

To assure that the recipient retains control of the place of receipt, subsection (b) requires that the system be specified or used by the recipient, and that the system be used or designated for the type of record being sent. Many people have multiple e-mail addresses for different purposes. Subsection (b) assures that recipients can designate the e-mail address or system to be used in a particular transaction. For example,

\textsuperscript{269} Note that the inquiry under the UETA concerned the form of the message sent by the sender, not the form in which it was received by the recipient's information system.

\textsuperscript{270} UETA § 15(b); MODEL LAW art. 15(2)(a)(i).

\textsuperscript{271} RESTATEMENT (SECOND) OF CONTRACTS § 68 (emphasis added).

\textsuperscript{272} UETA § 15(b)(1).
the recipient retains the ability to designate a home e-mail for personal matters, work e-mail for official business, or a separate organizational e-mail solely for the business purposes of that organization. If A sends B a notice at his home which relates to business, it may not be deemed received if B designated his business address as the sole address for business purposes. Whether actual knowledge upon seeing it at home would qualify as receipt is determined under the otherwise applicable substantive law.273

As was the case in determining time of sending, the UETA requires that the message be in a form capable of being processed by that system – a requirement missing from the Model Law – and further adds the additional requirement that the information processing system be one “from which the recipient is able to retrieve the electronic record.”274 The UETA provides the following reasoning for this requirement, stating that “[k]eying receipt to a system accessible by the recipient removes the potential for a recipient leaving messages with a server or other service in order to avoid receipt.”275 The question of the ability of the recipient to retrieve the message from that system, as noted above, does not exist in the Model Law. Arguably, however, that difference is not critical.

Consider the situation where, because of a power failure or system failure, the system becomes inaccessible, precluding the recipient from ever retrieving the record. The question would be (under both products): when did the failure occur? If it occurred before the electronic record entered the system, then no receipt has yet occurred under either formulation.276 If the message enters the system, the question initially under the UETA is whether the recipient is able to retrieve it. If the recipient is able to retrieve it, albeit for an instant, receipt has occurred. Subsequent failure of the system should not “undo” what has already occurred. The mere inability of the recipient to retrieve the electronic record at a later point in time is irrelevant once receipt has occurred. The impact of the later failure on the legal efficacy of the message is left to other law under the UETA, just as it

273. Id. § 15 cmt. 3. This is consistent with the approach taken in the Restatement to what the “proper address” requirement means. “The offeree may fulfill the requirement that an acceptance be properly addressed by using a return address indicated in the offer . . . . But any other place held out by the offeror as the place for receipt of such communications will do as well.” RESTATEMENT (SECOND) OF CONTRACTS § 66 cmt. b.
274. UETA § 15(a)(1).
275. Id. § 15 cmt. 3.
276. Under the Model Law, the message “should not be considered to be dispatched if it merely reached the information system of the addressee but failed to enter it.” Guide to Enactment para. 104. Obviously, if no dispatch has occurred, no receipt has occurred either.
is under the Model Law which deliberately did not address this concern.\footnote{277} One situation where the two laws differ (in analysis though not necessarily result) is when the recipient has designated an information processing system, but the sender sends the electronic record to another information processing system. The Model Law has a specific rule for that situation: the message is deemed received when the addressee retrieves it.\footnote{278} By contrast, the UETA does not have any specific rule. If the system, while not the designated system, was one used by the recipient for electronic records of this type, then the more general provision would apply and the record would be deemed received (whether or not it was "actually" retrieved or received). If the system was not generally used for messages of this type, the "deeming" rules of the UETA would not apply. Arguably, the "deeming" rules would not be needed if the record were actually retrieved by the recipient. In that case, the non-electronic rules on receipt should get to the same result. The UETA supplements, but does not displace, more general rules of dispatch and receipt.\footnote{279}

If, however, the record entered an information processing system of the recipient that was not the one designated by the recipient, nor one used by the recipient for such messages, and the record was never retrieved by the recipient, the two laws would again produce the same result: there would be no receipt under the Model Law (because there was no retrieval), and none under the UETA (because it was not sent to the correct address).

In the situation where no information system was designated, but a record is sent to a system that is not used by the recipient for receipt of records of that type, under the UETA there is no specific rule, and its "deeming" rules are inapplicable. Consequently, other law would kick in and the inquiry would be whether actual receipt occurred. By contrast, the Model Law provides that receipt in this case occurs when the message enters an information processing system of the addressee, a test that the UETA applies only to designated systems or ones used for that purpose. In effect, the Model Law goes beyond the UETA in its deeming rules. Both sets of rules regulate a sys-

\footnote{277. \textit{See id.} ("Model Law does not expressly address the question of possible malfunctioning of information systems as a basis for liability."). The Guide to Enactment notes that "where the information system of the addressee does not function at all or . . . cannot be entered into by the data message . . . dispatch . . . does not occur." \textit{Id.} The Guide seems to be silent on how to resolve the issue of how to treat a message when it does enter the system but is unretrievable, and the issue is not "liability" for the malfunctioning system but rather determination of whether receipt was accomplished.}

\footnote{278. \textit{MODEL LAW} art. 15(2)(a)(ii).}

\footnote{279. The only question might be whether "retrieval" as under the Model Law is what constitutes "actual receipt" under substantive law supplementing the UETA.}
tem when it designates which "entry" into the recipient's system is key. The UETA extends the "entry" rule to other information systems with the caveat that the system be one that the recipient uses for receipt of such records. The Model Law extends the "entry" rule to any systems of the recipient, regardless of how (or how little) the recipient uses that system.280 This approach was rejected in the UETA which recognized that today many persons have multiple email accounts, some of which are never accessed.281 Indeed, the Model Law, which applies the same "entry" rule used when a system is designated to situations where the recipient neither designates the system nor uses it for these purposes may be unfair to the unsuspecting recipient. That recipient has no reason to know (until actually retrieving the message) what message might reach a little-used mailbox. The only way persons can protect themselves is to either never have mailboxes which are not accessed on a regular basis, or make sure to designate a mailbox in each and every instance where business is transacted.282

The UETA adds a provision that does not appear to have a counterpart in the Model Law: an electronic message may be deemed to be received "even if no individual is aware of its receipt."283 This provision only states what is inherent in both the UETA and the Model Law (that individuals may act through computers) and restates the general legal rule on receipt (that a letter is received, at the latest, when the mailman delivers it. This is true even if no one knows of the delivery, picks up the letter or reads it). The rule reinforces the result under the two products: if a message is considered sent or received when it leaves (or enters) another information processing system, that result flows even if it happened without the knowledge of the persons involved.

280. MODEL LAW art. 15(2)(b).

281. See supra note 273 and accompanying text. The Australian Electronic Transactions Act departs from the Model Law on this point as well. If the recipient has not designated an information system for receipt of electronic messages, receipt occurs "when the electronic communication comes to the attention of the addressee." Australian Electronic Transactions Act § 14(4). See also UECA § 23(2)(b) (stating that receipt occurs when the recipient "becomes aware of" the message).

282. The Model Law's rule could be construed to encourage people to designate systems, but this type of social engineering is out of character in the Model Law. Moreover, given the breadth of the Model Law, which does not require consent to transact business electronically, it is difficult to imagine how a party "designates" systems in each and every instance.

283. UETA § 15(e).
iii. Place of receipt and dispatch

Both the UETA and the Model Law recognize that the issue of when receipt occurs and where it occurs are two separate questions.\textsuperscript{284} Similarly, they both recognize that the question of where a record is received may be a difficult one, since “it is not uncommon for users of electronic commerce to communicate from one state to another without knowing the location of the information systems through which communication is operated. In addition, the location of certain communication systems may change without either of the parties being aware of the change.”\textsuperscript{285} Consequently, objective criteria easily ascertainable by both parties are used in determining the place of dispatch or receipt. Both the UETA and the Model Law make the place of dispatch or receipt turn, not on the location of any particular information processing system, but rather on the location of the sender (in the case of dispatch) or the recipient (in the case of receipt). Both the UETA and the Model Law define location in a parallel manner, using slightly different language but achieving the same result. The location will normally be that of the party’s place of business;\textsuperscript{286} if there is more than one place of business, then the place of business with the closest relationship to the underlying transaction controls.\textsuperscript{287} If there is no place of business, then the party’s residence\textsuperscript{288} controls.

iv. Knowledge of non-dispatch or non-receipt

The rules in the UETA on when dispatch or receipt occurs in effect create presumptions that, at that point in time, the record was indeed sent or received. The UETA, however, provides that “if a person is aware that an electronic record . . . was not actually sent or received,” then the rules of the UETA are inapplicable, and “the legal effect of the sending or receipt is determined by other applicable law.”\textsuperscript{289} This provision appeared for the first time in the 1999 Annual Meeting draft of the UETA, and its genesis is unexplained in either the official comments to the final act or the reporter’s notes to the draft. The concern apparently addressed by the provision is that the “deeming” rules could operate to make electronic records legally effective even when the sender knew that the messages had not been sent.

\textsuperscript{284} Model Law art. 15(3); UETA § 15(c).
\textsuperscript{285} Guide to Enactment para. 100 (quoted in UETA § 115 reporter’s notes (1999 annual meeting draft); UETA § 15 cmnt. 4.
\textsuperscript{286} UETA § 15(d); Model Law art. 15(4).
\textsuperscript{287} Id. § 15(d)(1); Model Law art. 15(4)(a).
\textsuperscript{288} Id. § 15(d)(2) (residence); Model Law art. 15(4)(b) (“habitual” residence).
\textsuperscript{289} Id. § 15(g).
or received. Despite the laudable protective goals of the provision, upon closer analysis the provision is problematic.

A few examples illustrate the problem. Assume a message is sent to an address designated by the recipient for messages in this transaction in such a way that the UETA would deem the message to have been sent (i.e., properly addressed, in the correct form, etc.). Later, the recipient receives a computer generated message saying that the message was undeliverable.\textsuperscript{290} Does the mere fact that the message was not delivered (and therefore not received) mean that it was never sent? If that were the case, all statutory requirements that something be “sent” would be turned into requirements that they also be received — or at least that the sender not be “aware”\textsuperscript{291} of the fact that they were not received.\textsuperscript{292}

One way to resolve this would be to interpret the provision to apply if a message was “purportedly” sent under the UETA but was not actually sent (as opposed to received). This interpretation also has problems. Assume a sender sends a message and it enters a system outside the control of the sender (thereby satisfying the requirements of the UETA). How could one, under these circumstances, ever say that the message was not “actually sent.” One could imagine a situation where the message was returned, again with a computer generated message this time saying “host unknown” or “could not locate host,” thus potentially demonstrating that the message was improperly addressed.\textsuperscript{293} In this case, however, if it was improperly addressed, it would not have been deemed sent under the UETA to begin with. If it was “properly addressed” and it was the intervening systems that failed to recognize the address, the impact of saying the

\textsuperscript{290} A note of caution: in today’s electronic environment, a sender may receive notification that a message was not deliverable when in fact it was eventually delivered.

\textsuperscript{291} There are other possible ways that the sender could be “aware” that the electronic record was not received. It could, for example, receive a call from the recipient complaining that it did not receive the message; it could find out when action on the recipient’s part is forthcoming when it should have been; it could become “aware” during litigation. Missing from the statute is any guidance on when awareness is to be determined, and any guidance on what type of awareness is critical.

\textsuperscript{292} This mixing of “sent” and “received” in the statutory provision raises another interpretational problem which indicates that the wording is not as well crafted as the rest of the UETA. Would there ever be a situation, for example, where a message was purportedly received under the UETA, and a person (presumably the sender, but that is far from clear) is aware that it was not actually sent?

\textsuperscript{293} Although the return of the message could be an indication that it was improperly addressed, it could be an indication of routing problems (where the sending computer system did not recognize the address), server problems at the receiving end, or the fact that the recipient’s mailbox was full. Or, the address could be the one provided by the recipient, but the host may have gone out of business.
message was "not actually sent" or "not actually received" is to make the time of sending or dispatch conditional upon actual receipt.

The main concern may well have been not the "sending" but the "receipt" of messages. There are problems here as well. Assume a message enters the designated information processing system and is accessible but never accessed by the recipient. Before the recipient does receive the message, the system fails, and the recipient never accesses (or opens or reads) the message. The recipient becomes aware of the problem some time later. To say the failure of the recipient to access (or open or read) means the message was not actually received is to turn the receipt rule of the UETA (which depends upon delivery to the recipient's information system) into a receipt rule which depends upon actual access.

v. Effectiveness of Electronic Record

Although the UETA and Model Law define when dispatch and receipt occur in an electronic environment, neither of them answers the fundamental question whether an electronic record is effective upon dispatch or receipt. Up until the 1999 Annual Meeting Draft, the UETA did contain a provision that an electronic record is effective, if at all, when received even if no individual is aware of its receipt.294 This provision was deleted at the 1999 Annual Meeting of the National Conference of Commissioners. Several reasons were articulated for the deletion, ranging from process concerns (the UETA is a procedural statute while the provision attempts to set a substantive rule of contracting) to substantive concerns (that the provision overrules the mailbox rule in a manner which might be bad policy).295 At the same meeting where the UETA was approved, the National Conference of Commissioners on Uniform State Laws did in fact adopt a rule on contract formation in the electronic environment, providing, within the context of computer information contracts, that an electronic acceptance is effective upon receipt.296

294. UETA § 113(a) (1999 Annual Meeting Draft). The provision was intended to abolish the mailbox rule, see supra p. 329, but also served the purpose of underscoring that people may act through computers and be bound by their actions regardless of knowledge. UETA § 402, reporter's notes (Sept. 1998 Draft).

295. One of the substantive concerns expressed by state attorneys general was that their jurisdiction often depended upon where the contract was formed, and that adoption of a receipt rule might deprive them of the ability to exercise jurisdiction over consumer contracts.

296. See Uniform Computer Information Transactions Act.
Similarly, the Model Law has no such provision, choosing instead to defer to the national laws applicable to contract formation.\footnote{297} Consequently, it can be argued that the UETA and Model Law are consistent on this point. Nonetheless, the fact that both the UETA and the Model Law contained, at one point in time, rules on contract formation indicates that the issue is still a recurring question. Indeed, most model trading partner agreements dealing with electronic commerce contain such provisions.\footnote{298} Uncertainty as to the applicable rule in many situations, concerns about the relatively high percentage of e-mail messages that are sent but never received,\footnote{299} the ability of the sender of a message to determine whether or not the message has been received, and the need for certainty contributed to the desire of commercial parties to establish a clear, unequivocal rule. On an international basis, the problem is exacerbated. The mailbox rule\footnote{300} which predominates in many common law countries makes contractual acceptances effective upon sending for many instances of delayed communication, although common law countries retain a receipt rule for communications deemed to be instantaneous or relatively instantaneous in communication.\footnote{301} As a result, there is some uncertainty in countries like the United States as to whether electronic communications are covered by the mailbox (dispatch) rule or the instantaneous (receipt) rule. In many civil law systems, by contrast, acceptances are effective upon receipt. Indeed, this is the rule that has been adopted in the United Convention on the Sale of Goods\footnote{302} as well as the UNIDROIT Principles of International Commercial Contracts.\footnote{303} In the United States, pending legislation would adopt the receipt rule for electronic communications in the context of sales,\footnote{304} leases,\footnote{305} and

\footnote{297. Guide to Enactment para. 78 ("It was felt that such a provision might exceed the aim of the Model Law, which should be limited to providing that electronic communications would achieve the same degree of legal certainty as paper-based communications.").}

\footnote{298. See AMELIA H. BOSS & JEFFREY B. RITTER, ELECTRONIC DATA INTERCHANGE AGREEMENTS: A GUIDE AND SOURCEBOOK (Int'l Chamber of Commerce 1993).}

\footnote{299. By one estimate, approximately ten percent of e-mail messages are never received.}


\footnote{301. RESTATEMENT (SECOND) OF CONTRACTS § 64.}

\footnote{302. Convention on the International Sale of Goods § 18(2) (stating that acceptance is effective "at the moment the indication of assent reaches the offeror"). This apparent rejection of the mailbox rule is tempered by another provision terminating the ability of the offeror to revoke its offer once an acceptance has been dispatched. Id. § 16(1).}

\footnote{303. UNIDROIT Principles on International Commercial Contracts art. 2.4(1) (1994) (adopting receipt rule of CISG 18(2)).}
computer information contracts. This may represent the growing consensus as to the appropriate rule to be applied, on both a domestic and international basis, giving all courts the ability to apply the receipt rule to electronic transmissions based on the argument they should be treated as (relatively) instantaneous rather than delayed communications.

E. Omitted Provisions: Acknowledgment of Receipt

The Model Law contains a provision regarding acknowledgment of receipt that has no counterpart in the UETA as finally promulgated. Recognizing that functional acknowledgments are often used in commercial practice (particularly in electronic data interchange transactions), the Model Law chose not to impose any requirement upon parties to acknowledge receipt of electronic records, but instead to address the legal issues arising from the use of such acknowledgments, e.g., the weight they should be given in determining whether an acknowledgment was in fact received. In so doing, the Model Law took into account the large number of electronic data interchange trading partner agreements that included acknowledgment provisions. This is one area, however, which has arguably undergone substantial change, both during the promulgation of the Model Law and subsequently. The concept of an acknowledgment, or a functional acknowledgment, originated in the context of electronic data interchange, where the use of established standardized message sets such as EDIFACT allowed for some uniformity in the use and treatment of such acknowledgments. However, with the migration of many electronic commerce systems to the Internet, and with the proliferation of different systems with differing capacities to acknowledge receipt, it has become increasingly difficult to articulate a “rule” for acknowledgments that is sufficiently flexible to accommodate the variety of situations in which acknowledgments may be issued and still articulate a rule that provides any certainty.

307. The question remains, however, of how to prove or even presume receipt.
308. EDIFACT, or UN/EDIFACT, stands for the United Nations Rules For Electronic Data Interchange for Administration, Commerce and Transport, developed under the United Nations Centre for Trade Facilitation and Electronic Business (and its predecessor) within the Economic Commission for Europe. For more information on CEFACFT and EDIFACT, see http://193.194.138.128/cefact/index.htm.
The UETA contained a provision on acknowledgment up until October 1998,\(^{309}\) recognizing that such matters were also covered in many electronic data interchange trading partner agreements such as the one developed by the American Bar Association.\(^{310}\) The Drafting Committee decided, however, at its October 1998 meeting\(^{311}\) to delete the provision, reaching the conclusion that the adoption of such a provision would be contrary to the fundamental principles of the UETA: to retain the flexibility necessary to allow for the development of new commercial practices and new technological implementations.\(^{312}\)

F. New Provisions in the UETA

The UETA introduces several new provisions not found in the Model Law. Many of them may be explained as attempts to ameliorate concerns, particularly from consumers, that undue mischief would result from blanket recognition of electronic commerce.

1. Requirement of Consent.

The first major new provision, discussed at length above,\(^{313}\) makes it clear that nothing in the Act requires the use of electronic commerce,\(^{314}\) makes the consent of the parties a precondition to the application of the Act,\(^{315}\) and allows a party to withdraw its consent to conducting transactions electronically.\(^{316}\)

It should be emphasized that the failure to obtain consent to conducting business electronically has one, and only one, impact under the UETA: the UETA by its terms literally does not apply. Whether the electronic notice or communication nonetheless has any legal force or validity is left to other law – and there always remains the possibility that the UETA might be used by analogy in such situations.

The lack of consent hits hardest in one key area: record retention. A transaction may be entered into and performed without the use of electronic communications, but after the transaction is completed, one party may want to store the documents electronically.

311. UETA § 117, reporter's notes following deleted § 403 (Jan. 1999 Draft).
312. The UECA also omits any coverage of acknowledgments. See Gregory supra note 40 at 465.
313. See supra pp. 301-04.
314. UETA § 5(a).
315. Id. § 5(b).
316. Id. § 5(c).
There would be no obstacles under the Model Law because the Model Law clearly applies to the storage of electronic records whether or not those records were ever sent or received. Indeed, the drafters of the Model Law were adamant that this be the case.317 The introduction of the consent requirement in the UETA, however, may lead to an undesirable result: a person desiring to store electronic records relating to a paper transaction in order to satisfy record retention requirements may find that the UETA does not apply, thereby calling into question its ability to satisfy the record retention requirements in that manner.318 Canada and Australia, which have their own versions of a consent requirement, have avoided this problem. Australia’s consent requirement applies section-by-section, and no such requirement is present in its record retention provisions.319 Canada’s formulation, nothing “requires a person to use or accept information in electronic form, but a person’s consent to do so may be inferred from the person’s conduct[,]” does not require the consent of both parties in all cases.320 Consequently, limiting the ability of a party to a transaction to electronically store documents relating to that transaction because of the absence of consent of the other party would defeat the goal of much of the record retention rules of Section 12. This is particularly acute in the case of checks. As the Preface to the UETA observes, there are hundreds of state laws that require the retention or production of original canceled checks. To preclude the maker of those checks from storing them electronically because of the lack of consent of all of the payees (and drawees) would, in the language of the official comments, “preclude banks and their customers from realizing the benefits and efficiencies related to truncation processes otherwise validated under current law.”321

317. Consequently, the Model Law defines an originator to include someone who generates an electronic record, whether or not the record is ever sent or received. MODEL LAW art. 2(c).

318. The official comments to Section 3 of the UETA observe that “[u]nilaterally generated electronic records and signatures which are not part of a transaction also are not covered by this Act.” UETA § 3 cmt. 1. See also UETA § 2 cmt. 12 (stating the term “transaction” in the scope provision “does not include unilateral or non-transactional actions”). This does not address the situation where there is a transaction to which the unilaterally generated electronic message relates, but there was no “consent” by the other party to its generation and storage.


320. UECA § 6. Note that the UECA applies to record retention requirements even if there is no transaction. See id.

321. UETA § 12 cmt. 6. “Truncation” refers to the practice in the banking industry of taking a check that has been deposited for collection, making an electronic image of that check, and then forwarding the electronic image (rather than the paper check itself) through the banking system for collection. In such cases, the drawer will not have a paper check to retain, but only the image.
2. Provision of Information

A second key provision, present in the UETA but not in the Model Law, recognizes that many statutes, in addition to requiring a writing or a signed writing, may require that writing to be provided to one party, or require that the information be sent or displayed in a certain manner. The UETA introduces three new rules on the subject.

First, the UETA makes it clear that any requirements on how a writing is to be sent or how a document is to be displayed are not supplanted by the Act.\(^{322}\) Thus, if there is a requirement that the information be sent “by the most expeditious manner possible” or “by first class mail,” those requirements are still applicable regardless of the media used. As the notes to an early draft observed:

If a notice must be displayed at a place of business that requirement does not change simply because the notice may now be electronic. However, the ability to properly display the notice, if it is only in electronic form, may necessitate the use of paper. Similarly, if a rule of law requires delivery by US postal service, this Act will not affect that requirement of the rule, and delivery by post of a disc with the information on it would be required.\(^{323}\)

Second, if the law requires that information be provided by one party to another, it is not sufficient that the provider simply post the information and tell the other party to retrieve it. Concerns about this situation first arose in late 1998, leading to a provision\(^{324}\) that initially required that if an electronic record were provided it must be “under the control of the person to which it is provided” and be “capable of retention for subsequent reference.”\(^{325}\) The consensus of the Drafting Committee was that to satisfy a requirement that information be provided in writing, the recipient of the electronic record containing that information must be able to access the electronic record,

\(^{322}\) Id. § 8(b).

323. UETA § 103, reporter’s note 5 (Jan. 1999 Draft). The UETA official comments for section 8 state:

If a law requires that particular records be delivered together, or attached to other records, this Act does not preclude the delivery of the records together in an electronic communication, so long as the records are connected or associated with each other in a way determined to satisfy the other law.

UETA § 8 cmt. 4.

324. UETA § 103(d) (Oct. 1998). Strangely, the first provision appeared in the exclusions section of the draft.

325. See id. § 104(d).
read it, and refer to it at a later date. Ultimately, the provision was expanded to include requirements that information be "sent" or "delivered" in writing, as well as requirements that information be "provided" in writing.

A requirement that something be sent means that it must be placed outside the control of the sender; similarly, a requirement of delivery implies that the information be within the control of the recipient. Thus, the specified information in the form of an electronic record must first be "provided, sent or delivered" as the case may be.

The third new rule requires that the electronic record must also be "capable of retention by the recipient at the time of receipt." The UETA continues that an electronic record is not considered "capable of retention" if the sender (or its information system) inhibits the recipient's ability to print or store the electronic record. As the Official Comments observe: "The policies underlying laws requiring the provision of information in writing warrant the imposition of an additional burden on the sender to make the information available in a manner which will permit subsequent reference." The qualification that a record is not "capable of retention" if the sender or its system inhibits downloading or printing should not be misinterpreted; if it is the recipient's system which is incapable of downloading or printing, the sender may be found to have satisfied its obligations despite the inability of the recipient to retain the record. Obviously, however, there is a factual question as to who bears the responsibility in these instances.

Although the notion of a separate section on the provision of information in writing was borrowed from the Canadian UECA, the UETA introduced a new provision: "If a sender inhibits the ability of a recipient to store or print an electronic record, the electronic record is not enforceable against the recipient." This is clearly an attempt to

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326. See id. § 107, reporter's notes (Mar. 1999 Draft).
327. Id.
328. UETA § 8(a). The requirement that, where the information must be provided to a recipient, it must be capable of retention by the recipient originated in the Canadian UECA. UECA § 8.
329. UETA § 8 cmt. 3.
330. Indeed, the relationship between the UETA and the UECA with regard to provision of information reveals much cross-border pollination. While the UETA borrowed the notion of a section on provision of information (separate from writing) from the UECA, the UETA changed the original notion of "control" to one of "capable of retention," a formulation ultimately adopted in the UECA as well. In addition, the UECA adopted the UETA's rule on inhibiting or prohibiting storage, although it borrowed it only for satisfying the provision of the information requirement. The UECA stopped short of providing that if storage or printing was inhibited by the sender then the whole record would be unenforceable.
331. UETA § 8(c).
protect parties, particularly consumers, against unscrupulous merchants who send messages in "disappearing ink." The concept is simple: if the recipient cannot print, download, or retain it in some manner, it is unfair to enforce the record against the recipient. Some senders may wish to protect information being transmitted (e.g., intellectual property or confidential information) and therefore want to inhibit retention. If the sender does so, however, it cannot enforce the record against the recipient.

3. Error or Change

As noted above, the UETA and the Model Law differ drastically on their treatment of the attribution of electronic messages. The UETA Drafting Committee, while recognizing the importance of security procedures, was not prepared to give messages prima facie better treatment because security procedures were followed. The committee was reluctant to attribute unwarranted liability to parties who innocently venture into cyberspace. Moreover, concern for individuals interacting with pre-programmed computers caused the committee to examine more closely the issue of who bears the risk of loss from errors in transmission.

The UETA has two basic principles applicable to the area of errors in transmissions.\textsuperscript{332} The first is based on the agreement of the parties to implement a security procedure to detect changes or errors. If an error results because of the failure of one of the parties to properly use the procedure, then the other party is given the ability to avoid the effect of the change or error, thereby shifting the risk to the party at fault.\textsuperscript{333}

In instances where an error prevention or error correction procedure has not been supplied, however, the Drafting Committee was concerned about the ease with which errors by individuals could be made (e.g., hitting the "enter" key twice or mistyping a letter or number). The Drafting Committee was also concerned that, in transactions with automated agents, individuals would have less ability to correct errors than in transactions with other individuals; inadvertent errors occurring as the result of a single keystroke error are difficult, if not impossible, to retrieve given the speed of electronic communications.

Therefore, the committee established the second principle that, in the absence of error prevention or correction procedures, it would be appropriate to give the individual a limited opportunity to correct the error. The individual must (i) promptly notify the other person of

\textsuperscript{332} See id. § 10.

\textsuperscript{333} See id. § 10(1).
the error; (ii) take reasonable steps to return (or destroy) any benefit or consideration he has received; and (iii) not use or receive any benefit from the consideration.\footnote{Id. § 10(2). In addition to the statutory ability to avoid the error afforded by the UETA, the individual may also take advantage of other avoidance doctrines available under other law, such as the doctrine of mistake. Id. § 10(3).}

The impact of this rule is to encourage persons using electronic agents to provide error prevention and detection procedures. Such procedures are easily provided, for example, through the use of "confirmation screens" where the individual is asked to confirm the terms of the transaction.\footnote{Id. § 10 cmt. 5.} By providing an opportunity for an individual to review and confirm the information initially sent, the other party can eliminate the possibility of the individual defending on the grounds of inadvertent error since the electronic agent, through confirmation, allowed for correction of the error.

In many respects, this provision may be seen as a type of "consumer protection" provision, as its purpose was to protect individuals in dealing with automated agents. Although the provision would undoubtedly be one upon which consumers might rely, the Drafting Committee affirmatively rejected any attempt to limit the section to "consumers" as opposed to "individuals."\footnote{The November 1997 Draft of Article 2B (which later was finalized by the National Conference of Uniform States Laws as the Uniform Computer Information Transactions Act) contained an elaborate defense for consumers. U.C.C. § 2B-117(c) (Nov. 1, 1997 Draft), available at http://www.law.upenn.edu/bll/ulc/ulc_frame.htm.} As was explained in the Reporter's notes to the first draft in which this provision appeared:

Because the allocation of losses under this draft turns on the use of security procedures and their commercial reasonableness and places the loss on the party choosing to rely on electronic records and electronic signatures, the distinction between consumers and merchants, and sophisticated and unsophisticated parties has been eliminated. Rather the burden is placed on the person consciously desiring the benefits of electronic media to assure that the level of security necessary exists.\footnote{UETA § 203(c) (Nov. 1997 Draft). The Drafting Committee also rejected the approach adopted by Article 2B (which was later finalized by the National Conference of Commissioners on Uniform State Laws as the Uniform Electronic Transactions Act) which limited the provision to system errors, as opposed to inadvertent human errors by the individual. Id. The UETA chose to leave system errors to be decided under the general law of mistake. UETA § 10 cmt. 4. The differences between the two formulations (one protecting any individual who makes an error and the other protecting only consumers if there is a system error) demonstrate drastically different philosophies to error: one recognizing the fallibility of humans and striving to create an environment that protects}
The Model Law does have one limited provision dealing with errors in transmission. Where an error (by the sender or by the transmission system) results in duplicate messages being sent, they are treated as two separate messages unless the recipient "knew or should have known, had it exercised reasonable care or used any agreed procedure, that the data message was a duplicate."\textsuperscript{338} Although no such rule exists in the UETA, it may be provided by the supplementary law of mistake.

4. Notarization and Acknowledgment

The drafters of the UETA recognized that, in addition to requirements that a document be in writing, many state statutes required that the document be notarized or acknowledged by a third party. In the absence of any electronic equivalence of paper notarization and acknowledgment, arguably there would still be barriers to electronic commerce. Thus, the UETA sets forth a new section designed to assist in the migration of notarial requirements to an electronic environment. Under that section, where notarization, acknowledgment, verification, or oaths are required, the requirement is satisfied if the electronic signature of the notary or third party is appended to the record, along with all other information required to be included (e.g., that the oath was administered on a specified date).\textsuperscript{339}

5. Automated Transactions / Electronic Agents

Automation has been around for decades, but the growth of electronic commerce has seen automation transforming the process of contract negotiation and performance. Millions of transactions are entered into daily on the Internet — and in many instances those transactions consist of an individual talking to a computer, or a computer talking to another computer. The concept of automation appears in the Model Law,\textsuperscript{340} but in the UETA it takes on a new face with the use of two new terms: "automated transaction"\textsuperscript{341} and "electronic agent."\textsuperscript{342}

\textsuperscript{338} MODEL LAW art. 13(6).
\textsuperscript{339} UETA § 11. The UECA, by contrast, is silent on notarization or affidavits.
\textsuperscript{340} Thus, a message may be attributed to a person if it was sent "by an information system programmed by, or on behalf of, the originator to operate automatically." MODEL LAW art. 13(2)(b) (1998).
\textsuperscript{341} UETA § 2(2) (providing that a transaction "conducted or performed, in whole or in part, by electronic means or electronic records, in which the acts or records of one or both parties are not reviewed by an individual in the ordinary course . . . ").
\textsuperscript{342} UETA § 2(6) (providing that an electronic agent means "a computer program or an electronic or other automated means used independently to initiate an action or re-
Although one could question why two terms (rather than one) were necessary, the concept is very simple. The Prefatory Note for the UETA states: "The Act makes clear that the actions of machines ("electronic agents") programmed and used by people will bind the user of the machine, regardless of whether human review of a particular transaction occurred."

To that extent, the provisions of the UETA on automated transactions are really quite simple: a contract may be formed by the interaction of electronic agents; a contract may be formed by the interaction of an electronic agent and an individual; and other substantive law determines the terms of the contracts.

The only other section referring to an "electronic agent" is a section designed to protect individuals who interact with electronic agents. As discussed above, it would allow an individual in an automated transaction the ability to avoid the effect of its own error if there were not mechanisms for error prevention or correction available.

6. Government Records

On its face, the Model Law did not distinguish between governmental and private transactions or communications, nor did it provide any special rules for government engaged in electronic commerce. Nonetheless, the limitation of the Model Law to "commercial activities" could easily be read (and indeed was intended by some to mean) that governmental activities were excluded. The UETA, while limited to "transactions", does not take the position that governmental activity is excluded, but rather assumes that it is and then provides "special" rules for governmental entities.

343. The Canadian UECA did not adopt the double concept of electronic agent and automated transaction, using only the former term with a simplified definition drawn from the UETA. UECA § 19. Earlier versions of the UETA contained provisions that depended upon the concept of an automated transaction (as opposed to simply an electronic agent); those rules were eliminated, but the definition of an automated transaction survived.

344. UETA, Prefatory Note. While this proposition was a key one in the opinion of the drafters of the UETA, the drafters of the UECA thought it so obvious it was not worth special attention. It does, however, provide affirmatively that a contract may be formed by the interaction of an electronic agent and a natural person, or the interaction between electronic agents. UECA § 21.


346. Id. § 14(2).

347. Id. § 14(3).

348. Id. § 10(2). See discussion supra pp. 342-43.
The three governmental sections in the UETA are limited. The first simply provides that governmental entities "shall determine whether, and the extent to which, [it] . . . will create and retain electronic records and convert written records to electronic records." This provision covers internal use of electronic records, and leaves decisions about conversions from paper to electronic up to each agency (or the state).

The second section deals with governmental communications with others (including non-governmental as well as governmental entities), and requires each government agency to determine if and how it will send electronic messages or receive them from others. The section permits the government agency to set standards for use of electronic records and signatures. This provision is probably best viewed as a restatement of the basic principles applicable to all entities under the UETA: nothing in the law requires a party to a transaction to accept electronic communications, and each party may therefore set the standards for what electronic records it will or will not accept. The argument for nonetheless retaining these provisions despite their apparent redundancy is that they remove any doubt that agencies are permitted to engage in electronic communications and convert from paper to electronic systems.

The last governmental provision is not mandatory, but discretionary, stating that a government agency "may encourage and promote consistency and interoperability with similar requirements adopted by other governmental agencies . . ." This section, which was deemed "critical in addressing the concerns . . . that inconsistent applications may promote barriers greater than currently exist," was originally a mandate that states "must" encourage and promote interoperability; the language was changed at the 1999 annual meeting to "may," which arguably deprived the section of any substantive impact. The Official Comments to the UETA nonetheless stress the importance of the provision:

This section is critical in addressing the concern that inconsistent applications may promote barriers greater than currently exist. Without such direction the myriad systems that could develop independently would be new barriers to electronic commerce, not a removal of barriers. The key to

349. UETA § 17. The UETA gives the choice to enacting states to either require each governmental agency to make those determinations or to require a designated state officer to do so.
350. Id. § 18.
351. Id. § 5(a). Cf. UETA § 18(c).
352. Id. § 19.
interoperability is flexibility and adaptability. The requirement of a single system may be as big a barrier as the proliferation of many disparate systems.\textsuperscript{354}

G. Incursions Into Negotiability

During the drafting of both the Model Law and the UETA, questions were raised about the propriety of applying broad provisions equating electronic records with paper writings in areas where the paper itself was treated as representing certain underlying rights, rights which could only be effectively transferred by the transfer of the paper. Because of the perceived difficulty in applying the UETA to negotiable paper, the UETA excludes from its generalized coverage negotiable instruments (including checks, drafts, and promissory notes), as well as negotiable documents of title.\textsuperscript{355} The Model Law does not contain any specific exclusion for negotiable paper, although the possibility of such exclusions is mentioned in the context of the writing requirements.\textsuperscript{356}

Both the Model Law and the UETA contain specific provisions that address some of the special issues surrounding negotiability in an electronic environment. Indeed, the Model Law does so by providing a separate part titled “Electronic Commerce in Specific Areas” within a chapter called “Carriage of Goods,” where, it sets out special rules for bills of lading and other transport documents.\textsuperscript{357} The UETA includes special provisions by creating a new category of records called “transferable records,” a term which was coined for documents that if in writing might qualify as negotiable promissory notes or documents for title.\textsuperscript{358}

Despite the fact that both the Model Law and the UETA attempt to address negotiability of electronic records, they do so in different areas and adopt different approaches. The Model Law chose to focus on transport documents, noting “the carriage of goods was the context

\textsuperscript{354} UETA § 19 cmt. 6.

\textsuperscript{355} Id. § 2(b)(2). Although the UETA does not mention these paper records by name, the Uniform Commercial Code exclusion effectively excludes Articles 3 and 4 (covering negotiable paper) and Article 7 (covering documents of title).

\textsuperscript{356} In its discussion of “writing” equivalents, where it is possible for an enacting state to list certain exclusions, the Guide to Enactment acknowledges that a state may want to exclude formalities under the Convention Pertaining to a Uniform Law for Cheques, but mentions this in the context of international treaty obligations rather than in the context of negotiability. Guide to Enactment para. 51.


\textsuperscript{358} UETA § 16 (defining a transferable record).
in which electronic communications was most likely to be used and in which a legal framework facilitating the use of such communications was most urgently needed.\footnote{359} The needs and demands of maritime trade were constantly heard at the deliberations on the Model Law, including presentations by the Comite Maritime International. Consequently, on the basis of a Secretariat study on the issue of transferability in the context of transport documents,\footnote{360} statutory provisions were drafted dealing with contracts for the carriage of goods involving data messages.\footnote{361}

By contrast, the main focus of discussion in the drafting of the UETA was on negotiable instruments, rather than negotiable documents of title. Early drafts included a definition of “transferable record” that covered both instruments (checks and notes), as well as documents of title (bills of lading and warehouse receipts).\footnote{362} However, the provision engendered considerable debate in the last year of drafting over the need for, as well as the definition and treatment of, transferable records. The draft was scaled back initially to exclude checks\footnote{363} and later to exclude documents of title as well.\footnote{364} The primary focus of the proponents of the concept of transferable records was on promissory notes (which are often accompanied by a mortgage or security interest in property).\footnote{365} As one report noted: “There would be some anomaly if the evident of security underlying a debt could be electronic but the evidence of the debt could not.”\footnote{366} The elimination of

\begin{itemize}
\item \footnote{359} Guide to Enactment para. 110.
\item \footnote{362} “Transferable record” means a record, other than a writing, that is an instrument or chattel paper under Article 9 of the [Uniform Commercial Code] or a document of title under Article I of the [Uniform Commercial Code]. UETA § 102(24) (Nov. 1997 Draft); UETA § 102(27) (April 1997 Draft).
\item \footnote{363} UETA § 102(25) (Jan. 29, 1999 Draft).
\item \footnote{364} UETA § 102(27) (Mar. 1999 Draft).
\item \footnote{365} “If the benefits and efficiencies of electronic media are to be realized in this industry it is essential to establish a means by which transactions involving paper promissory notes may be accomplished completely electronically.” UETA § 16 cmt. 1.
\item \footnote{366} ABA Science and Technology Section, Electronic Commerce Division, Subcommittee on Electronic Commercial Payments, Working Group on Negotiability and Electronic Commerce, and ABA Business Law Section Cyberspace Law Committee, Task Force on Transferability of Electronic Assets, Joint Report to the UETA Drafting Committee of the UETA Provisions Governing Transferable Records (Jan. 25, 1999 draft), available at http://www.webcom.com/legaled/EETAForum/docs/0199aaba1.html. As the reporter’s note to one draft observed: “There currently exists significant commercial interest in providing a method for the transferability and enforceability of electronic notes as
documents of title was justified because of the limited scope and impact of state law in the area, the lack of significant evidence of commercial demand for UETA coverage, and the activity of federal regulators in the field (e.g., electronic cotton warehouse receipts). It was further argued that the UETA allowed for market development of the UETA in a controlled manner. Input from those involved in the storage and transport of goods, however, led to the final transferable records provision covering both records that would otherwise be documents of title under Article 7, if in writing, along with those that would be notes under Article 3 of the Uniform Commercial Code.

The difference in coverage of the Model Law and the UETA demonstrate fundamental differences in the perceived needs in electronic commerce on an international, as opposed to a more domestic, level. Internationally, the concern is with transport documents, while domestically the concern is with financing (and particularly of financing using securitized assets). But the two instruments differ in a second fundamental way — the manner in which each chooses to deal with negotiability. Under the Model Law, the key is uniqueness: "If a right is to be granted to . . . one person . . . and if the law requires that . . . the right . . . must be conveyed to that person by the transfer, or use of, a paper document, that requirement is met if the right . . . is conveyed by using one or more data messages, provided that a reliable method is used to render such data message . . . unique." This requirement, referred to as the "guarantee of singularity," is intended to assure that only one person can claim the right.

By contrast, the UETA focuses not on uniqueness or singularity, but upon "control." A person who has "control" of a transferable record is considered the holder of the transferable record with those rights and defenses arising under other law, including (if the applicable statutory requirements are satisfied) the rights and defenses of a holder in due course. This concept of control had its origins in Articles 8 and 9 of the Uniform Commercial Code and their treatment of securities entitlements and chattel paper. While the Model Law ap-

against the maker in order to provide the requisite legal certainty so that systems and processes, which involve significant expenditures of time and resources, will be developed." UETA § 102(19) (reporter's note) (Mar. 1999 Draft).

369. Model Law art. 17(3).
371. UETA § 16(b) ("A person has control of a transferable record if a system employed for evidencing the transfer of interests in the transferable record reliably establishes that person as the person to which the transferable record was issued or transferred."). Id.
372. UETA § 16 cmt. 3.
peared to focus on the "uniqueness" of the data message itself, the UETA appears to look at the system in which the record is maintained and transfers noted.\textsuperscript{373} Moreover, the UETA has a form of "consent" built in as its provisions only apply if the issuer of the electronic record has expressly agreed it is to be treated as a transferable record.\textsuperscript{374}

What emerges from this brief comparison of both the Model Law and the UETA is that the entire area of electronic negotiability is still in the nascent stages. The comments to the UETA describe its treatment as a "compromise position" which "serves as a bridge pending more detailed study and consideration of what legal changes, if any, are necessary or appropriate in the context of the payment systems impacted."\textsuperscript{375} On an international level, the possibility of work in the area of negotiability and transferability of rights to goods in an electronic environment going beyond the provisions of the Model Law was repeatedly raised, and has been placed on the agenda for discussion within UNCITRAL.\textsuperscript{376} Similarly, the electronic issues regarding documents of title are on the table before a drafting committee revising Article 7 of the Uniform Commercial Code, as well as a group looking at Articles 3 and 4. Whether the concepts found in either the Model Law or the UETA are abandoned, refined, or extended remains to be seen.

IV. CONCLUSION

The UNCITRAL Model Law on Electronic Commerce and the Uniform Electronic Transactions Act are wonderful illustrations of the degree to which international and national laws, although not identical, nonetheless may be based on the same general principles and may articulate the same basic rules. To this extent, traditional perils of cross-border commerce – the uncertainty arising from what domestic laws apply – are minimized. The maximum benefits arising from the promulgation and adoption of such coordinated or harmonized instruments can only be achieved, however, if the documents are interpreted on a uniform basis as well. This requires an understanding of the extent to which the instruments are similar to one an-

\textsuperscript{373} As the comments to the UETA notes, "[t]he development of electronic systems meeting the rigorous standards of this section will permit retention of copies which reflect the same integrity as the original. As a result storage, transmission and other costs will be reduced, while security and the ability to satisfy legal requirements governing such paper records will be enhanced." \textit{Id.} § 16 cmt. 1.
\textsuperscript{374} \textit{Id.} § 16(a)(2).
\textsuperscript{375} \textit{Id.} § 16 cmt. 3.
other, and the degree to which they are different. In a global economy, however, it is imperative that countries begin to look beyond their borders in the interpretation of domestic instruments to take into account interpretation of similar instruments elsewhere. United States domestic courts, recognizing the importance of uniform interpretation, are quite comfortable accounting for interpretations given to similar instruments in other states in the country; it is time they also recognize the importance of the interpretations given in other nation states.