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Electronic Contracts and Signatures: National Civil Law in the EU will change drastically soon

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Abstract

Civil law is likely to change radically the coming years. These changes are necessary because society becomes more and more digitized, and the law was drafted in a 'paper world'. In this paper some recent initiatives of the European Union (EU) on Electronic Commerce are described. The focus is on the formation of contracts electronically and the use of signatures in an electronic environment. Besides EU Directives, the UNCITRAL Model Law on Electronic Commerce is described, because of its influence with respect to Electronic Commerce regulation.

Keywords: EU Directives, Electronic Commerce, electronic signatures, contract law

1 Introduction

We have just entered the 21st century, and it seems that in the short term civil law will change drastically, in particular contract law. These changes are necessary because society becomes more and more digitized, and the law was drafted in a 'paper world'. The law should be amended in order to deal with issues like electronic signatures (Swindells & Henderson 1998) and electronic contracts (Cavanillas & Martínez Nadal 1999).

Instead of buying books in an ordinary book shop around the corner, surfing the Internet and browse through (one of the large) electronic book stores becomes more common. It was shortly after the Internet became a popular medium in the mid 1990s that companies started doing business on the Internet. Nowadays many companies have web-sites on which they offer goods and services. All sorts of commercial activities can and actually are carried out on the World-Wide Web, to mention but a few:

* selling and buying of, e.g., books: <http://amazon.com>; CDs: <http://www.cdnow.com>;

* provision of services, e.g., legal counseling: <http://www.legal.com/Mediation/Index.htm>;
<http://www.advocaat.nl>;

* publishing of, e.g., journals: <http://www.wkap.nl/kaphtml.htm/KODETAILS>.

Commercial activities on the Internet is booming business (the above mentioned internet sites are just a very small selection), and the prognoses for further expansion are very optimistic. It seems that only a lack of confidence in the Internet as a means to explore commercial activities could hamper the existing great expectations. Governments recognize the opportunities of Electronic Commerce, and believe that economic power cannot be realized without a substantial amount of Electronic Commerce. Therefore, national and international governments and organizations try to establish a stable environment in which a digital economy can flourish abundantly. Regulation on legal matters related to Electronic Commerce is drafted, and non-governmental initiatives (e.g., Codes of Conduct) are stimulated.

Recently, the European Commission "has agreed an ambitious agenda to push through all remaining Electronic Commerce legislation by the end of the year to try to help the European Union catch up with the US on the internet economy." (<http://www.ft.com/nbearchive/email-neteq332372.htm>). So, 2000 promises to be the year of Electronic Commerce related EU-Directives. At this moment (March 2000) there is already one genuine Electronic Commerce Directive (The 'electronic signature' Directive - 1999/93/EC from 13 December 1999, PB L 13, 19-1-2000). The time given to the Member States to implement is relatively short: before 19 July 2001 (Article 13). Soon to be expected are other Directives on Electronic Commerce, and these Directives will have great impact on the Civil Code (at least in the Netherlands, but probably in all Member States). In this text the main Directives on Electronic Commerce are discussed. The focus is on concluding contracts electronically and signing electronically (for a detailed discussion of the Directives, see Lodder 2000). Because the Model Law on Electronic Commerce of the UNCITRAL can be seen as a 'Mother Law', relevant parts of it are addressed before discussing the EU Directives. But first section 2 is dedicated to a short introductory remark on Electronic Commerce.

The purpose of this paper is modest, but not without significance. An outline of the legal initiatives that deal with electronic contracting and electronic signatures is sketched. Each legally interested citizen within, but also without, the European Union can start thinking about necessary amendments to civil law. Not much time for reflection is left for that, because if the European Union will realize its ambitious agenda, before 2003 national civil law will have gone through some fundamental changes in order it to deal with Electronic Commerce topics.

[1]

2 What is Electronic Commerce?

2.1 Definitions of Electronic Commerce

Electronic Commerce is often interpreted as being just Internet commerce. Take for example the definition of (Buckley 1999):

"(...) Electronic Commerce (i.e., business processes which shift transactions to the Internet or some other non-proprietary, Web-based system). Electronic Commerce is a means of conducting transactions that, prior to the evolution of the Internet as a business tool in 1995, would have been completed in more traditional ways--by telephone, mail, facsimile, proprietary electronic data interchange systems, or face-to-face contact."

Buckley's definition of Electronic Commerce is actually a definition of Internet Commerce. Most of the 'traditional ways' that are mentioned refer to electronic means. So, commercial activities performed using these means belong to Electronic Commerce. Actually, a variant of EDI ('proprietary electronic data interchange systems'), namely open EDI, is one of the early examples of Electronic Commerce (probably the main example before the rapid growth of the Internet as a place to conduct commercial activities in the mid 1990s).

A pure definition of Electronic Commerce is one by Roger Clarke, who is working on Electronic Commerce related topics already since the late 1980s. He claims that Electronic Commerce is usefully defined as (<http://www.anu.edu.au/people/Roger.Clarke/EC/ECDefns.html>):

"the conduct of commerce in goods and services, with the assistance of telecommunications and telecommunications-based tools"

A definition of Electronic Commerce that to my opinion covers the basic notions characterizing Electronic Commerce (commercial context, goods and services, (tele)communication, business transactions) is:

Commercial activities concerning goods and services as well as any business transaction, where participants are not necessarily at the same physical location and therefore do apply telecommunication means.

2.2 Realizing trust in Electronic Commerce

A critical success factor for Electronic Commerce becoming the leading way to conduct business is that people really trust the electronic environment and feel as comfortable while shopping on the World-Wide Web as they do in a traditional shopping mall. There are basically three ways to realize that people will trust and therefore accept the electronic environment.

First, governments can create a legislative framework that provides that legal acts in an electronic environment will have the same status as when these acts are conducted in a traditional, e.g. paper-based, environment. Moreover, in the law precautions must be formulated on topics like privacy, safety, and security.

Second, the industry or consumer organizations can draft regulations or codes of conducts that give solutions for problems that can occur in electronic environments, and also deal with issues like privacy, security, and for example what information always has to be given about the company and the product. In order to express the difference with regulative initiatives of governments, this second way to realize consumers to trust the electronic environment is called self-regulation (see, e.g.

<http://www.ecp.nl/model.pdf>)

Third, inform people about the possibilities and restrictions of the electronic environment (see Kolkman & Van Kralingen 1998). Once people know what they can expect from the electronic environment, they will sooner use it, or, at least will not leave it aside out of ignorance.

This text concentrates on the first way to realize trust: regulative initiatives.

3 The UNCITRAL Model Law on Electronic Commerce

The United Nations Commission on International Trade Law (UNCITRAL) has adopted in 1996 a Model Law on Electronic Commerce (henceforth: the Model Law; see <http://www.rechten.vu.nl/~lodder/enlist/ec-links/uncitral.htm>). The Model Law can be used as a guide for executive branches of governments and legislators by adapting current legislation to Electronic Commerce.

The Model Law is divided into two parts, the first part is about Electronic Commerce in general and consists of three chapters:

- * Chapter I General provisions
- * Chapter II Application of legal requirements to data messages
- * Chapter III Communication of data messages

The second part is about Electronic Commerce in specific areas (carriage of goods) and is not further discussed. According to article 1, the Model Law is applicable to "any kind of information in the form of a data message used in the context of commercial activities".

3.1 Chapter II. Application of legal requirements to data messages

The core of the Model Law are the chapters II & III. Article 5 and the article 5bis (that was added in June 1998) deal with the legal recognition of data messages. Information shall not be denied legal effect, validity or enforce-ability solely on the ground that it is:

- * in the form of a data message (5)
- * not contained in the data message, but merely referred to (5bis).

The second point was added in order to regulate for an electronic environment what is accepted in a paper environment, namely that provisions are not, or just briefly mentioned and in stead reference is used as a concise means ('incorporation by reference').

An important legal issue that needs to be settled is how the requirement of information to be in writing can be met in an electronic environment. The articles 6-8 are about this issue. In main lines, the Model Law relies on the 'functional-equivalent' approach (Guide to enactment of the Model Law, no. 16) "which is based on an analysis of the purposes and functions of the traditional paper-based requirement with a view to determining how those purposes or functions could be fulfilled through electronic-commerce techniques." It goes without saying that in a digital environment

documents cannot be signed in the traditional way. It is one of the main issues of Electronic Commerce: what equivalent should be used for a signature. Article 7 is based on the recognition of the functions of signatures in paper-based environments. It is stated that legal requirements for signatures are met in a digital environment if in relation to a data message a method is used (article 7, paragraph (1)(a)):

* to identify the signer;

* to indicate his approval;

Furthermore, the method used should be as reliable

* as was appropriate for the purpose for which the data message was generated or communicated.

This article identifies the basic functions of a signature (identification and authentication) and explicates that the electronic signature should at least be as reliable as one in a paper-based environment would have been.

3.2 Chapter III. Communication of data messages

Article 11 deals with the formation and validity of contracts. In the article it is stated that data messages may be used to express an offer and the acceptance of an offer. The exceptions to this general rule are on the one hand that parties may have agreed not to use data messages, and on the other hand that legislation explicitly forbids to form contracts electronically (for example the selling of a house or a marriage). Article 5 of the Model Law shows up a little modified in article 11, second phrase of paragraph 1: "Where a data message is used in the formation of a contract, that contract shall not be denied validity or enforceability on the sole ground that a data message was used for that purpose."

Rules about the attribution of data messages are laid down in article 13: "the article is intended to apply where there is a question as to whether a data message was really sent by the person who is indicated as being the originator" (Guide to enactment of the Model Law, no. 83). In the first paragraph the obvious rule is defined that a data message is of the originator itself if he sent it himself. The second paragraph is about situations in which a data message is deemed to be that of the originator. This is the case if (a) a person or (b) an information system acted on behalf of the originator. In the third paragraph it is stated that the addressee of a data message may assume that a data message is of the originator and act accordingly, if:

1. he applied a authentication procedure previously agreed to by the originator (3)(a));
2. the data message resulted from the actions of persons authorized to access the authentication procedure of the originator (3)(b).

The third paragraph does not apply if the addressee received notice from the originator that it was not his data message and the addressee has reasonable time to act accordingly (article 13, paragraph 4(a)). The question here is, how to be sure that the notice is of the originator, if apparently the authentication procedure did not work properly with regard to the previous data message. The question is a hard one to answer. I do believe it would be appropriate to check in this situation the authenticity of the data messages of the originator in another, not electronic way. To my knowledge, neither the Model Law, nor the Guide to enactment mentions this problem. Another problem, namely the possible improper use of the exception, is solved as follows "If the addressee can prove that the message is that of the originator, paragraph (1) would apply and not paragraph (4)(a)" (Guide to enactment of the Model Law, no. 88). A further exception, only to paragraph (3)(b), is negligence of

the addressee (e.g. he knew or should have known that the data message was not that of the originator).

Paragraph 5 is about the content of the data messages received by the addressee in a way as described in paragraphs 1-3: "the addressee is entitled to regard the data message as received as being what the originator intended to send, and to act on that assumption." The exception here is if the addressee knew or should have known that errors in transmission caused errors in the data message.

Finally, paragraph 6 deals with the issue of erroneous duplication of data messages. Generally the addressee may assume that a data message is a separate one, except if he knew or should have known that it was not.

Article 14 is about acknowledgement of receipt, both in case the originator requests such an acknowledgement and in case the originator and addressee agreed to acknowledge. The acknowledgement plays an important role in the EU 'Electronic Commerce Directive'.

A last important issue is the time and place of dispatch and receipt of data messages. Unless agreed otherwise, dispatch of a message "occurs when it enters an information system outside the control of the originator" (Article 15, paragraph 1). The second paragraph is about the time of receipt of a message. Normally, the time of receipt is when the data message enters an information system of the addressee. An exception occurs in case there was a designated information system, and the message was not sent to that system. In that case the time of receipt is the moment the addressee retrieves the message.

The assumption about the place is that the physical location of the information system is not decisive, instead the Model Law "sets forth a more objective criterion, namely, the place of business of the parties." (Guide to enactment of the Model Law, no. 100). So, unless agreed otherwise, the place where the data message is dispatched or received is where the addressee/originator have their place of business (paragraph (4)).

Since the physical location of an information system may be another than the place of business, it is stated explicitly in paragraph (3) that this has no consequences for determining the of receipt of data.

3.3 UN/ECE CEFAC Electronic Commerce agreement draft

Another initiative of the UN is the following. On March 3, 1999, The UN/ECE CEFAC (<http://www.unece.org/trade/untdid/sessdocs/>) has published the final draft version of their Electronic Commerce Agreement, which is referred to as E-Agreement. The idea of this agreement is that despite all the efforts undertaken to regulate legal aspects of Electronic Commerce, still several issues can better be addressed through a contractual process. The intended scope of the E-Agreement is on business-to-business Electronic Commerce, since no provisions relating to consumer protection are incorporated.

The E-agreement is based upon the experience with respect to the UN/EDIFACT model EDI Interchange Agreement (UN/ECE Recommendation No. 26). As far as partners are engaged in contractual relations based exclusively on EDI, they are recommended to remain using EDI Interchange Agreements. However, all relations not based exclusively on EDI, should use the E-agreement.

The draft model agreement addresses several issues relevant for the formation and validity of electronic transactions, such as what communication standards are used, whether or not a party should acknowledge receipt of a message, how to deal with errors in communication, the definition

of an offer, the acceptance period. The UN/ECE CEFACT warns contracting parties to be careful, because still many jurisdictions require (parts of) contracts to be in writing and/or signed.

4 European Union

4.1 Overview of Directives, (amended) proposals relevant for Electronic Commerce

There are a number of European initiatives that are relevant for Electronic Commerce (see also Stuurman 1999). The following Directives (or proposals) are all relevant in respect to the regulation of Electronic Commerce:

* The 'distance selling' Directive - 1997/7/EC

This Directive has to be implemented into the legislation of the Member States by mid 2000. (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: see http://europa.eu.int/comm/dg24/policy/developments/dist_sell/dist01_en.html).

This Directive is addressed below.

* The 'Electronic Commerce' Directive - COM(1999) 427 final

This regulation has not yet the status of a Directive, but a Common Position has been adopted on 28 February 2000. The discussion below is primarily based on the amended proposal from August 1999 (that is not significantly different from the Common Position), see: <http://europa.eu.int/comm/dg15/en/media/eleccomm/eleccomm.htm>.

* The 'electronic signature' Directive - 1999/93/EC 13 December 1999

The Directive stems from 13 December 1999, see: <http://europa.eu.int/comm/dg15/en/media/sign/index.htm>, and is discussed below.

Besides the above Directives, there are several other initiatives that will not be further discussed, but need to be mentioned:

* The 'copy right' Directive - COM(1999) 250 final

For a discussion of the 'Amended proposal for Directive on copyright and related rights in the information society' see (Lodder 2000), for recent developments (February 2000) see http://europa.eu.int/comm/internal_market/en/intprop/intprop/copy3.htm

* The 'electronic money' Directive - Official journal 1998, C 317/7

(see <http://europa.eu.int/comm/dg15/en/finances/general/727.htm>)

* The 'financial services' Directive - COM(1999) 385 final

(see <http://europa.eu.int/comm/dg15/en/finances/consumer/99-559.htm>).

* The EU Commission Communication on E-commerce and Indirect Taxation (COM (1998) 374

final).

4.2 Distance selling Directive (97/7/EC)

The initiative of the 'distance selling' Directive (97/7/EC) stems from a period in which the Internet already existed, but the first WWW-browser (Mosaic) had not appeared yet, let alone that there was any commerce on the Internet. However, during the drafting of this Directive the WWW was launched, and even before the 'distance selling' Directive was published in its final form, the first commerce on the Internet had begun. It goes without saying that Internet commerce is an example of distance selling.

Recital 11 of Directive 97/7/EC leaves no doubt as to whether the Directive also applies to Internet commerce: "(...) the use of means of communication (...) whatever the means of communication used.", nor does the definition in article 2, paragraph (4): "means of distance communication means any means which, without the simultaneous physical presence of the supplier and the consumer, may be used for the conclusion of a contract between those parties." The recital 11 of the 'Electronic Commerce Directive' (Common Position) is also clear: "Directive 97/7/EC (...) form a vital element for protecting consumers in contractual matters; those Directives also apply in their entirety to Information Society services (...)".

The Directive demands that consumers are provided with particular information before the contract is concluded (article 4, paragraph (1)), for example:

- * the identity of the supplier and, in the case of contracts requiring payment in advance, his address;
- * the main characteristics of the goods or services;
- * the price of the goods or services including all taxes;
- * the period for which the offer or the price remains valid;

Article 5 is for the purposes of Electronic Commerce a little ambiguous. First it states that the consumer must receive written confirmation or confirmation in another durable medium of the information described in article 4 (1) (a) to (f), at the latest at the time of delivery of the good. So the demand of the information to be in writing is also met in case this information is available and accessible to the consumer in any other durable medium (e.g., a Web-page). However, further on in this article an alternative to written information is not mentioned in case information about the right of withdrawal is concerned: "written information on the conditions and procedures for exercising the right of withdrawal". Especially if goods are delivered electronically (e.g., downloaded software), this demand cannot be met. The information considered, comprehensibly, most important is the geographical address: "the consumer must in all cases be able to obtain the geographical address of the place of business of the supplier to which he may address any complaints." For this information a weaker 'able to obtain' suffices, so for example information on a web-page will suffice here.

From the remainder of the Directive at least the following articles have to be mentioned. The consumer has a right of withdrawal (article 6) within a period of at least seven working days without penalty. He also does not have to give a reason for his withdrawal. Since this is a minimum, Member States are allowed to define in their legislation a longer period. The withdrawal is without costs, except the costs for returning. The time for the supplier to perform is rather long, namely 30 days (article 7). However, this is a maximum, so here Member States are allowed to define in their legislation a shorter period. The Member States should prohibit so called inertia selling (article 9). A possible way to regulate this is to give the consumer the right to keep the goods without having to pay for it. The rights of the Directive are binding, and the consumer may waive these rights (article

12).

The Member States should have implemented the Directive in the summer of 2000. In October 1999, the Dutch government has proposed an adaptation of the civil code. Although the Directive is not only about selling (but also about services), primarily for reasons of 'economic legislation' (meaning that the least changes are necessary) the Directive is laid down in the civil code under selling contracts.

4.3 Electronic Commerce Directive

First, note that the name of the Directive is slightly moderated in the recent Common Position: "Directive on certain legal aspects of Electronic Commerce and the internal market" has become "Directive on certain legal aspects of Information Society services, in particular Electronic Commerce, in the Internal Market".

The Commission realizes that because of the inherent global character of Electronic Commerce regulations on a European level will in the end not be sufficient. See for example recital 20a,

"Whereas, despite the global nature of electronic communications, coordination of national regulatory measures at European Union level is necessary in order to avoid fragmentation of the Internal Market",

and recital 20c,

"Whereas, if the market is actually to operate by electronic means in the context of globalisation, the European Union and the major non-European areas need to consult each other with a view to making laws and procedures compatible".

Whether the optimism expressed in recital 20b is realistic is questionable:

"Whereas, in order to allow the unhampered development of Electronic Commerce, the legal framework must be *clear* and *simple*, *predictable* and *consistent* with the rules applicable at international level so that it does not adversely affect the competitiveness of European industry or impede innovation in that sector" (italics are mine, ARL).

One issue that is so far not solved yet is what law is applicable if a consumer uses an information society service. Does the law of the country where he lives apply (according to the Rome convention), or does the law of the service provider apply according to the 'country of origin'-principle of the amended proposal? Only future can tell.

The Directive addresses the following issues:

- * Establishment and information requirements
- * Commercial communications
- * Formation of online contracts
- * Liability of intermediaries
- * Codes of Conduct

Given the focus of this text (electronic contracting) only the formation of contracts is discussed (for

a full discussion, see Lodder 2000).

4.3.1 On-line contracts

The provisions of articles 9-11 on electronic contracts complement the proposal for a Directive on electronic signatures. The formation of on-line contracts is an essential element of Electronic Commerce: "For Electronic Commerce to develop its full potential, it must be possible for contracts to be concluded on-line unrestricted by inappropriate rules (such as a requirement that contracts be drawn up on paper)." Therefore, in article 9 it is laid down that the Member States have the duty to "ensure that their legislation allows contracts to be concluded electronically."

Article 10 mentions the information that has to be provided by the service provider before the contract is concluded:

- (a) the different stages to follow to conclude the contract;
- (b) whether or not the concluded contract will be filed and whether it will be accessible;
- (c) the expedients for correcting handling errors.
- (d) any codes of conduct to which they subscribe and information on how those codes can be consulted electronically.

The Member States have to draft legislation in which it is precisely described (in such a way as to ensure that parties can give their full and informed consent) what different steps have to be followed for concluding a contract electronically. The steps that have to be followed in any case for concluding a contract are those described in article 11 about the moment at which the contract is concluded.

In the original proposal the following acts were necessary:

1. The recipient of the service indicates to accept the service;
2. The service provider acknowledges the receipt of the acceptance;
3. The recipient of the service confirms the receipt of the acknowledgement of receipt.

In the amended proposal the third act is no longer necessary for conclusion of the contract. Although the previous obliged third act may have seem somewhat overdone (reason why the prior article 11 was sometimes called the 'ping-pong'-regulation), now it might have become too easy to conclude a contract. Namely, if someone clicks on an 'accept-button' (e.g. accidentally!) and does not want to buy, the sole message of the service provider in which he confirms the acceptance is enough to conclude an, unwanted, contract. The addition of the phrase "accidental transactions" to article 11.2:

"the service provider shall make available to the recipient of the service appropriate means that are effective and accessible allowing him to identify and correct handling errors and accidental transactions before the conclusion of the contract."

is not enough guarantee to prevent unwanted contracts. Especially because the contract can be concluded in a split second. The service provider is according to article 11.1 even obliged to confirm the acceptance immediately. While in the original proposal acts 2-3 had to be performed "as quickly as possible" (in the Common Position "without undue delay"), in the amended proposal act 2 has to

be performed "immediately". Although in combination with no longer requiring the third act this amendment is a little ill-chosen, in consideration of a properly functioning 24-hours economy this 'speeding-up'-alteration is an important one.

Finally, it should be mentioned here that in the Common Position from 28 February 2000, a third paragraph is added: "Paragraph 1, first indent, and paragraph 2 shall not apply to contracts concluded exclusively by exchange of electronic mail or by equivalent individual communications."

4.4 Directive on Electronic Signatures (1999/93/EC)

A proposal for a Directive establishing a legal framework for the use of electronic signatures has been put forward on 13 May 1998 by the European Commission. A year later, after a heavy political struggle, the commission presented an amended proposal on 29 April 1999 taking into account most suggestions of the Parliament. Just a week before, on 22 April 1999, the Council reached Political agreement on a Common Position. This Common Position was presented on 28 June 1999 and took over most amendments that were included in the amended proposal of the Commission. On 13 December 1999 the Directive had become final. See for an overview:

<http://europa.eu.int/comm/dg15/en/media/sign/index.htm>.

The scope of the Directive (article 1) is to establish a legal framework for electronic signatures and certain certification services. The Directive does not cover "aspects related to the conclusion and validity of contracts". This subject is dealt with in the E-commerce Directive. Excluded are also "legal obligations where there are requirements as regards form prescribed by national or Community law", and, finally the Directive is not meant to "affect rules and limits, contained in national or Community law, governing the use of documents."

As a consequence of the political struggle (between countries who wanted a high level of protection, and countries who were satisfied with less demands for the electronic signature), the following two definitions of electronic signatures appear in the Directive. First, an 'ordinary' electronic signature (article 2.1):

"electronic signature ' means data in electronic form which are attached to or logically associated with other electronic data and which serve as a method of authentication"

Second, an advanced electronic signature (article 2.2):

"advanced electronic signature ' means an electronic signature which meets the following requirements:

- (a) it is uniquely linked to the signatory;
- (b) it is capable of identifying the signatory;
- (c) it is created using means that the signatory can maintain under his sole control; and
- (d) it is linked to the data to which it relates in such a manner that any subsequent change of the data is detectable;

The legal consequences of the two types of electronic signatures are regulated differently. Ideally, the electronic signature should have the same status as the written one. The Member States should adapt their legislation in order to realize that the advanced signature will have the same status as a written one (article 5.1). The normal electronic signature may not be denied legal effect and

admissibility as evidence in legal proceedings solely on the grounds that it is:

- in electronic form, or
- not based upon a qualified certificate, or
- not based upon a qualified certificate issued by an accredited certification-service provider, or
- not created by a secure signature-creation device.

If one of these requirements is not met, the electronic signature may not be denied legal effect. If this article is interpreted in a restrictive way, it could be argued that if more than one of these requirements is not met, the electronic signature can be denied legal effect. However, it seems likely that even in that case (more than one requirement not met) it can be argued that the electronic signature has legal effect.

Another issue the Directive deals with is the certification services, but falls without the scope of this paper (for a discussion, see Lodder 2000).

On their web-site (<http://europa.eu.int/comm/dg15/en/media/sign/99-915.htm>) the commission welcomed the new legal framework to guarantee security of electronic signatures. They correctly observe that: "doing business electronically is increasing rapidly both for companies and for consumers. But without security and trust, there won't be a notable shift towards commercial and financial transactions on the Internet."

Hopefully the national implementation of the Directive, expected in the summer of 2001 (article 13) will realize security and trust. A necessary condition for the regulation to be successful will be close cooperation on world-scale, especially with the USA.

5 Concluding remarks

In this paper some recent EU-initiatives on Electronic Commerce are described. The focus has been on the formation of contracts electronically and the use of signatures in an electronic environment. Besides the EU Directive, the UNCITRAL Model Law on Electronic Commerce has been described for its influence in the field of Electronic Commerce regulation. The coming years will be exciting, because various EU Directives on Electronic Commerce will be implemented in national legislation. Probably most Member States will face problems realizing the amendments to their legislation. The amendments will touch the fundamentals of civil law. For example, it is to be expected that the basic structure of the Civil Code will be damaged. This already happened in the Netherlands, as appeared in this paper, while implementing the distance selling Directive.

The amendments of national legislation will be difficult, probably an even harder problem to solve is how the inherent global character of Electronic Commerce can be done justice in legislation. It is likely that world-wide initiatives (both governmental regulations and self regulations) will be realized. As already discussed, the intention to co-operate internationally has been expressed in the recitals of the 'Electronic Commerce'-Directive. Indeed, the World-Wide Web urges to work on a World-Wide Law.

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[1] Section 2-4 are based on the not previously published Lodder (2000).