Electronic Promises: Contract Law Reform and E-Commerce in a Comparative Perspective

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US and European Union approaches to revising contract law to accommodate electronic commerce are diverging. The ad hoc, piecemeal approach to reform in the US favors deregulation in most contexts, stiff regulation in others, and relies heavily on case law developments. The comprehensive, broad approach taken by the European Union places greater emphasis on regulation generally by maintaining consistency in the regulation of traditional and online markets. Each approach has produced both deliberate and unintended revisions to existing contract law. While it is too soon to be sure, the European Union approach seems more likely to produce sensible outcomes in some contexts, such as consumer protection and the oversight of the development of technical standards.

1. Introduction

As the volume of electronic contracting continues to increase rapidly,1 legislatures around the world are evaluating existing contract law doctrines in light of new business practices. Because electronic commerce traverses national boundaries even more easily than traditional forms of cross-border trade, a comparative perspective would seem highly advantageous in this context. Yet, the following analysis indicates that even the US and the European Union, which

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1 The US Department of Commerce publishes an annual report estimating the volume of electronic commerce taking place in the US economy. It found that in 2000, electronic contracts were used in transactions worth over US$1 trillion, representing an increase of more than 12% compared with 1999 totals. The annual reports can be accessed at <http://www.census.gov/eos/www/ebusiness614.htm>.
together control the largest markets for electronic commerce activities, have already missed important opportunities to learn from each other and to coordinate their law reform efforts. This paper considers some of the strengths and weaknesses of certain recent European Union and US law reforms, highlighting efforts that seem more likely to achieve their objective of promoting the growth of electronic commerce.

A sharp disparity between US and European Union approaches to electronic commerce first emerged nearly a decade ago in the context of information privacy rights. A similar disparity, although perhaps of a lesser magnitude, is now emerging in the US and European Union approaches to electronic contract law reform. The US has taken a haphazard approach, favoring deregulation and market forces in some contexts, while clamping down with surprisingly onerous regulations in others. Because of its lack of any overarching vision of how electronic contracting law should evolve, it continues to rely heavily on case law developments to make incremental reforms in contract law. The European Union, by contrast, has worked to construct a coherent edifice that balances state control and market forces while harmonizing the law applicable to traditional and electronic commerce. Both the US and European Union approaches raise thorny problems regarding the degree to which any substantive doctrines of contract law require reform in order to accommodate electronic commerce, and those issues are still far from being authoritatively resolved. While it is too soon to know whether a piecemeal, ad hoc approach or a sweeping programmatic approach to the problem of law reform in response to technological innovation is generally better suited to the logic of electronic commerce, the European Union approach seems more likely to produce a sound outcome in some areas, such as consumer transactions and the oversight of technical standards.

2. Electronic commerce and uniform contract law

a) Basic premises

Legislatures facing electronic commerce issues must confront a basic question: Do electronic interactions require a fundamental reform in this area of law, or do the underlying principles and structures remain valid? It is highly doubtful, for example, whether copyright law will survive the age of electronic communication and
digitalization in its present form.² Company law or the law on movable property, on the other hand, will most likely not see their basic structures affected by electronic commerce.³

For the area of contract law, the answer will be twofold: Both US and European Union legislators seem to agree that facilitative or enabling rules of contract law, in particular those from which parties may derogate, may not require fundamental reform but mere adaptations: There are few reasons why the consequences of a breach of contract, e.g., should differ depending on whether the contract was concluded by electronic or by traditional means.

There is much more of a divergence with regard to the modern overlay of public law that characterizes what was once the law of purely private contractual obligations. In Europe, a generally stronger public sentiment in favor of regulation of markets leads legislators to work to update and preserve the content of existing regulations that limit the scope of private choice in markets. In the US, by contrast, a profound skepticism regarding the efficacy and desirability of regulation of markets leads legislators to resist updating regulations that were written with traditional markets in mind and that might apply to electronic commerce if their formal terms were modified slightly. The net result of the US reluctance to restate existing regulations in terms that make their application to electronic contracts explicit is a gradual diminution of public oversight of market behavior as economic activity assumes more on-line dimensions. The laissez faire or self-regulatory approach favored in the US and the more conventionally regulatory approach taken in the European Union may also reflect in some measure US enthusiasm for new technology and the much more ambivalent popular attitude toward innovation in the European Union.⁴ These different perspectives lead to diverging approaches to contract law reform with regard to electronic commerce.

³ Of course, the use of electronic communication and electronic registries may become common in company law and property law as well. However, the legal mechanisms to establish a company or a security right will likely remain the same whether registered electronically or in a paper register.
⁴ See generally Misha Glenny, How Europe Can Learn to Stop Worrying and Learn to Love the Future, Wired 9.02 (February 2001), available at
b) US codification efforts

In the US, efforts to codify the law governing electronic contracts have met with mixed success. The federal Electronic Signatures in Global and National Commerce Act and the state Uniform Electronic Transactions Act, have been very successful, largely because they address only a narrow range of all the issues raised by technological innovation in contracting practices. An attempt to codify the law of software licensing, the Uniform Computer Information Transactions Act (UCITA) included some provisions that would have regulated software licenses formed using electronic media and might have been applied by analogy to other contexts. UCITA has been hugely controversial, however, and seems very unlikely to achieve widespread acceptance. Among the controversial provisions of UCITA were those making enforcement of standard form contract terms easier, and validation of post-payment disclosure of material terms in consumer transactions. This approach is in direct conflict with that taken in the European Union with the Unfair Contract Terms Directive, which generally limits the enforcement of standard form contract terms, and the Distance Selling Directive, which requires full disclosure of terms prior to the formation of the contract and payment by a consumer.

In the absence of real prospects of codification, the US law of electronic contracting is developing in fits and starts through the development of judicial

5 Discussed infra at n. 69 ff.
6 In 2002, only 2 states (Virginia and Maryland) had enacted UCITA, but 3 states (Iowa, West Virginia and North Carolina) had enacted laws to invalidate any choice of law provision that would make UCITA applicable to a citizen of that state. A neutral panel of experts convened by the American Bar Association (ABA) to review UCITA issued a report in 2002 finding the model law to be so flawed it could not recommend the ABA support its enactment in the states, an exceptional conclusion for the ABA to draw with regard to a NCCUSL model law. The working group report can be accessed at <http://www.abanet.org/ucita/report_on_ucita.pdf>.
7 UCITA §§ 112, 209.
9 Directive 97/7/EC of the European Parliament and of the Council of 20 May 1997 on the protection of consumers in respect of distance contracts, [1997] O.J. L 144/19, Art. 4 and 5. They are also in conflict with Article 2:104 of the Principles of European Contract Law which limits the enforcement of terms not brought to a party’s attention by the contract drafter, Article 2:208 which would invalidate additional or different terms offered after offer and acceptance if they materially alter the terms of the agreement, and Article 4:110 which limits the enforcement of unfair terms that were not individually negotiated. Ole Lando and Hugh Beale (eds.), Principles of European Contract
precedent, but this does not yet provide very consistent guidance. Because there are not yet many reported cases dealing with electronic contracts, most lawyers in the US look to older cases interpreting the significance of "shrinkwrap" software licenses (licenses enclosed in a shrinkwrap cover with software disks or CDs and bearing a legend stating that breaking the shrinkwrap to access the software constitutes acceptance of the terms of the software license), and telephone order sales of goods. Many of the cases involve the efforts of the vendor to enforce mandatory arbitration terms in consumer contracts, terms which would not be enforceable in a consumer contract in the European Union over the objection of the consumer.\textsuperscript{10} The lack of a consistent body of case law analyzing the rights and responsibilities of the parties to distance contracts, software licenses and by extension, electronic contracts, seems to reflect the absence of any broad consensus regarding how US contract law should be adapted to apply to new forms of transactions. There is considerable support for a laissez-faire approach that would limit many forms of government intervention in markets by failing to revise law that by their current terms do not apply to electronic commerce. However, there is also considerable support preserving a role for government oversight in online markets; the degree of popular support in the US for government regulation of new technologies became apparent following the terrorist attacks on September 11. Until some progress is made in resolving this political controversy, it is unlikely that either a new federal law or a uniform state law addressing these issues will make much headway.

In early shrinkwrap cases, US courts showed a reluctance to enforce strictly standard form contracts. In \textit{Arizona Retail Systems, Inc. v. Software Link, Inc.},\textsuperscript{11} the court held that the shrinkwrap license might be part of the contract with regard to the first sale of a copy of software. When the licensee placed an order by telephone after having inspected that first copy and the licensor did not insist in that phone call that the terms in the form contract were part of the agreement, the shrinkwrap license terms were deemed not to be included in the subsequent telephone order contract. In later shrinkwrap cases, however, courts have been more willing to enforce all the


\textsuperscript{11} 831 F. Supp. 759 (D. Ariz. 1993).
terms in shrinkwrap licenses. In *ProCD, Inc. v. Zeidenberg*, Judge Easterbrook of the Seventh Circuit held that a shrinkwrap license included with a CD-ROM containing a noncopyrightable database was enforceable to limit the rights of the purchaser of the CD. This ruling overturned the district court’s opinion holding that the terms contained in the shrinkwrap license were unenforceable because the purchaser of the CD-ROM had not agreed to them at the time of purchase. In *Mortenson Company, Inc. v. Timberline Software Corporation*, the Supreme Court of Washington held that the limitation on consequential damages contained in a shrinkwrap license was enforceable against a licensee who submitted a construction bid $1.95 million less than it should have been due to a malfunction by the software. The software license limited the software developer’s liability to the purchase price of the software. While preparing the bid, the software malfunctioned repeatedly, each time displaying the following error message: Abort. Cannot find alternate. Mortenson submitted the bid generated by the software notwithstanding the repeated error messages, and learned after being awarded the contract that its bid was much lower than intended.

In cases involving telephone sales of tangible goods, US courts have generally enforced post-payment terms against the purchaser even though the vendor did not make it clear that acceptance of printed terms to be received later was a condition subsequent to the sale of goods contract. In *Hill v. Gateway 2000, Inc.*, Judge Easterbrook held that the preprinted-form contract enclosed with a computer the Hills had ordered by telephone from Gateway was enforceable because the purchaser had not exercised its right to return the computer within 30 days if the terms were not acceptable. In *Edmond v. Gateway 2000, Inc.*, a court stayed the proceeding before it and required a consumer to submit to arbitration a dispute regarding the adequacy

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12 86 F.3d 1447 (7th Cir. 1996).
14 140 Wash.2d 568; 998 P.2d 305; 2000 Wash. LEXIS 287 (Wash. 2000).
15 A condition subsequent is an event that extinguishes a duty that has already arisen. E. Allen Farnsworth, Farnsworth on Contracts, 2nd ed. (1998), § 8.2; Restatement (Second) of Contracts § 230.
16 105 F.3d 1147 (7th Cir. 1997).
of the customer service provided based on the terms of a service contract Gateway had included in the box with the computer. However, in *Brower v. Gateway 2000, Inc.*, an appellate court in New York held that, although the terms of the preprinted-form contract were generally enforceable, the arbitration clause it contained was unconscionable and therefore unenforceable. In *Klocek v. Gateway, Inc.*, the court refused to dismiss a compliant filed by a *pro se* plaintiff based on a mandatory arbitration clause contained in a contract which was enclosed in a box with a computer. The court rejected Judge Easterbrook’s reasoning in *Pro-CD* and *Gateway* as unpersuasive. If a contract was formed at the time of a telephone order, then the printed form shipped inside the box with the computer would only be an offer by Gateway to modify the terms of a contract already formed. Under such circumstances, the mandatory arbitration provision in the contract would not be binding on the plaintiff, so summary judgment for Gateway was not warranted.

c) Parameters of electronic commerce legislation in the European Union

The European Union has not yet produced any detailed legal instrument for electronic contracting that could be compared to the draft legislation produced in the US such as UCITA, or a broad attempt to transpose the UNCITRAL Model Law on Electronic Commerce into member state law such as UETA. The Electronic Commerce Directive mixes public and private law provisions, each focusing rather narrowly on some specific problems that arise in electronic commerce. It is clear that this directive is not aimed to be the comprehensive and final regulatory framework for electronic contracts in Europe. To some extent, this may be the consequence of a failure by the Commission or the Council to take into account international models or examples such as the UNCITRAL Model Law on Electronic Serv. 2d 1110 (Del. Ch. 2000) reached a similar result on similar facts.

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20 Discussed supra at n. 6.
21 Discussed infra at n. 69.
Commerce or the uniform instruments in the US.\textsuperscript{24} However, the process of European legal harmonization in electronic commerce seems to be influenced by other factors:

Long before the emergence of electronic commerce from business to consumers, the European Union had been very active to anchor strong consumer protection mechanisms in contract law. The result is a set of directives which provide the framework for most of the national consumer protection rules: the early directives on defective products liability\textsuperscript{25} and on contracts negotiated away from business premises;\textsuperscript{26} the directive on package tours;\textsuperscript{27} the directive on unfair contract terms;\textsuperscript{28} more recently, the directives on distance selling\textsuperscript{29} and on the sale of consumer goods\textsuperscript{30} among others. Both the provisions of these directives and their underlying purposes are not limited to paper world contracts, but based on general assumptions why consumers may need protection against certain business practices: Consumers have commonly been presumed to have weaker bargaining powers and few means to negotiate standard form contracts;\textsuperscript{31} the consumer is supposed not to grasp the true value of a contract and the economic impact of his commitment when

\textsuperscript{23} Discussed infra at n. 41.


he is addressed in his home by a sales representative; and the consumer cannot see or test the goods before she buys them through a distance contract.\textsuperscript{32} Recently, the justifications given for a high level of consumer protection seem to find support in economic analyses such as information assymetries and weak competition.\textsuperscript{33}

There is a broad consensus within European legislative institutions that most of the rationales of the consumer protection instruments equally apply to electronic commerce situations. It is also a general understanding that the level of protection in electronic commerce should not be lower than in traditional paper-based transactions.\textsuperscript{34} At the same time, the scope of application of the existing consumer protection directives extends to all types of contracts whether concluded on paper or by electronic means. Neither the provisions of the unfair contract terms directive nor those in the directives on distance contracts or on the sale of consumer goods are restricted to paper documents. The directive on distance contracts even gives an example for explicit “cross-sectional” consumer protection legislation: Its drafters clearly had in mind contracts concluded by the use of new media.\textsuperscript{35} Nonetheless, they decided not to limit the scope of the directive to online contracting, but to extend it to all contracts concluded without personal contact on the basis of an organized sales and distribution system. This directive is a clear example of European efforts to coordinate the rules for both electronic contracts and contracts concluded through other, more traditional means of communication. Thus, European consumer protection law has been “technology neutral” from the very outset. Electronic commerce in Europe is not taking place in an lawless space or “legal vacuum” that would have to be filled by broad legislation. As a consequence, to legislate for consumer protection in electronic commerce on a European level can only mean to harmonize and eventually adapt the existing instruments and to fill

\textsuperscript{32} Distance Selling Directive 97/7/EC, [1997] O.J. L 144/19, consideration 14.

\textsuperscript{33} Cf. Stefan Grundmann, The Structure of European Contract Law, 9 ERPL 505, 515, 520 (2001).


\textsuperscript{35} Not primarily the Internet which had not been developed for business services before 1997, but electronic mail, fax, teleshopping or automatic telephone order systems; cf. Distance Selling Directive
remaining gaps, but not to proceed to a complete codification of electronic consumer contracts.

The other factor to be considered is the level of harmonization of contract law which the European Union has achieved before the emergence of electronic commerce. This landscape of European contract law can be divided in two characteristic areas.\textsuperscript{36} Those mandatory rules of contract law which can be seen as a reaction to market failure – like labour law, antitrust regulations or consumer protection – are broadly harmonized or even standardized within the European Union.\textsuperscript{37} Here, European legislation for electronic commerce can be based upon a well-developed and detailed structure. National legislation in this area is strictly limited by the Treaty provisions establishing the internal market.

The situation turns out to be very different for the area of „facilitative“ contract law, meaning all those rules which provide a fall-back framework on which contract parties may rely in cases where they have not agreed otherwise in their contract. This „general“ contract law – like the rules on conclusion or avoidance of contracts, on performance or breach – has still remained a national affair until now. A uniform European model for national legislation comparable to the US Uniform Commercial Code does not exist, and a fully harmonized European law of contracts or a European civil code have not yet evolved beyond the project phase.\textsuperscript{38} It is not even finally decided whether the internal market actually requires such a level of harmonization of general contract law\textsuperscript{39} and whether the European Union has the competence for it.\textsuperscript{40} In this situation, it would seem rather daring, if the European Union decided to

\textsuperscript{36} Cf. supra at n. 3 ff.
\textsuperscript{37} Grundmann, supra, n. 33 at 517 f.
\textsuperscript{38} Peter-Christian Müller-Graff, Gemeinsames Privatrecht in der Europäischen Gemeinschaft (2nd ed. 1999), 9, 27.
\textsuperscript{40} For positive answers, see Jürgen Basedow, A Common Contract Law for the Common Market, 33 Common Market Law Review 1177 (1996); Arthur Hartkamp e.a. (eds.), Towards a European
develop detailed structures for electronic contracts, before the foundations of a common „general“ contract law in Europe are clearly visible. It would give the impression that the second step was made before the first.

As a result, the European Union approach to bring its legal system in line with the requirements of the technological change is in the same time a comprehensive and a selective one: It is comprehensive because it aims at transferring the existing legal framework, e.g., for consumer contracts to electronic commerce. Remaining gaps are supposed to be filled by specific legislation. It is selective and fragmentary in the same time because this gap-filling legislation does not result in an all-inclusive legal background for electronic commerce providing for complete guidance, but in singular instruments which have to be coordinated.

3. The European Union rules concerning electronic contracting

a) The Electronic Commerce Directive’s “contract law neutrality”

The European Union directive on electronic commerce\(^41\) clearly reflects the legislative parameters which have been outlined. The provisions on electronic contracting (Articles 9, 10 and 11) do not address the full process of how a contract may be concluded by electronic means. Rather they combine a broad general rule enabling electronic contracts as such (Art. 9)\(^42\) with some detailed disclosure obligations (Art. 10) and narrow mandatory requirements for the exchange of order and acceptance in online contracting (Art. 11). Both the general rule and the more specific provisions do not directly interfere with the existing national systems of „general“ contract law. They are “contract law neutral”.\(^43\) This is obvious for Art. 9:


\(^{42}\) Art. 9 (1): ”Member States shall ensure that their legal system allows contracts to be concluded by electronic means. Member States shall in particular ensure that the legal requirements applicable to the contractual process neither create obstacles for the use of electronic contracts nor result in such contracts being deprived of legal effectiveness and validity on account of their having been made by electronic means.”

\(^{43}\) Christian Schneider, Zur Umsetzung der E-Commerce-Richtlinie im Regierungsentwurf zur
It leaves to the European Union member states the decision how they want to make their contract law conform with the requirements of electronic commerce. Only the level of conformity – full acceptance of electronic contracts – is laid down. While less clear, the same is true for the rules on online orders in Art. 11. This provision is not supposed to introduce a new way for the exchange of offer and acceptance, but imposes an additional duty upon any e-business to send an acknowledgment of receipt upon a communication sent by the consumer. Art. 11 does not decide whether the business posting an interactive Web site makes an offer which the consumer accepts or whether the consumer clicking through the site makes the offer which is accepted through the confirmation sent by the business or otherwise. The only rule that might directly interfere with national contract law is the provision on the moment of receipt of electronic offers and acceptances.

The original approach for the directive had been slightly different. The draft Art. 11 contained a substantive rule for the conclusion of contracts by electronic means which differed considerably from any mechanism that could be found in national contract law: It required double confirmation by both contracting parties after the exchange of offer and acceptance. Upon almost unanimous disapproval by commentators, the Council cancelled the rule in the final version of the directive.

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45 Art. 11 (1): “Member States shall ensure, except when otherwise agreed by parties who are not consumers, that in cases where the recipient of the service places his order through technological means, the following principles apply: - the service provider has to acknowledge the receipt of the recipient’s order without undue delay and by electronic means, - the order and the acknowledgement of receipt are deemed to be received when the parties to whom they are addressed are able to access them.”


47 The German law implementing Art. 11 of the directive – § 312e (1) BGB [German Civil Code] – refers to the general principle of German law that a contractual declaration is deemed to be received when it has reached the sphere of the addressee and the addressee can be expected to read it (§ 130 (1) BGB).


Other examples of European harmonization of contract law show that this was most likely a wise decision: The Distance Selling Directive requires the member states to insure that consumers are exempt from any obligation or consideration when they receive goods or services the supply of which they have not solicited (“inertia selling”). Such marketing practices are considered to be unfair and to lure consumers in sales contracts they do not want. As a consequence, the unsolicited supplier is punished by the loss of any right to the goods he sent, as well as of any consideration. The German implementation of this rule, however, has caused lively debates because it collides with several structural principles of German law. Neither the drafters of the directive nor the German legislature had foreseen these collisions. The practical impact of this issue is negligible, since inertia selling has never been common practice. But the example serves as good evidence of the difficulties that are connected with European harmonization of contract law for specific purposes such as electronic commerce.

Another example is the directive on the sale of consumer goods. Although the scope of this instrument is limited to consumer sales – it provides for compulsory guarantees and remedies for consumer buyers – the German legislature found that an implementation of the directive in a separate act would lead to the unsatisfactory situation to have two different systems of sales law. Therefore, Germany decided to completely revise its one hundred years old contract law. The consequences of this reform will keep the German civil law community busy for a long time. There is no reason to criticize the consumer sales directive for this effect. But it shows that partial harmonization on the European level often leads to internal disharmonies in

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51 § 241a BGB.
52 Matthias Casper, Die Zusendung unbestellter Waren nach § 241a BGB, Zeitschrift für Wirtschaftsrecht (ZIP) 2000, 1602; Günter C. Schwarz, § 241a BGB als Störfall für die Zivilrechtsdogmatik, Neue Juristische Wochenschrift (NJW) 2001, 1449.
54 For a short introduction see Stefan Grundmann, European sales law-reform and adoption of international models in German sales law, 9 ERPL 239 (2001).
the member states’ legal systems. These internal disharmonies can only be avoided by either a European codification or a harmonization of the entire contract law system (or at least a considerable part of it) or, in the meantime, by “contract law neutral” legislation like the directive on electronic commerce.

b) "Technical deficiencies"

The directive on electronic commerce has been criticized for a lack of clarity in the provisions on electronic contracts and for its fragmentary character. Indeed, the articles of the directive may hardly serve as a model for precise drafting. In this respect, reference to successful examples like UETA or the UNCITRAL Model Law on Electronic Commerce would certainly have been fruitful. But analyzing such “technical deficiencies” in the light of what has been said about the difficulties of European contract law harmonization it appears necessary to distinguish between unclear drafting on the one hand and what may have been a deliberate abstention of the drafters on the other hand.

The directive does not provide for any legal consequence or sanction to the failure of a supplier to give the required information or to confirm receipt of an order by the consumer. This will lead to a considerable variety of implementations in the European Union member states. In Austria, to give an example, an electronic commerce business which does not conform to the disclosure requirements of the directive may be fined by public authorities. Germany has not chosen this approach. Instead, the only direct consequence of a failure to inform the customer on the Web page is that the customer may withdraw from the contract at any time. Thus, the seller is threatened with the potential obligation to reimburse the customer for an indefinite period of time. Apart from this sanction, a failure to disclose may result in an obligation to pay damages or may be subject to unfair competition

55 Ramberg, supra, n. 24.
56 Ramberg, supra, n. 24 at 431 f.
57 Bundesgesetz, mit dem bestimmte rechtliche Aspekte des elektronischen Geschäfts- und Rechtsverkehrs geregelt werden (E-Commerce-Gesetz – ECG) of 21 December 2001, BGBl. 2001 I Nr. 152, 1977, § 26 (1). The maximum fine is limited to only 3,000 Euro.
58 § 312e (3) BGB.
59 This mechanism has its roots in the Distance Selling Directive, Art. 6.
It is not decided that these sanctions are sufficient to enforce the requirements of the directive,\(^{61}\) and Germany might be forced to tighten them.

This divergence of the sanctions is certainly an unfortunate situation. However, it does not necessarily have negative impacts on the efficiency of the internal market. From the directive it is rather clear to Internet suppliers which information they have to provide to their customers and that they have to face negative consequences when they fail to do so. The fact that they face different negative consequences in different member states, however, is nothing they may complain about: If an online supplier from France decides to comply to the information duties when selling to Austrian consumers because he fears the fine, but decides not to do so vis-à-vis German consumers because he is not afraid of withdrawals, then he will have difficulties in using the same Web site for all countries. But such behavior is not the one the directive aims to support. Thus, the lack of legal consequences may turn out less severe than expected. Moreover, had the drafters decided to add uniform sanctions to the directive they could have come into conflict with the idea of a “contract law neutral” directive. Legal consequences such as the invalidity of the contract or a right to payment of damages may easily interfere with national contract law structures. Only uniform measures of public law such as fines would have avoided this risk.

More concern could have been given to the information duties themselves of which the Electronic Commerce Directive and the Distance Selling Directive make an almost inflationary use.\(^{62}\) The lists of information duties in both directives are long and not very well harmonized. Whereas the information obligations arising prior to the conclusion of the contract in both directives may be fulfilled by any means, under the Distance Selling Directive the information must additionally be sent to the consumer in writing or “on another durable medium available and

\(^{60}\) Palandt-Heinrichs, BGB Ergänzungsband (61st ed. 2002), § 312e Rn. 11.

\(^{61}\) See Clemens T. Steins, Entwicklung der Informationspflichten im E-Commerce durch Rechtsprechung und Schuldrechtsreform, Zeitschrift für Wirtschafts- und Bankrecht (WM) 2002, 53, describing the reluctance of Internet suppliers to comply with the information obligations of the Distance Selling Directive.

\(^{62}\) Distance Selling Directive, Art. 4 and 5; Electronic Commerce Directive, Art. 10.
accessible”.

The ways by which the supplier may conform to this last condition in online contracting are still to be determined. Furthermore, the information overflow may well result in the contrary effect that consumers do not read any of the information provided. On the other hand, the US examples of standard form contracts being enforceable without any reasonable prior disclosure to the consumer are best evidence that there can be a real need for information obligations.

Finally, the directive on electronic commerce does not address the issues of signature and writing requirements in electronic environments which are major issues in other instruments like UETA and the UNCITRAL Model Law. It would indeed have been an advantage had the drafters of the directive made use of the experience gained with these models before they worked on the directive’s general rule. Isolated legislation for a global issue as electronic commerce may once become one would be unfortunate at best. On the other hand, the general rule in Art. 9 of the directive is much broader in scope than the respective provisions in UETA and the UNCITRAL Model Law. Art. 9 imposes a duty upon the member states to enable the conclusion and performance of contracts by electronic means. The modification or abolition of writing or signature requirements is perhaps the main element of it, but it is clearly only one of the obligations that the member states must undertake. Thus, it seems as if the directive, in its Art. 9, has transferred the obligation to refer to existing models to some extent to the member states enacting it. It is left to national legislatures to find out the best way to adapt their national contract law – writing and signature requirements in particular – to electronic commerce. A detailed European rule on what writing means in electronic environments would also have been possible. But it would have called for a

63 Distance Selling Directive, Art. 5.

64 In the first published court decision in Germany concerning the "durable medium", the court has held that even a Web page constitutes a "durable medium": OLG München, dec. of 25 January 2001, Neue Juristische Wochenschrift 2001, 2263, 2264. This holding has been widely rejected: Clemens T. Steins, Entwicklung der Informationspflichten im E-Commerce durch Rechtsprechung und Schuldrechtsreform, Zeitschrift für Wirtschafts- und Bankrecht (WM) 2002, 53, 58; Stefan Lorenz, Zeitschriftenabonnements im Internet – heute und morgen, Neue Juristische Wochenschrift (NJW) 2001, 2230.

65 See supra at n. 11 ff., and infra, at n. 77.
thorough analysis of the purpose of statutory writing requirements in all member states. It would certainly have been commendable if the drafters of the directive had assumed this task. On the other hand, the reluctance to interfere with national concepts of contract law – i.e. the “contract law neutrality” of the directive – may have been one reason why they did not do so.

On balance, the Directive on electronic commerce has not created a comprehensive codification for electronic contracting and has not even harmonized a few, if any, aspects of contract law. Considering the current state of European civil law harmonization, it is doubtful whether it would have been reasonable to try to do more than this. A clear advantage of the Directive is its approach to sort out specific problems which currently affect consumer trust in electronic transactions.\(^67\) In this respect, the Directive – together with the other European consumer protection instruments – seems to be moving in the right direction, and perhaps even a small step ahead of the US developments discussed below.

4. Lessons from the US experience with E-SIGN

In 2000, the Electronic Signatures in Global and National Commerce Act (“E-SIGN”)\(^68\) was signed into law. The US Congress took the text of the Uniform Electronic Transactions Act (UETA),\(^69\) a model law drafted for adoption by the fifty states, and revised it for use as a federal law.\(^70\) While the UETA drafting process was thoughtful and deliberative, producing a balanced model law that has been widely praised,\(^71\) by contrast Congressional consideration of the issues was hasty and highly politicized, producing a statute that is difficult to read and in some cases nearly impossible to apply. Legislation addressing the issues raised by the

\(^{66}\) Ramberg, supra, n. 24 at 432 ff.
\(^{67}\) Cf. the priceline.com example infra at n. 77.
\(^{70}\) E-SIGN is not a simple restatement of UETA, however. It does not contain many provisions found in UETA, such as the provisions governing attribution of messages found in UETA § 9, the admissibility of electronic records as evidence found in UETA § 13, or when electronic messages are deemed sent and received found in UETA § 15.
UNCITRAL Model Law on Electronic Commerce\textsuperscript{72} had been under consideration by the US Congress for more than a year when in spring 2000, a coalition of political forces suddenly emerged that made enactment of such a law highly likely. Over a period of several weeks, the project of removing obstacles to the formation and enforcement of electronic contracts became such a hot topic that everyone in Congress clambered to express their support for it. In the indecorous rush to finalize the law before the consensus supporting it disappeared again, the statute quickly became encrusted with ill-considered and poorly drafted provisions. As a result, it lacks the simplicity and clarity of UETA, and may have added more uncertainty than it resolved in the realm of electronic contract law in the US. Two of the most important sources of uncertainty regarding the application of E-SIGN include the treatment of consumer contracts and the relationship of state and federal electronic contracting law.\textsuperscript{73}

The consumer protection provisions contained in E-SIGN § 101(c) are not found in UETA but were the product of frantic lobbying on the part of consumer advocates.\textsuperscript{74} Although these provisions reflect important and valid insights about the

\footnote{\textsuperscript{71} See, e.g., Ramberg, supra, n. 24.}

\footnote{\textsuperscript{72} The heart of the UNCITRAL Model Law on Electronic Commerce is found in art. 5 which provides that communications shall not be denied legal effect solely because they are in electronic form.}

\footnote{\textsuperscript{73} For a general overview of the provisions of E-SIGN and a comparison to corresponding provisions of UETA, see Robert A. Wittie and Jane K. Winn, E-SIGN of the Times, E-Commerce Law Report, July 2000. Other serious ambiguities created by E-SIGN include the provisions requiring state laws to be technology neutral in regulating electronic commerce, and the obligations of local government (such as those at the county level, as opposed to state or federal governments) to accept communications from constituents using electronic media.}

\footnote{\textsuperscript{74} (c) Consumer Disclosures. --

(1) Consent to electronic records. -- Notwithstanding subsection (a), if a statute, regulation, or other rule of law requires that information relating to a transaction or transactions in or affecting interstate or foreign commerce be provided or made available to a consumer in writing, the use of an electronic record to provide or make available (whichever is required) such information satisfies the requirement that such information be in writing if --

(A) the consumer has affirmatively consented to such use and has not withdrawn such consent;

(B) the consumer, prior to consenting, is provided with a clear and conspicuous statement --

(i) informing the consumer of (I) any right or option of the consumer to have the record provided or made available on paper or in nonelectronic form, and (II) the right of the consumer to withdraw the consent to have the record provided or made available in an electronic form and of any conditions, consequences (which may include termination of the parties' relationship), or fees in the event of such withdrawal;
nature of electronic contracting in business-to-consumer markets, they represent a missed opportunity for US consumers because they are unnecessarily narrow in focus. In particular, the UETA contains a very general provision requiring the consent of both parties to form contracts using electronic media, but E-SIGN lacks such a provision. In E-SIGN, there is a requirement that a consumer unambiguously consent to the use of electronic media, but is only triggered by a pre-existing obligation to provide the consumer with a written disclosure. This provision establishes an important principle in online consumer protection law: that the risks associated with current poor quality and lack of standardization in consumer personal computer systems are to be born by retail businesses wishing to use them to communicate with consumers, not by consumers. Before a business can accept a consumer’s agreement to use electronic media to communicate with the business, the business must be able to "reasonably demonstrate" that the consumer can in fact access and store the statements in electronic form. For example, a business sending

(ii) informing the consumer of whether the consent applies (I) only to the particular transaction which gave rise to the obligation to provide the record, or (II) to identified categories of records that may be provided or made available during the course of the parties' relationship;

(iii) describing the procedures the consumer must use to withdraw consent as provided in clause (i) and to update information needed to contact the consumer electronically; and

(iv) informing the consumer (I) how, after the consent, the consumer may, upon request, obtain a paper copy of an electronic record, and (II) whether any fee will be charged for such copy;

(C) the consumer --

(i) prior to consenting, is provided with a statement of the hardware and software requirements for access to and retention of the electronic records; and

(ii) consents electronically, or confirms his or her consent electronically, in a manner that reasonably demonstrates that the consumer can access information in the electronic form that will be used to provide the information that is the subject of the consent; and

(D) after the consent of a consumer in accordance with subparagraph (A), if a change in the hardware or software requirements needed to access or retain electronic records creates a material risk that the consumer will not be able to access or retain a subsequent electronic record that was the subject of the consent, the person providing the electronic record --

(i) provides the consumer with a statement of (I) the revised hardware and software requirements for access to and retention of the electronic records, and (II) the right to withdraw consent without the imposition of any fees for such withdrawal and without the imposition of any condition or consequence that was not disclosed under subparagraph (B)(i); and

(ii) again complies with subparagraph (C).

75 UETA § 5(b).

76 E-SIGN § 101(c)(1)(C)(ii).
monthly statements by postal mail could not accept a consumer’s instruction coming in the form of a telephone call or paper correspondence to stop mailing statements and begin sending them in electronic form without taking some further steps to be sure the consumer could actually receive, read and store the statements in electronic form. This obligation might be satisfied by asking the consumer to visit a Web site and type in a password sent by postal mail, or by reading a password sent by email to a representative during a telephone call. This imposes a very high burden on any business using postal mail today to communicate with consumers, but can be met easily by any business that interacts with consumers exclusively through a Web site.

The irony of the E-SIGN consumer protection provisions is that they only apply to that subset of consumer transactions where some other US consumer protection law creates an obligation to provide disclosures in writing, not in all forms of online consumer contracts. Many transactions involving a business and consumer in the US have no such written disclosure requirement, and the E-SIGN consumer provisions do not address those transactions. While US consumer advocates may care deeply about the rights of consumers to receive mounds of turgid and dense written disclosures, it is not clear that the consumers share their concerns.

The drafters of European Union Electronic Commerce Directive77 may have done a slightly better job at identifying potential problems with online contracting processes that may be of concern to consumers. For example, Art. 10 (1) requires information society service providers to inform consumers of the technical steps in the process required to form a contract prior to concluding it, and procedures for correcting errors. In addition, Art. 5 (1) requires that service providers must disclose their identity and location and provide consumers with a means of contacting them rapidly and in a direct and effective manner. There is at present no law imposing such requirements on US merchants, and in fact, many major US Internet retail sites do not provide this information to consumers. The design of the priceline.com Web site is revealing in this regard. Priceline.com offers a ”reverse auction” service to consumers: consumers indicate the maximum price they will pay for a service and

priceline.com tries to find a vendor willing to offer the service. When a consumer submits a bid, it is irrevocable. A review of the priceline.com Web site reveals that consumers must proceed through four separate screens by clicking on a "next" icon of ambiguous significance before finally arriving at a screen that requires clicking on a "buy my tickets now" icon. Notwithstanding priceline.com’s failure to make clear to consumers its procedure for receiving irrevocable bids from them, its terms and conditions of use state "It is a violation of law to place a Request in a false name or with an invalid credit card.” Priceline.com apparently does not consider the use of pseudonyms by consumers wishing to learn how its online contracting system works before submitting an irrevocable bid to it to be an appropriate strategy for dealing with its poorly designed Web site. In addition to not providing an explanation of its contracting system, priceline apparently does not offer any error correction process, as it has no description of one anywhere on its Web site; it does not provide any description of a method for consumers to contact it rapidly and in a direct and effective manner; and it does not disclose its principle place of business or geographical location.

The federal preemption provisions in E-SIGN add considerable uncertainty to its interpretation and application. While the general principle that federal law preempts inconsistent state law is an incontrovertible element of the US federal legal order, E-SIGN introduced a novel counterpart to "preemption" in an effort to diffuse the political controversy surrounding its usurpation of a model law drafted by the states for their own use. Congressional deference to the autonomy of state governments has been growing in recent decades in the US. Federal legislators are often fearful of criticism for making unwarranted incursions into state sovereignty, yet these fears were apparently not sufficient to stop them from pilfering UETA from the National Conference of Commissioners on Uniform State Laws (NCCUSL), a law reform organization made up of representatives of the states. When this move provoked an outcry from various quarters, Congress attempted to placate its critics by adding a novel provision permitting states to "supersede" the federal E-SIGN Act under certain circumstances. Thus, if states had laws that were inconsistent with E-SIGN, E-SIGN would preempt those laws, establishing national uniformity on the basis of a federal law, but if states instead passed the original, uniform version of UETA, then E-SIGN would not preempt state law, but instead be "superseded" by
the state’s enactment of UETA. This notion of “supersede” is problematic for many reasons, including its novelty and complexity. Of particular concern to consumer advocates, however, was the surprising result that any state that took seriously its obligation to enact the official, uniform version of UETA effectively eliminated the application of the consumer protection provisions of § 101(c) from transactions taking place entirely within the state. Consumer advocates are now lobbying individual state legislatures to enact legislation based on E-SIGN § 101(c) to insure its application to local transactions.

On balance, enactment of a federal law may have helped remove any uncertainty regarding the validity of contracts formed using electronic media under US law. This uncertainty arose due to the continued existence of a “Statute of Frauds” under US law that required a plaintiff in certain contract disputes to produce a writing signed by the defendant. State-led efforts to repeal the Statute of Frauds by enacting UETA showed signs of trouble, which is one reason a coalition of forces supporting E-SIGN at the federal level emerged. California, the state with the largest market for electronic commerce companies in the US, had made substantial revisions to UETA before enacting it into state law. Technology companies feared that other states would follow California’s lead in making non-uniform revisions to UETA before enacting it, destroying any uniformity it might offer even if it were enacted in all fifty states. The enactment of E-SIGN has eliminated any lingering doubts that might have existed about the enforceability of electronic contracts under US law, but at the price of considerable uncertainty about the legal effect of many hastily drafted provisions of E-SIGN. Due in part to the incentives provided in E-SIGN, UETA has now been enacted in nearly all fifty states, so as a practical matter, any business in

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78 California, the first state to enact UETA, had loaded up the model law with a large number of non-uniform revisions, thus destroying any prospect of national uniformity through harmonization of state laws. This E-SIGN provision was designed to preserve the preemptive effect of E-SIGN in any state that tried to follow California’s lead.

79 The authority of the US federal government to regulate private economic activity must be based on some express authorization contained in the US constitution. E-SIGN is based on Congress’ authority to regulate interstate commerce, so by definition cannot apply to transactions that take place entirely within one state.

80 The original Statute of Frauds was enacted in England in 1677 and repealed in 1954. It remains in effect in the US in UCC § 2-201 and the Restatement (Second) of Contracts, § 131.
the US planning to use electronic contracts will likely refer to the provisions of both E-SIGN and UETA in its review of applicable law.

5. Relationship between technical standards, contracting technologies and contract law

Although the US and European Union approaches to electronic contract law reform differ markedly in the realm of consumer protection law, most electronic commerce today is conducted between businesses, not with consumers. US and European Union law applied to "B2B" electronic contracts is less divergent than the law applicable to consumer contracts and less problematic, in light of recent efforts to harmonize the law applicable to such cross-border trade including the Vienna Convention on the International Sale of Goods and the UNIDROIT Principles of International Commercial Contracts. While this may indicate that no major reform of existing principles of commercial law and the law applicable to cross-border commercial transactions will be required to accommodate the continued growth of electronic commerce, advances in the technology of electronic contracting may call that conclusion into question. This is because new electronic contracting technologies may require a greater degree of formalization and standardization of business practices than older technologies such as electronic data interchange (EDI) required. The potential for conflict between the normative content of technical standards on the one hand, and law and public policy concerns on the other, has already been illustrated by the controversy surrounding the Internet privacy standard, Platform for Privacy Preferences (P3P). The significance of any conflict between what technical standards can accommodate on the one hand, and what the law requires on the other is increased if the regulatory authority of the technical standards is enhanced because of strong network effects.

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Networks, including information technology networks, have special characteristics that often make them resistant to change. These special characteristics can often be analyzed as a form of market "externality" that arises when one market participant’ actions affect other market participants without compensation being paid. Networks may evidence positive or negative externalities. If the value of being in a network is increased to those already in the network every time a new person joins the network, then adding a new participant to the network has positive network externalities. For example, if the network is the network of fax machine users, the market price of fax machines may reflect their cost of production, not their value based on how many people can be reached by fax. The positive effect of more individuals participating in the network is an externality to the extent that fax manufacturers continue to base their pricing decisions on their costs of production and each new fax machine purchaser has no way to collect from existing fax machine owners the increase in value that accrues to them as a result of the growth in the network. In many circumstances, those externalities can be considerable.

Network effects, however, are not always positive. A common form of negative network externality, known as a "lock-in" effect, arises when the cost of making changes to some part of a network system is so expensive that participants in a network refrain from making even changes that would improve the operation of the network. This problem can also be referred to as "path dependence.” Lock-in can arise due to the fact that participants in a network may have to make large investments to gain access to a network. Once those investments have been made, participants in a network will be reluctant to write them off and switch to new systems if it is not certain that everyone on the present network will do the same thing at the same time. If one form of a network technology can gain a significant market share quickly, then other competitors may find themselves unable to dislodge the first mover unless their products are significantly superior to the first-in-time product and the costs of switching are not prohibitive.

Commercial activity that takes place within electronic networks may be to some degree regulated by norms embedded in the network technology itself, and those regulations may take on a mandatory character if an end user’s only choice is to comply with the norm or be excluded from access to a particular market because of strong network effects. For example, almost all letters of credit issued to finance cross-border trade today are issued using the SWIFT international electronic funds transfer system. These letters of credit are subject to the Uniform Customs and Practice (UCP) issued by the International Chamber of Commerce. The UCP operate as a sort of modern lex mercatoria because they provide a set of internationally respected rules governing the rights and obligations of the parties to letters of credit used in cross-border trade. Because of the way that information is organized in an electronic letter of credit transmitted using the SWIFT network, the UCP applies by default to any transaction unless the parties take some action to override that default setting. This default setting in the SWIFT network technology can be thought of as a sort of “technical norm” that governs the conduct of parties to a trade credit; the content of the norm is that the UCP should apply to the letter of credit. In this example, the substance of the technical norm harmonizes with the contractual choices of the parties, as well as the commercial law of most trading nations. The centralized state law of trading nations makes binding a choice by the parties to apply the UCP to a letter of credit, and the technical norm embodied in the system rules of SWIFT makes the choice of the UCP virtually universal.

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86 Society for Worldwide Interbank Telecommunications, see <http://www.swift.com> (visited April 30, 2002).


88 The UCP was widely used in letters of credit issued in cross-border trade long before the creation of electronic networks; the effect of the SWIFT default rule may be limited to consolidating its dominance in this area of law.

89 “The Uniform Customs and Practice is an international body of trade practice that is commonly adopted by international and domestic letters of credit and as such is the "law of the transaction" by agreement of the parties.” Comment to Revised Uniform Commercial Code (UCC) 5-101.
the choice of UCP is only a default rule application of which the parties can avoid, it is not a mandatory norm.

As more commercial activity takes place within networked computer systems, the role of "technical norms" as a supplementary source of law is likely to increase. Just as with custom and other informal sources of regulation, technical norms may arise through a variety of procedures and with varying degrees of self-consciousness among the actors involved in their creation. Legislators will face problems only if technical norms and the requirements of law diverge, and legislators cannot easily cause the content of technical norms to be revised to bring them into conformity with the law. It is not yet possible to predict how often such conflicts will arise between what networked systems for processing commercial transactions permit and what the law requires, or how difficult any such conflicts may be to resolve if they arise. An early indication of what the future may hold for those considering whether electronic commerce will require revisions in existing contract law can be found in the development of technologies to regulate the collection of personal information in Internet commerce.

The World Wide Web Consortium (W3C)\(^90\) is one of the leading organizations helping to set standards for the Internet. The W3C issued the Platform for Privacy Preferences (P3P),\(^91\) a standard designed to promote the development of Internet technologies to facilitate communication between firms and individuals regarding data practices. Microsoft's Internet Explorer 6.0 supports P3P, permitting end users visiting Internet sites to block the site operator from placing cookies\(^92\) on the end user's computer without the end user's consent. The P3P standard is promoted by US Internet companies as a successful example of "self-regulation" while it has been roundly criticized by US privacy advocates as encouraging greater disclosure of

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\(^{90}\) Information about the W3C is available on its Web site at <http://www.w3c.org>.

\(^{91}\) The P3P standard and information about it can be accessed at <http://www.w3.org/P3P/> (visited April 30, 2002).

\(^{92}\) Cookies are text files that are placed on the hard drive of a visitor to a Web site by the server providing the Web content. Cookies permit the server to recognize a return visitor and to track the activities of individual visitors to a site. Unless the end user provides personally identifiable information to the Web site operator, it is not usually possible for the Web site operator to associate a real world person with an online identity established through the use of cookies.
personal information, not less,93 and by European Union technologists and regulators as undermining European Union efforts to protect individual information privacy on the Internet.94

Some of the objections of European Union data protection regulators to P3P are based on its failure to provide for certain requirements of European Union data protection law. In particular, P3P cannot accommodate the European Union requirement that certain categories of highly sensitive personal information should be collected only with the express consent of the individual concerned. These categories of information include racial or ethnic origin, political opinions, religious beliefs, health or sexual orientation. Under limited circumstances, if the individual provides "explicit consent" then such information may be collected. This is a higher standard of consent than that applied to other types of personal information.95 The P3P standard has no mechanisms for distinguishing between the most general form of consent and explicit consent to the transfer of sensitive information. Thus, P3P works well only in jurisdictions such as the US that generally permit Internet merchants to collect any personal information about their customers that they can, and places few, if any, restrictions on the uses to which such information can be put. The dissemination of software products designed to support P3P in the absence of any supplemental standards designed to meet the requirements of European Union data protection law will undermine the efficacy of European Union data protection law. In effect, P3P embodies a technical norm that merchants should be allowed to seek to collect from any individuals any information the individual is willing to divulge, which conflicts with the requirements of European Union law.


95 The general standard is "unambiguous consent" that is a freely given and informed indication of intent. Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, [1995] O.J. L 281/31, Articles 2(h) and 7(a); for sensitive information, data may be processed without explicit consent if an exception applies, for example to provide necessary medical treatment. Data Protection Directive, Art. 8.
New electronic contracting systems are now being developed using the same technologies that were used to develop the P3P standard. These contracting systems are part of what is often referred to as "Web services". The first generation of contracting parties likely to form contracts within networked markets based on Web services technologies will probably be sophisticated businesses. If the developers of Web services technologies achieve their objectives, these contracting parties should find they have the same range of options in negotiating and executing contracts in online markets that they have in traditional markets. Web services are likely to build on existing electronic contracting technologies, such as EDI technologies that came into widespread use in the 1980s and 1990s, and given the deference generally shown to the contractual choices of sophisticated business parties by the contract law of most trading nations, there is not a great likelihood that any profound conflicts will emerge between what these new technologies can accommodate and what the law requires. The situation is likely to be quite different if electronic contracting technologies designed for B2B use find their way into B2C transactions. This is particularly likely to be a problem in jurisdictions such as the European Union that have many statutory requirements that apply in consumer but not business transactions. European Union consumer protection authorities should now be monitoring the development of Web services technologies to try to avoid the kind of problems that were experienced when the P3P standard was issued without regard to the requirements of European Union data protection law.

The European Union, unlike the US, already has a regulatory framework in place to insure that the development of technical standards does not conflict with existing law. This framework is provided by the Technical Standards Harmonization

96 The technologies that constitute Web services include the Simple Object Access Protocol (SOAP), which permits applications running on different computers with different operating systems to share information; eXtensible Markup Language (XML) a system for formatting Internet content so that it can be processed with reference to the meaning of the content; libraries or registries of XML formats and a platform-independent programming language such as Java. For some discussion of legal issues raised by XML technologies in particular, see Todd Vincent, Legal XML and the Standards for the Legal Industry, 53 S.M.U. L. Rev. 1395 (2000); Clayton P. Gillette, Interpretation and Standardization in Electronic Sales Contracts, 53 S.M.U. L. Rev. 1431 (2000); Edward L. Rubin, Computer Languages as Networks and Power Structures: Governing the Development of XML, 53 S.M.U. L. Rev. 1447 (2000); Jane K. Winn, Making XML Pay: Revising Existing Electronic Payment Methods to Accommodate Innovation, 53 S.M.U. L. Rev. 1477 (2000).
Directives,\(^{97}\) which are designed to prevent the emergence of new obstacles to the internal market in the form of technical standards issued by national standards developing organizations that unfairly favor domestic industry at the expense of industries in other member states. The problem with trying to apply such a procedure to assure the consistency of national laws and electronic commerce standards is that at present it applies only to technical standards developed within the recognized, official standard developing organizations of each member state. Electronic contracting technologies are developing in response to the efforts of global standards developing organizations such as the W3C, and in response to the development of largely proprietary technologies that aspire to become de facto standards, such as the new Microsoft .NET group of products and services. The current European Union procedure for the harmonization of technical standards does not have any authority over global standards developing organizations such as the W3C, much less any authority over private companies such as Microsoft that retain control over technologies they hope will become widely adopted in new markets through intellectual property laws.

The Electronic Signature Directive\(^{98}\) represents a novel attempt to adapt the existing European Union procedures for reviewing voluntary standards to meet the needs of parties wishing to form contracts using electronic media.\(^{99}\) The contrast between the US hands-off approach and the European Union attempt to promote public-private collaboration with regard to online authentication standards mirrors the contrast between US and European Union approaches to the development of digital cellular telephone standards in the 1980s and 1990s. The European Union effort produced the GSM (Global System for Mobile communications) standard


\(^{99}\) The Directive has been criticized on other grounds, including that it does not relate the concept of electronic signature to the kind of intent normally required to find that a binding contractual obligation has been formed. See Ramberg, supra, n. 24.
which is now the global standard for digital cellular phones while the US effort produced fragmented standards that resulted in higher prices for lower quality service by comparison.\textsuperscript{100}

The Electronic Signature Directive provides that an ”advanced electronic signature” must be treated as the equivalent of a traditional signature in its legal effect.\textsuperscript{101} Rather than follow the US model and leave it up to the market to decide what constitutes an advanced electronic signature, or try to mandate the use of particular technologies in the Directive itself, annexes to the Directive spell out the functional characteristics of an advanced electronic signature. Member states are required to insure that those providing such advanced electronic signature services are held liable for any failure to meet the standards set forth in the annexes to the Directive.\textsuperscript{102} In 1999, the Commission helped establish the European Electronic Signature Standardization Initiative (EESSI) to develop technical standards in conformity with the Directive that member states could rely upon in their oversight of electronic signature service providers.\textsuperscript{103} By 2002, the EESSI had finalized over a dozen technical standards related to the delivery of electronic signature services. However, it remains to be seen whether any of those standards will achieve widespread acceptance in the marketplace because electronic signatures are still not in widespread use in Internet commerce.\textsuperscript{104}

6. Conclusion

The US and European Union have each enjoyed successes and failures in their attempts to bring contract law doctrine into line with the commercial realities of the 21st century. The European Union disposes of a comprehensive programmatic framework of directives that allows to enforce the general European concepts of


\textsuperscript{101} Art. 5 (1).

\textsuperscript{102} Art. 6.

\textsuperscript{103} Information about EESSI is available at <http://www.ict.etsi.fr/eessi/EESSI-homepage.htm>.

\textsuperscript{104} For a discussion of the reasons why electronic signatures are not yet widely used in Internet commerce, see Jane K. Winn, The Emperor’s New Clothes: The Shocking Truth About Digital Signatures and Internet Commerce, 37 Idaho Law Review 353 (2001).
consumer protection in electronic contracts. The method of the directives to fix
goals but not the ways to achieve them is reasonable considering the lack of a broad
basis of uniform contract law rules in Europe. However, this method on the one
hand, and some lack of coordination between the instruments on the other hand, may
result in non-uniform implementation in the member states and, accordingly, to
remaining legal uncertainty. The US success with UETA, a model of clarity and
rationality, has been undercut by the ineptitude of E-SIGN. The effort at large-scale
codification of electronic contract law in the US that produced UCITA has failed due
to political controversy, but a lively debate about the appropriate contours of
electronic contract law doctrine is emerging in case law.

Among the most fundamental challenges any legislator will face in assessing
the relevance and efficacy of traditional contract law doctrine in light of
technological innovation will be finding an appropriate response to the development
of more powerful systems for negotiating and forming contracts. Competitive
pressures will encourage businesses to seek to replace humans with automated
contracting processes, but automated processes may embody technical norms that are
not altogether consistent with law or public policy. The turmoil in the realm of
information privacy law and practice may be an indication of the kind of controversy
that will arise in the realm of contract law as new, more powerful electronic
commerce technologies come into widespread use. Mechanisms to keep the
development of technical standards in tune with both competitive market forces and
the requirements of law and public policy will have to be found.