Law of Electronic Commercial Transactions

Contemporary issues in the EU, US and China

Faye Fangfei Wang

Routledge Research in IT and E-Commerce Law

Part II

Electronic contracts

The development of electronic commerce signifies that businesses increasingly rely on the internet to conduct their transactions. Undoubtedly the computer provides a useful digital platform for sellers and buyers. The formation and validity of electronic contracts is the focal point in electronic commercial transactions, which will be examined by discussing and analysing the following scenario:

The scenario of electronic contracting

Stage 1:
A buyer (B) accesses a website selling airline tickets controlled by a seller (A), an airline ticket sale company, and asks the price of return flight tickets from London to Paris. B has never had any dealings with A before. Having checked that there are flight tickets available, A's computer uses knowledge that it has acquired itself to calculate a price by means of a complex formula that it has evolved for itself. The computer then notifies B of the price at which it is prepared to sell the tickets. B responds by ordering a quantity of tickets to be dispatched to B, completes the required web form and an appropriate debit to be made from his bank account. B also scrolls through part of the agreement (standard terms and conditions) and decides to click on the button to signify assent to the terms and conditions.

Stage 2:
A never knows that this transaction has occurred. The website also does not clearly give B the knowledge of when the contract is finally concluded and B is fooled into pressing the wrong button before he is able to consider whether he wishes to be finally bound by the contract.

Stage 3:
Only after the conclusion of the contract does B realise that tax is not included in the price, and that the price is much higher than originally indicated – as the price of flight tickets has changed while the buyer was acting on the website. Meanwhile, B also realises that he has requested the

wrong quantity of tickets. Instead of booking for one person, he orders and pays for two persons.

When B discovers the pricing error he sends emails and letters to A's web-mail accounts notifying them of this error and asking for correction.

Legal concerns in response to the scenario

1 Does the above transaction constitute a valid contract?
2 When is the offer effective and when is the acceptance to the offer effective?
3 Does A have a right to amend the wrong advertisement on the website after the order has been made?
4 Is 'error in electronic communications' equivalent to 'the traditional mistake and misrepresentation in contracts'? If not, what are the differences?
5 What are the duties and liabilities of internet service providers?

The above scenario also reflects four main legal doctrines that need to be determined in order to remove the obstacles to electronic communications:

1 What is electronic contracting?
2 Who is contracting?
3 When is an electronic contract made?
4 Where is the contract made?

Firstly, at the national and international level, the directives, model laws and conventions governing electronic commercial transactions do not cover when offers and acceptances of offers become effective for purposes of contract formation.[1] Neither does the most recent international instrument – the UN Convention on the Use of Electronic Communications in International Contracts (UN Convention).[2] It is still debatable whether the UN Convention should include a provision on when an offer and acceptance in electronic form takes effect, and whether the existing rule of the time of dispatch and receipt of electronic communications will be sufficient to ascertain an offer and acceptance. If so, how should it be explained, and if not, what should be done about it?

Secondly, the UN Convention does not impose a duty of the availability of contract terms,[3] whilst the EC Directive on Electronic Commerce does.[4] The problem arises because no such obligations existed under the United Nations Convention on Contracts for the International Sale of Goods (CISG) or most of the other international instruments dealing with commercial contracts.[5] The crucial difference between paper-based and electronic contracts is that once a contract is written, if parties keep it safe, it can be stored forever, whilst a contract is concluded by electronic means without the possibility of re-accessing it again or downloading it afterwards – it might be lost forever; therefore it may become a barrier to evidential proof.

Thirdly, the UN Convention recognises that it is now possible to conclude a contract by electronic agents without any human intervention. Electronic transactions could take place either between an individual and an electronic agent acting on behalf of an individual, or between two electronic agents acting respectively on behalf of two individuals.[6] The US Uniform Electronic Transactions Act (UETA) provides that 'a contract may be formed by the interaction of electronic agents of the parties, or by the interaction of an electronic agent and an individual'.[7] It is a so-called 'automated message system'. Automated message systems, also known as 'electronic agents', refer essentially to a system for automatic negotiation and conclusion of contracts without the involvement of a person, at least on one of the ends of the negotiation chain.[8]

The UN Convention also introduces the use of automated message systems.[9] It aims to clarify that automated means of communication can convey the intention necessary in contract formation, providing that a contract shall not be denied validity or enforceability on the sole ground that: when one or both parties have interacted in the contracting process by using an automated message system without review by any person, or when a contract is formed by the interaction of two automatic message systems.[10] This is a non-discrimination rule intended to make it clear that the absence of human review of or intervention in a particular transaction does not by itself preclude contract formation.[11] The Explanatory Note of the UN Convention in 2007 explains that 'Electronic communications that are generated automatically by message systems or computers without direct human intervention should be regarded as "originating" from the legal entity on behalf of which the message system or computer is operated'.[12] The EC Directive on Electronic Commerce and the UNCITRAL Model Law on Electronic Commerce lack specific rules on that matter. Although the UN Convention has significantly recognised automated message systems, there is a query about whether the rules of an automated message system would conflict with the consent requirements of concluding an e-contract, if 'consent' between two contracting parties is agreed as a prerequisite of forming a contract.

The fourth obstacle, which connects to the first and the third obstacles above, is error in electronic communication. Article 14 of the UN Convention addresses a type of error specific to e-commerce, namely data input errors, in view of the potentially higher risk of error in real time or near instantaneous communications made between individuals and automated systems. It deals with the consequences of errors made in interactions between individuals and automated information systems that do not offer the individual an opportunity to review and correct the input error. It requires a party offering goods or services through an automated information system to make available some technical means of identifying and correcting errors. It makes sense that consent may be required prior to the conclusion of an automated e-contract system, because meanwhile, it makes time available for error amendments.

The penultimate obstacle is the determination of the location of parties.

Unlike the offline world where parties have physical venues, the online business can be located only in space. Therefore, how to determine the location of parties who are doing business online becomes a debated issue. There is no specific provision governing this issue under directives or model laws on electronic commerce; however, the UN Convention has established a provision in an attempt to remove the uncertainty of determining the location of parties. It is still doubted whether this provision under the UN Convention is sufficient and practical.

Finally, battle of forms, which is the most complicated issue in commercial contracts, raises barriers to offline contracting. Electronic contracts add another, more difficult, element into this dimension. Whether the existing international instruments dealing with battle of forms are adequate with regard to the battle of electronic standard contracts must be examined.

The solutions to the obstacles in electronic contracting as illustrated above will be proposed in the following chapters, mainly answering the following questions:

1 What is electronic contracting?
2 Who is contracting?
3 When is an electronic contract made?
4 What are the remedies when errors in electronic communications occur?
5 Where is an electronic contract made?
6 How can electronic battle of forms be dealt with?

3 What is an electronic contract?

3.1 The definition of electronic contracting

The ICC refers to 'electronic contracting' as 'the automated process of entering into contracts via the parties' computers, whether networked or through electronic messaging'.[1] This definition is an amalgamation of two separate explanations, one contained in the UN Convention[2] defining 'electronic communication', and the other taken from the US UETA and UCITA providing for 'automated transactions'. 'Electronic communication' means 'any communication that parties make by means of data messages',[3] whereas 'automated transactions' means any transaction conducted or performed, in whole or in part, by electronic means or electronic records. In addition, electronic communication establishes a link between the purposes for which electronic communications might be used, and the notion of 'data messages' which was important to retain.[4] This new concept gives a broader definition of electronic means of transactions and makes it compatible with a wide range of possible developing techniques.

3.2 Features: email v. clickwrap v. shrinkwrap

The UNCITRAL Model Law on Electronic Commerce states that 'an offer and the acceptance of an offer may be expressed by means of data messages. 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'.[5]

There are two main ways in which commercial contracts can be made electronically. A common and popular method is through the exchange of electronic mail (email). Email can be used to make an offer and to communicate an acceptance of that offer. The email containing the offer or acceptance can be sent through the offeror's (or offeree's) outbox, the digital equivalent of a postbox, to a server of an internet service provider (ISP) and then forwarded to the offeree's (offeror's) inbox. The other method of contracting is using the world wide web. Normally, the vendor would provide a display of products on his website and indicate the cost of such products. A customer

can scroll through the website previewing the items or products on offer, click on the item for further information and if interested in the purchase, can place an order by filling in an order form and clicking 'Submit', 'I Accept', or something similar.[6] These are called 'clickwrap' or 'webwrap' agreements. It is like taking the goods to the cash register in a shop, except that the cashier will usually be a computer instead of a person.[7] Contracts displayed on a website requiring a user to click a button to show acceptance, are generally non-negotiable and often are not read or viewed in their entirety before being accepted, raising the issue of whether there truly is mutual assent by the parties to the terms of the agreement.[8]

A third type of electronic contract is a 'shrinkwrap' agreement. A shrink-wrap agreement usually refers to a contract for a software product. It is commonly used in a software licence agreement. The terms and conditions in a shrinkwrap agreement are usually not visible until users start to install the software. In other words, the terms and conditions of the contract will be only available for review after the purchaser pays for the product. Currently, there are no consistent judicial opinions in the world on whether the terms and conditions of a shrinkwrap agreement that are not available before the conclusion of the contract of sales should be valid and enforceable. In the US, the Uniform Computer Information Transactions Act (UCITA) states that if the purchaser does not have an opportunity to review the terms before he pays, the product can be returned to the merchant.[9] However, the UCITA is not widely adopted in the US. In e-commerce practice it is advisable that the seller of software products makes the terms and conditions available for the purchaser to review prior to the placing of the order by displaying them directly on the website or providing a hyperlink.

Whatever the form of electronic contracting, trust is the basic element to foster transactions. In the process of an electronic trade, parties may not have met, or because of the fast speed of online transaction, parties may not have a chance to read terms and conditions of contracts precisely. There is a need to establish a certain level of trust which will, in return, build users' confidence in concluding electronic contracts.

At an international level, both the UNCITRAL Model Law on Electronic Commerce and the UN Convention employ the 'functional equivalent approach' with a view to determining how the purposes or functions of paper-based documents could be fulfilled through electronic commerce techniques.[10] In the EU, the EC Directive on Electronic Commerce contains three provisions[11] on electronic contracts, the most important of which is the obligation on Member States to ensure that their legal system allows for contracts to be concluded electronically. It can be found in Article 9(1), which in effect requires Member States to screen their national legislation to eliminate provisions which might hinder the electronic conclusion of contracts. Many Member States have introduced into their legislation a horizontal provision stipulating that contracts concluded by electronic means have the same legal validity as contracts concluded by more 'traditional' means. In

particular, as regards requirements in national law according to which contracts have to be concluded 'in writing', Member States' transposition legislation clearly states that electronic contracts fulfil such requirement.[12] In China, the National People's Congress adopted the new Contract Law which recognised electronic contracting in March 1999.[13] The new Contract Law of China (CLC)[14] implements several changes in contract formation rules. For example, a contract can now be made in any manner.[15] Under the CLC writings include agreement, letters, telegrams, telex, fax, electronic data information and electronic mail.[16]

3.3 The online contracting parties: who is contracting online?

In the scenario, who are the contracting parties? Are they seller A, buyer B or buyer B's computer? There is no provision governing this substantive issue under the UN Convention. Article 1 of the UN Convention sets the scope that it applies to 'parties whose places of business are in different states',[17] but 'neither the nationality of the parties nor the civil or commercial character of the parties or of the contract is taken into consideration'.[18] Thus, if A and B were contracting in different states ('but it is not necessary for both of those States to be contracting States of the UN Convention'), A and B would be contracting parties under the scope of the UN Convention.[19] Buyer B's computer cannot be regarded as a contracting party because it can't be considered a natural or legal person. The UN Convention does not directly have a ruling to contracting parties except for Article 4 referring to parties as 'originators and addressees'. Article 4(d) defines an 'originator' as 'a party by whom, or on whose behalf, the electronic communication has been sent or generated prior to storage, if any, but it does not include a party acting as an intermediary with respect to that electronic communication'. Article 4(e) determines 'addressee' as 'a party who is intended by the originator to receive the electronic communication, but does not include a party acting as an intermediary with respect to that electronic communication'. Thus, buyer B's computer should not be deemed to be a contracting party.

In the above scenario, how will it be possible to ascertain that the parties (buyer B and seller A) are really who they claim to be?

The word 'parties' is used in the UN Convention, which includes both natural persons and legal entities. The difference between recognising contracting parties online and offline is the method of identifying the parties. In the online environment, parties might never know and meet each other and there is no written signature in their e-contract.

The increased use of electronic authentication techniques as substitutes for handwritten signatures and other traditional authentication procedures has created a need for a specific legal framework to reduce uncertainty as to the legal effect that may result from the use of such modern techniques, namely electronic signatures.[20] The UN Convention does not attempt to identify specific technologies equivalent to particular functions of handwritten

signatures. Instead, it establishes general conditions under which electronic communications would be regarded as authenticated with sufficient credibility and would be enforceable in the face of signature requirements.[21]

At the same time, the UN Convention does not force parties to accept electronic communication, that is, the parties are free to decide whether or not to use electronic signatures.[22] The concept of 'party autonomy' is central to the UN Convention, in which Article 3 allows parties to exclude the application of the Convention as a whole or only to derogate from or vary the effect of any of its provisions. This important principle in contractual negotiations under the UN Convention is consistent with the view of UNCITRAL. Thus, no party should be compelled to use electronic means in the formation of contracts with regard to offers and acceptances.[23] The explanation given is that a party may lack access to electronic communication or the knowledge to use it or because of receipt or authentication problems. However, party autonomy does not allow the parties to relax statutory requirements on signatures in favour of methods of authentication that provide a lesser degree of reliability than electronic signatures, which is the minimum standard recognised by the UN Convention.[24]

For example, Article 9(3) of the UN Convention is intended to remove obstacles to the use of electronic signatures and does not affect other requirements for the validity of the electronic communication to which the electronic signature relates. According to Article 9(3)(a) of the UN Convention an electronic signature must be capable of identifying the signatory and indicating the signatory's intention in respect of the information contained in the electronic communication.

Article 9(3)(b) further establishes a flexible approach to the level of security to be achieved by the method of identification used under Article 9(3)(a). The method used under Article 9(3)(a) should be as reliable as is appropriate for the purpose for which the electronic communication is generated or communicated, in light of all the circumstances, including any relevant agreement.

There are two concerns in relation to Article 9(3): first, is it necessary to require the signatory's 'approval' of the information contained in the electronic communication, but not merely the indication of the party's intention? Does the notion of 'signature' necessarily imply a party's approval of the entire content of the communication to which the signature is attached? Second, how can one determine that the signature is 'as reliable as appropriate'? What is the 'reliability test'? However, these two obstacles are directly related to the implementation of electronic signature and authentication, which will be discussed in detail in Part III.

In the US, EU and China there are similar grounds as to the definition of online contracting parties as they provide rules on the identity requirements of valid electronic signatures. There are also differences among them. In the US, the Uniform Electronic Transactions Act (UETA) does not provide the definition of parties but an electronic agent, such as a computer program or other automated means, employed by a person. That person shall be

responsible for the results obtained by the use of that tool.[25] In China the China Electronic Signatures law explicitly clarifies that the person who provides electronic certification service shall be responsible for the service issuing a digital authentication certificate, although a digital certificate may be concluded by a natural person and an automated certification system.[26] In the EU there is an additional requirement related to the recognition of online contracting parties in the EC Directive on Electronic Commerce. Article 6(b) of the EC Directive on Electronic Commerce specifies the transparency requirements, and that commercial communications must be identifiable as such, and the natural or legal person on whose behalf the commercial communication is made must be identified.[27]

4 When is an electronic contract made?

When is an electronic contract concluded? Was it at the time when B completed the required web form, made a payment by debit card, or clicked the 'I agree' button to the terms and conditions? Could it be when A received B's order or when A amended the mistakes?

To answer the above questions it is necessary to examine the time of dispatch and receipt of an electronic communication, the rule relating to offer and acceptance and also errors in electronic communications.

4.1 Dispatch and receipt of an electronic communication

4.1.1 Time of dispatch

Different legal systems use various criteria to establish when a contract is formed and UNCITRAL favoured that it should not attempt to provide a rule on the time of contract formation that might be at variance with the rules on contract formation of the law applicable to any given contract.[1] The UN Convention on the Use of Electronic Communications in International Contracts (hereafter the UN Convention) offers guidance that allows for the application, in the context of electronic contracting, of the concepts traditionally used in international conventions and domestic law, such as 'dispatch' and 'receipt' of communications.[2]

The UN Convention redefines the dispatch and receipt of an electronic communication, which is different from the earlier legislation, UNCITRAL Model Law on Electronic Commerce. Article 10(1) of the UN Convention states that 'the time of dispatch of an electronic communication is the time when it leaves an information system under the control of the originator or of the party who sent it on behalf of the originator', whilst Article 15(1) of the UNCITRAL Model Law on Electronic Commerce, consistent with the UETA, defines it as 'the time of dispatch of an electronic communication is the time when it enters an information system outside of control of the originator or of the person who sent the data message on behalf of the originator'. The definition of 'dispatch' in the UN Convention is given as the time when an electronic communication left an information system under the control of

the originator, as distinct from the time when it entered another information system. It was chosen to mirror more closely the notion of 'dispatch' in a non-electronic environment.[3] The redefinition of the time of dispatch of an electronic communication is a welcome and timely change that better reflects the realities in today's technological environment.[4] However, the EC Directive on E-commerce lacks provisions defining 'the time of dispatch'.

The UN Convention is distinct from the rule of the Model Law on Electronic Commerce and UETA that the dispatch/sent of a data message occurs when it enters an information system outside the control of the originator/sender, or of the person who sent the data message on behalf of the originator/sender.[5] The UETA further provides a more precise explanation of 'an information system', namely that the information system can be designated or used by the recipient.

When applying the above rules to the earlier scenario the time of dispatch of electronic communications will occur when buyer B clicks the 'I agree' button to the terms and conditions and sends his order to seller A with the completed web payment form (i.e. giving credit card details), because when the action is done, buyer B is not in control of his order form any more and the order form enters an information system designated by seller A.

4.1.2 Time of receipt

As to the time of receipt, the EC Directive on Electronic Commerce (Article 11) stipulates that Member States shall apply the principle that: 'the order and acknowledgement of receipt are deemed to be received when the parties to whom they are addressed are able to access them'.

The EC Directive on Electronic Commerce is vague on what constitutes 'able to access'. It fails to explain the meaning of 'accessibility'.

The UN Convention (Article 9(2)) provides an objective criterion of 'accessibility', namely that 'Where the law requires that a communication or a contract should be in writing, or provides consequences for the absence of a writing, that requirement is met by an electronic communication if the information contained therein is accessible so as to be usable for subsequent reference'. The UN Convention Explanatory Note 2007 explains that the word 'accessible' implies that information in the form of computer data should be readable and interpretable,[6] and the word 'usable' is intended to cover both human use and computer processing.[7] Keeping receipt to a system accessible by the recipient removes the potential for a recipient leaving messages with a server or other service in order to avoid receipt.[8]

The UN Convention further analyses, in depth, that the time of receipt of an electronic communication is the time when it becomes capable of being retrieved by the addressee at an electronic address designated by the addressee.[9] It is presumed to occur when the electronic communication reaches the addressee's electronic address.[10]

This is comparable to Article 15(2) of the Model Law on Electronic

Commerce and §15(b) of the UETA. The difference is that the UETA provides further detail in that 'the electronic record is received when it is a form capable of being processed by that system'.[11] Another noticeable difference between the UN Convention and the Model Law on Electronic Commerce, as well as the UETA, is that the UN Convention does not mention the rules for receipt of electronic communications sent to a non-designated address.

However, none of them cover the issues as to how the sender proves the time of receipt, how the designation of an information system should be made, and whether the addressee could make a change after such a designation. There is also no explanation of what the meaning of 'capable of being retrieved' is, when the electronic communication is capable of being retrieved, or whether 'capable of being retrieved' is equivalent to 'able to access'.

Despite the difference in wording the effect of the rules on receipt of electronic communications in the UN Convention is consistent with the UNCITRAL Model Law on Electronic Commerce and the UETA. Article 10(2) of the UN Convention further regulates the rule on the time of receipt in the case where an electronic communication reaches the addressee's electronic address, which is presumed to be capable of being retrieved by the addressee at an electronic address designated by the addressee. In the author's opinion, this provision refers to three considerations in the determination of the time of receipt of an electronic communication as below:

- Firstly, accessibility should be defined under the designated address. For example, if A sends B an offer at his home email address which is rarely used for business purposes, it may not be deemed received if B designated his official business email address as the sole address for business purposes. Thus, even though the email is accessible at B's home address, it will not constitute receipt of the electronic communication.
- Secondly, the retrievability should be distinct from the accessibility. That the electronic communication is accessible does not constitute the presumption that the electronic communication is retrieved. The rationale is that if the originator chooses to ignore the addressee's instructions and sends the electronic communication to an information system other than the designated system, it would not be reasonable to consider the communication as having been delivered to the addressee until the addressee has actually retrieved it.[12]
- Thirdly, receipt of an electronic communication at a non-designated electronic address should fulfil two conditions: retrievability and awareness. In other words, receipt at a non-designated electronic address occurs when (a) the electronic communication becomes capable of being retrieved by the addressee and (b) the addressee actually becomes aware that the communication was sent to that particular address.

In addition, the final noteworthy difference is that the EC Directive on Electronic Commerce only covers the acknowledgement of receipt of

electronic communications, whereas the Model Law on Electronic Commerce and UETA include the acknowledgement of all electronic records.[13] The scope of the UN Convention is even wider as it embodies all electronic communications which are made by means of data messages.[14]

4.2 Offer and acceptance[15]

4.2.1 International legislative developments

At the international level, conventions and model laws governing electronic commercial transactions do not include a substantial rule on the effectiveness of offer and acceptance for the purposes of contract formation. The non-cyber-specific international instrument, the United Nations Convention on Contracts for the International Sale of Goods (CISG), provides provisions on the rules of offer and acceptance. For example, Article 15(1) of the CISG specifies that '[a]n offer becomes effective when it reaches the offeree'. The Advisory Council stated that for purposes of this provision, '[t]he term "reaches" corresponds to the point in time when an electronic communication has entered the offeree's server'.[16] Article 18(2) of the CISG further provides that:

> an acceptance of an offer becomes effective at the moment the indication of assent reaches the offeror. An acceptance is not effective if the indication of assent does not reach the offeror within the time he has fixed or, if no time is fixed, within a reasonable time, due account being taken of the circumstances of the transaction, including the rapidity of the means of communication employed by the offeror. An oral offer must be accepted immediately unless the circumstances indicate otherwise.

The Advisory Council noted for purposes of this provision: an acceptance becomes effective when an electronic indication of assent has entered the offeror's server, provided that the offeror has consented, expressly or impliedly, to receiving electronic communications of that type, in that format, and to that address.[17]

It is obvious that the CISG adopts the acceptance rule in determining a valid offer and acceptance in paper-based contracts. It is also notable that the Advisory Council of the CISG applies the same rule to the acknowledgement of a valid electronic offer and acceptance by simply interpreting 'reach offeree or offeror' as 'enter the offeree's or offeror's server' without any clear clarification of the time of dispatch or receipt of an electronic communication. The UN Convention on the Use of Electronic Communications in International Contracts (hereafter the UN Convention) does not provide a provision on the validity of offer and acceptance, but includes a clear rule on the time and place of dispatch and receipt of electronic communications. It is

still debatable whether the UN Convention should propose a provision on when an offer and acceptance in electronic communications takes effect, and whether the existing rule of the time of dispatch and receipt of electronic communications will be sufficient to ascertain an offer and acceptance. If so, how should it be explained, and if not, what should be done about it?

Whether a contract has been formed is one of the most critical questions concerning internet transactions. An English case, which is famous as a starting point for the law in this area for further reference in other countries, is *Entores v Miles Far East Corp*.[18] The leading judgment in the Court of Appeal was given by Lord Denning:

> His approach was to take as his starting point a very simple form of communication over a distance, that is, two people making a contract by shouting across a river. In this situation, he argued, there would be no contract unless and until the acceptance was heard by the offeror. If, for example, an aeroplane flew overhead just as the acceptor was shouting his agreement, so that the offeror could not hear what was being said, there would be no contract. The acceptor would be expected to repeat the acceptance once the noise from the aeroplane had diminished. Taking this as his starting point, he argued by analogy, that the same approach should apply to all contracts made by means of communication which are instantaneous or virtually instantaneous.[19]

The case shows that when the means of communication being used by parties is almost instantaneous the acceptance rule should prevail over the postal rule. The House of Lords further approved this decision in *Brinkibon Ltd v Stahag Stahl und Stahlwarenhandelsgesellschaft mbH*.[20] On this basis, regarding emails or clickwrap contracts as falling into the 'instantaneous' category, the acceptance should take place where it was received, rather than where it was sent. However, an email may not be opened as soon as it arrives, and it may be not read until some time after it has been delivered. Thus, it is crucial to determine the time that the acceptance takes effect. It is suggested that the contract will be formed, at the earliest, when the acceptance is received by the offeror's email system and is available to be read. At the latest, it should be regarded as complete after the passing of a reasonable period of time for the acceptance to have been read as expected.[21] With regard to a web agreement, the contract would be made where the offeror had acknowledged to the offeree that his or her offer was accepted, either by means of a direct response on the website or by a subsequent email, which is called the 'information duty'.

The online contract cannot be binding on the parties until there has been an agreement. The normal analytical tool used to test such a meeting of minds is that of offer and acceptance. Generally, a binding commitment emerges when the offeror has knowledge of the acceptance and when the offeree is similarly apprised of this. However, the rules on offer and acceptance reflect cultural, economic and political ideas about consensual activity.

According to contract law a promise with consideration is deemed to bind the parties when an offer is accepted.[22]

The process of contract negotiation over the internet is the same as in physical reality: invitation to treat, offer and counter-offer, and final acceptance. The distinction between an invitation to treat and an offer is that an invitation to treat is not binding, whilst an offer, met with acceptance, may form a contract. The distinction does not entitle a website to induce a customer to enter a contract by using misleading statements. If a factual statement prior to a contract being formed is classified as misleading, the induced party may be entitled to claim damages, rescind the contract, or even both.[23]

The UN Convention is silent on the validity of offer and acceptance, except for 'invitation to make offer'.[24] It defines 'invitation to make offer' as a proposal to conclude a contract, which is generally accessible to parties making use of information systems, rather than addressed to one or more specific individuals. It is similar to the concept of 'an invitation to treat' in the traditional law of paper-based contract. Displaying information of products including price, quantity and delivery method is an invitation to make offer rather than a real offer as the information on the website is available to the public but not to one or more specific persons. This is evidenced by an English leading case *Pharmaceutical Society of GB v Boots Cash Chemists*.[25] The Court of Appeal held that the display of products on the shelves was not an offer, but an invitation to negotiate. Boots did not infringe the Pharmacy and Poisons Act 1933 as the sale of products took place at the cash desk. It was the customer that made the offer to buy the goods by putting the goods into the basket. It is up to the pharmacist to accept or reject the offer at the cash desk.

The difficulty that may arise in this context is how to strike a balance between a trader's possible intention (or lack thereof) to be bound by an offer, on one hand, and the protection of relying on parties acting in good faith, on the other hand.[26] The general principle that offers of goods or services that are accessible to an unlimited number of persons are not binding applies even when the offer is supported by an interactive application.[27] Typically, an 'interactive application' is a combination of software and hardware for conveying offers of goods and services in a manner that allows for the parties to exchange information in a structured form with a view to concluding a contract automatically.[28] Article 11 of the UN Convention is not intended to create special rules for contract formation in electronic commerce. Accordingly, a party's intention to be bound would not suffice to constitute an offer in an absence of those other elements, such as the quantity and price of the goods.[29] But what will happen if the buyer orders a large quantity of goods that the seller may not be able to supply?

In traditional contract cases there are evidences of protection of sellers. For example, in the case of *Grainger & Son v Gough*,[30] the judge held that the transmission of price lists did not amount to an offer to supply an unlimited quantity of products described at the price named, as the stock of products from advertisers or merchants could be limited. The House of Lords further

approved this decision in *Esso Petroleum Ltd v Customs and Excise Commissioners*.[31] Without reasonable expectations advertisers or merchants could have been in breach of contractual obligations when they failed to supply a large order. In e-commerce practice it is common that e-retailers will indicate the estimated quantity of products that are available for sale on the website, whereas, in the international trade industry, the companies or manufacturers may clarify the possible length of production per unit or container shipment.

EU legislative status

In the EU the EC Directive on Electronic Commerce is also silent on the effectiveness of offer and acceptance, but it obliges offerees to acknowledge the receipt of an offer (order) 'without undue delay and by electronic means'.[32] The supplier is entitled first to acknowledge receipt of the offer, and then to accept the offer, according to the rule of 'time of acceptance'.[33]

US legislative trends

In the US, with regard to the efficiency of offer and acceptance, there is only the UCITA, which provides that 'a contract may be formed in any manner sufficient to show agreement, including offer and acceptance or conduct of both parties or operation of electronic agents which recognizes the existence of a contract'.[34] It also specifies that, in the case of a computer information transaction, 'a contract is formed when an electronic acceptance is received'.[35] The UETA and ESIGN Act are silent on the appropriate rule for the timing of an acceptance.[36] However, §14 of UETA validates transactions formed between parties by the interaction of their electronic agents even if they were not aware of the resulting terms or agreements. The section also validates the formation of contracts by interactions between an electronic agent and an individual who voluntarily performs actions with knowledge or reason to know that they will cause the electronic agent to complete performance. The ESIGN Act, whilst generally validating the use of electronic agents,[37] does not address these issues. UETA, §15 provides that a record is 'sent' when it is properly addressed in a form capable of being processed and it enters a system outside that of a sender or system to which the addressee has access, and that a record is 'received' when it enters a system designated for receipt of such information in a form capable of being processed. Although the parties may contractually alter this rule it provides a bright-line default rule. The ESIGN Act is silent on this issue.[38]

The UCITA validates electronic contracts by replacing the concept of a 'writing' with that of a 'record', stating that contracts valued at $5,000 or more are not enforceable unless 'the party against which enforcement is sought authenticated a record sufficient to indicate that a contract has been formed and which reasonably identifies the copy or subject matter to which the contract refers'.[39] The UETA also imposes a record requirement rather

than a writing requirement. Both UCITA and UETA define a 'record' as 'information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form' and an 'electronic record' as a record that is created, generated, sent, communicated, received, or stored by electronic means.[40] Therefore, both UCITA and UETA broaden the traditional common law writing requirement and clarify the validity and enforceability of certain electronic contracts.

Chinese legislative framework

In China, the Contract Law of China (CLC) states that parties may conclude their contract by way of offer and acceptance.[41] Under the CLC the common law postal rule does not apply. An acceptance is effective at the time when the offeree indicates assent, and it should reach the offeror within the time fixed in the offer.[42] If there is no fixed time in the offer, the offer is deemed to be effective within a reasonable time. Compared with the United Nations Convention on Contracts for the International Sale of Goods, 1980 (CISG) the offer and acceptance rules of the CLC are similar.[43] In contrast to the CLC, the China Electronic Signatures Law does not directly regulate the rules of offer and acceptance of electronic contracts. However, Articles 9 to 12 deal with the sending and receipt of data messages. Article 10 states that if the receiving of any data message needs to be confirmed as prescribed by laws and administrative regulations or the stipulations of the parties, the receipt shall be acknowledged. Article 11 deals with the time the data message is deemed to be sent and received. It states that the time when any data message enters into a certain information system out of the control of the addresser shall be regarded as the time for sending the data message. It further states that where a recipient has designated a specific system to the sender for sending the data message the time at which the data message enters such a system shall be deemed to be the time of the receipt of the data message. If no given system is designated, the time when the data message enters into any system of the recipients for the first time shall be regarded as the time for receiving the data message.

Can the postal rule apply to E-contracting?

Traditionally, English courts have been in favour of the postal rule because the court felt that the acceptance rule might result in each side waiting for confirmation of receipt of the last communication ad infinitum.[44] This would not promote business efficacy. Therefore, in order to promote business efficacy, it would be much better if, as soon as the letter of acceptance was posted, the offeree could proceed on the basis that a contract had been made and take action accordingly.[45] In the court's view the conduct of business will in general be better served by giving the offeree *certainty*.[46] In *Household Fire and Carriage Accident Insurance Co v Grant*,[47] it was held that even if an

acceptance was lost and it never arrived at its destination the contract was still concluded. This is still the rule under English contract law. However, the postal rule itself has limitations. It only applies to acceptance, and not to any other type of communication such as offer or counter-offer.[48] Communication of the offer is required in virtually all situations as the person to whom the offer is addressed must be aware of it.[49] In short, the postal rule was created to provide certainty in contractual formation at a time when the communication system involved unavoidable delays, because the postal stamp enables us to determine easily the time of posting an acceptance.

On the other hand, the postal rule also contains two major disadvantages: firstly, the offeror will not be aware of the contract until a few days after the letter of acceptance was posted by the offeree; secondly, the acceptance letter might never be received by the offeror, because it might be lost by the post office. This failure of delivery would prevent the offeror from knowing that a contract had been made.

As noted above, the postal rule states that if the offeree contemplates acceptance by post the acceptance is effective once posted rather than when it is received. It provides the offeree with confidence that an acceptance once posted will be effective, even if the postal system delays delivery of the acceptance beyond the offer date.[50] That is, the contract is deemed to have been concluded at the moment the acceptance is placed into the postal system.[51] The impact of the traditional postal rule on the offer and acceptance process in electronic contracting must be assessed.

In the era of information technology, accepting an offer can be through electronic means and there are some similarities between email and post. For instance, dispatching an email is identical to dropping a letter in a red post box. Just like for the sender of a letter, the sender of an email will have no control over it after having pressed the send button, as it will be transmitted to his internet service provider (ISP).

However, an issue which arises when parties are communicating by electronic means is whether an offer can be revoked, or if the offeree can reject an offer once an acceptance has been sent and when it is received.[52] Some scholars like Professor Murray, Professor Walker and Professor Gloag argue that email and clickwrap agreements are different and have to be treated in a different way. They proposed that the postal rule should apply to emails, whilst clickwrap agreements should employ the acceptance rule. In my view, although emails and clickwrap agreements are different, they have something in common in that they deliver messages much faster than normal postal mail.

Postal mail services v. electronic mail services

Compared to postal mail services, electronic communications have three major differences in character:

- Firstly, although email is not completely instantaneous, it is, unlike

postal mail, normally very quick. Sometimes there are delays, but it is rare and it normally lasts less than a day. Thus, the postal rule loses its traditional function of efficiency in email communications.

- Secondly, current software technology makes it possible not only to determine exactly when the acceptance email was sent by the offeree, but also when it was received by the offeror's server. Hence, contractual certainty will be established by proof of receipt.
- Thirdly, another point to take into account, which makes email communications different from postal ones, is that when the acceptance is sent to the offeror, if no direct reply follows, under the current software system an automated message with three possible responses may be sent to the offeree: that 1) the message has been received or delivered; that 2) the message has been read; or that 3) the message failed to be delivered. However, the speed at which the packages of information are forwarded along the different routes before they are reassembled at their final destination is more dependent on the workload of the servers and networks they use than the geographical distance of the computers. It may therefore be possible to receive a 'return to sender' message in your inbox a few days later.[53] Thus, when the email was sent, it might have never reached the recipients due to technical failures or some other possibilities. There will be a delay between the sending of an acceptance and its coming to the attention of the offeror.

The receipt acknowledgement of email, such as 'your message has been received or delivered', performs on this occasion similar functions as 'recorded delivery' mail, creating again an element of certainty. This will have, unlike the postal rule, the advantage of enabling both parties to know that there is a contract. Thus, taking account of the above features of email, the acceptance rule should prevail over the traditional postal rule in the electronic communication environment. That is, the acceptance takes effect when it reaches the offeror.

Solution: the application of the acceptance rule

Due to the characteristics of electronic communications, it would be convenient and harmonious to apply the acceptance rule to electronic transactions. English courts have already accepted that the postal rule should not be applied where it would lead to 'manifest inconvenience or absurdity'.[54] This position is also supported in the US Restatement (Second) of Contracts, which provides that acceptance given by telephone or other medium of substantially instantaneous two-way communication is governed by the principles applicable to acceptance where the parties are in the presence of each other.[55] Thus, the acceptance rule – that the acceptance becomes effective when it reaches the offeror – should be applied in electronic contracting, especially clickwrap agreements because it is as instantaneous as

face-to-face or oral interactions. The question then arises as to whether we should apply the same rule, 'the acceptance rule', to email as to clickwrap agreements.

If the acceptance rule is applied, then another issue must be answered: 'Is there a contract when the acceptance is received by the server or when it is actually received and read by the offeror?'[56]

There are three possibilities applying the acceptance rule in electronic mail communications:

- firstly, at the earliest stage, the contract is concluded when the acceptance is received by the offeror and it is available to be read;
- secondly, at the middle stage, the contract will be formed when the acceptance is received by the offeror and is assumed to be read by him within a reasonable time;
- thirdly, at the latest stage, the contract will be established when the acceptance is received and actually read by the offeror.

In relation to clickwrap agreements the contract will be formed when the acceptance has been received by the offeror's server. The server then automatically responds to it with an acknowledgement of receipt.

As the outcomes above show, there is a crossing point between email contracting and clickwrap agreements, that is, the acceptance must be received and the corresponding acknowledgement must follow. Therefore, we could treat email and clickwrap agreements as the same standard of electronic communications in contracts. Meanwhile, in order to be compatible with the determination of 'the time of receipt of electronic communications'[57] in the UN Convention, the uniform rule should be that an electronic contract will be concluded when the acceptance is received and has been retrieved or read by the offeror within a reasonable time. This would be presumed with the evidential automatic message confirming that 'the message has been received', 'the message has been delivered' or 'the message has been read'. In the author's view, an extra explanatory note or an amendment (addition) clause of the effectiveness of the electronic offer and acceptance in the UN Convention is a necessity to remove the legal uncertainty of the valid process of electronic contracting and boost users' confidence in doing business online.

Looking back on the above scenario, Party A's advertisement on his website should be deemed to be an invitation to treat, because it does not specifically target Party B, but it is instead open to any Party X. When B completes the order form and agrees to the standard terms and conditions A's invitation to treat becomes a firm offer. When B clicks the button to dispatch his order form, it should be regarded as an acceptance to A's offer. The complicated issue raised here is whether B can amend the offer after the acceptance has been received and read; this will be discussed further under the section of errors in electronic communications.

4.3 Availability of contract terms

In contract law terms become parts of contracts because the parties agree to them. In electronic contracting parties agree to the terms and conditions (T&C) which are a record of data messages appearing on the PC screen. Sometimes, after clicking the 'I agree' button, T&C disappear and it is impossible to get back to them or download them afterwards. Even if it is possible to access them or reproduce them afterwards often standard T&C are inalterable and parties asked to 'agree' to the terms in some instances will have no easy alternative other than to submit.[58]

In response to the above concerns some legislation requires that the T&C should be available to be downloaded or reprinted afterwards, which aims to enhance legal certainty, transparency and predictability in international transactions concluded by electronic means.[59] However, some legislation is silent on the consequences of the failure to comply with requirements of availability of T&C electronically.

Article 10(1)(b) of the EC Directive on Electronic Commerce requires that the concluded contract should be filed by the service providers, and it must be accessible. Furthermore, Article 10(3) states that 'contract terms and general conditions provided to the recipient must be made available in a way that allows him to store and reproduce them'. The EC Directive on Electronic Commerce does not provide the solution for determining the consequences of a failure to provide the stipulated information.

The UN Convention on the Use of Electronic Communications in International Contracts (hereafter the UN Convention) does not impose any requirement for contracting parties to make available the contractual terms in any particular manner nor give any consequence for failure to perform the duty. Article 13 of the UN Convention preserves the application of domestic law that may require a party to make available to the other party the electronic communications containing the contractual terms.[60] Because there is a wide variety of consequences for failure to make the T&C available subject to domestic laws, for example, some might suggest that failure to make the T&C available should constitute an administrative offence and incur a fine, whereas some might give the customer the right to seek an order from the court to enforce the requirement of making the T&C available, or the contract does not enter into force until the time when the merchant has complied with its obligations.[61] However, usually the rule of imposing a duty of making the T&C available and its consequence of failure to do so does not exist in paper-based offline transactions; therefore international commercial contract legislation did not create any sanctions.[62] It should be left to competition laws or consumer laws to deal with.[63]

In the author's opinion, electronic communications are fundamentally different from paper-based communications. Electronic evidence is crucial for any possible disputes that might arise later. It is necessary to regulate the rule of the availability of T&C in an international instrument such as the UN

Convention and the issue of making the T&C available should be compulsory, whether by means of displaying on the website, downloading from the network, or requesting from merchants, simply because the rule of consent is the kind of knowledge that national legal systems require from business partners in order to infer their (explicit or implied) consent on T&C. The principle of mutual consent rules on contract formation in the majority of countries requires the modification of T&C to be notified and accepted by counter-parties in order to become part of the contract. Regarding the issue of when such knowledge of T&C shall be gained, the majority of countries require prior knowledge or knowledge at least at the time of contract conclusion[64] of the receipt of the contract or agreement, while the other view is that an e-market participant shall in principle be bound by T&C if, at the time of agreement, it was aware or should have been aware of such terms using ordinary care.[65] Thus, the requirements of the availability of contract terms will fulfil the requirements of the awareness of the contract or sale agreement. If the availability of contract terms is guaranteed in electronic contracting it will be much more efficient and convenient than offline contracting. For example, when a wholesaler goes to Acme wholesale store to order products and pays for them at the till, how often will they check the T&C on the back of the receipt? Alternatively, if a wholesaler purchased products through Acme's website where the negotiation tool of the T&C was provided, it might be more likely that the wholesaler would read and select the T&C. Thus, T&C in online circumstances might prevail over T&C in the offline world.

However, there is no need to have a specific provision governing the consequences of failure to do so under the UN Convention, because it relates to substantive laws, which lead to different outcomes and are too different to be uniformed. Thus, it should be dealt with according to domestic laws.

4.4 Error in electronic communications

Mistake means that parties make errors in subject matters or the terms of the contract as to quality or quantity etc. Misrepresentation refers to a false statement of fact that induces the other party to enter into a contract. In traditional contract laws mistakes can make a contract void whilst misrepresentation can make a contract voidable. Mistakes that constitute a void contract should be fundamental.[66] In the case of *Seatbooker Sales Limited v Southend United Football Club*, the original contract of internet ticket sales service was valid as no mistake and misrepresentation were found.[67] In the author's view, error in electronic communications should include both electronic input mistakes and electronic false statement. The concepts of mistakes and misrepresentation in electronic contracts should be the same as those in offline contracts.

One feature that distinguishes online methods of communication from traditional media is that software now assumes an instrumental role in

constituting agreements. If the buyer intends to make a purchase online he will need to engage with the input data. The software interprets the steps automatically in the negotiations purely on the basis of the clicks made by the buyer. If the buyer does not communicate the range of predicted responses, either the process will cease or a new range of options will be presented for consideration.[68] Thus, there are differences in the process of forming a contract electronically and those that are paper-based.

Is 'error in electronic communications' equivalent to 'the traditional mistake and misrepresentation in contracts'? If not, what are the differences?

In answering that question, one should ask whether there is something more we need to protect errors in electronic contracting beyond the existing contract law.

4.4.1 Current legislation in electronic errors

International approach

Article 14 of the UN Convention details the rules of error in electronic communications as:

1. Where a natural person makes an input error in an electronic communication exchanged with the automated message system of another party and the automated message system does not provide the person with an opportunity to correct the error, that person, or the party on whose behalf that person was acting, has the right to withdraw the portion of the electronic communication in which the input error was made if:
   (a) The person, or the party on whose behalf that person was acting, notifies the other party of the error as soon as possible after having learned of the error and indicates that he or she made an error in the electronic communication; and
   (b) The person, or the party on whose behalf that person was acting, has not used or received any material benefit or value from the goods or services, if any, received from the other party.
2. Nothing in this article affects the application of any rule of law that may govern the consequences of any error other than as provided for in paragraph 1.

According to Article 14(1) of the UN Convention there are four conditions on withdrawing the portion of electronic communications in which input error was made.

Firstly, Article 14 of the UN Convention applies to a very specific situation that is only concerned with errors that occur in transmissions between a natural person and an automated message system when the system does not

provide the person with the possibility to correct the error.[69] Secondly, the UN Convention further authorises a party who makes an error to withdraw the portion of the electronic communication where the error was made under the conditions of '(a) notifying the other party of the error as soon as possible after having learnt of it, and (b) not having used or received any material benefit or value from the goods or services'.[70]

EU approach

Compared with the UN Convention the EC Directive on Electronic Commerce is much simpler in regulating input errors. It mainly requires the service provider to provide information and make technical means available, appropriate, effective and accessible prior to the placing of the order.

The EC Directive on Electronic Commerce obliges websites to provide in a clear, comprehensible and unambiguous manner information about how customers may identify and correct input errors before they place an order.[71] For instance, the EC Directive on Electronic Commerce requires certain procedural information before parties can enter into a contract. To avoid technical problems or mistakes by the contracting parties the service provider must provide the following information:[72]

- the different technical steps that are to be followed to conclude the contract;
- whether the contract will be filed by the service provider and whether it will be accessible;
- the technical means for identifying and correcting input errors prior to the placing of the order; and
- the languages offered for the conclusion of the contract.

Furthermore, Article 11(2) of the EC Directive on Electronic Commerce provides that 'Member states shall ensure that, except when otherwise agreed by parties who are not consumers, the service provider makes available to the recipient of the service appropriate, effective and accessible technical means allowing him to identify and correct input errors, prior to the placing of the order'.

US approach

The Second Restatement of Contracts, §153 states:

> Where a mistake of one party at the time a contract was made as to a basic assumption on which he made the contract has a material effect on the agreed exchange of performances that is adverse to him, the contract is voidable by him if he does not bear the risk of the mistake under the rule stated in §154, and (a) the effect of the mistake is such

that enforcement of the contract would be unconscionable, or (b) the other party had reason to know of the mistake or his fault caused the mistake.

The Uniform Electronic Transactions Act (UETA), §10 regulates the effect of change or error. It states that if a change or error in an electronic record occurs in a transmission between parties to a transaction, the following rules apply:

(1) If the parties have agreed to use a security procedure to detect changes or errors and one party has conformed to the procedure, but the other party has not, and the nonconforming party would have detected the change or error had that party also conformed, the conforming party may avoid the effect of the changed or erroneous electronic record.
(2) In an automated transaction involving an individual, the individual may avoid the effect of an electronic record that resulted from an error made by the individual in dealing with the electronic agent of another person if the electronic agent did not provide an opportunity for the prevention or correction of the error and, at the time the individual learns of the error, the individual:
    (A) promptly notifies the other person of the error and that the individual did not intend to be bound by the electronic record received by the other person;
    (B) takes reasonable steps, including steps that conform to the other person's reasonable instructions, to return to the other person or, if instructed by the other person, to destroy the consideration received, if any, as a result of the erroneous electronic record; and
    (C) has not used or received any benefit or value from the consideration, if any, received from the other person.
(3) If neither paragraph (1) nor paragraph (2) applies, the change or error has the effect provided by other law, including the law of mistake, and the parties' contract, if any.
(4) Paragraphs (2) and (3) may not be varied by agreement.

As outlined in the US Second Restatement and UETA, the conditions of withdrawal of error in electronic communications in the US are similar to those of the UN Convention. However, there are still some differences. For example, §10(1) of the UETA does not define the scope of 'between parties', in other words, it is not clear whether the parties of the error communication can be natural persons or, like the UN Convention, the error communication should occur between a natural person and an automated transactions system.

The rule of error input in the UETA is for both B2B and B2C transactions, whereas §214 of the Uniform Computer Information Transactions Act (UCITA) governs electronic error, only for consumer defences. It specifies that:

> (a) In this section, 'electronic error' means an error in an electronic message created by a consumer using an information processing system if a reasonable method to detect and correct or avoid the error was not provided.
> (b) In an automated transaction, a consumer is not bound by an electronic message that the consumer did not intend and which was caused by an electronic error, if the consumer:
>
> (1) promptly on learning of the error:
> (A) notifies the other party of the error; and
> (B) causes delivery to the other party or, pursuant to reasonable instructions received from the other party, delivers to another person or destroys all copies of the information; and
> (2) has not used, or received any benefit or value from, the information or caused the information or benefit to be made available to a third party.
>
> (c) If subsection (b) does not apply, the effect of an electronic error is determined by other law.

As provided above, both UETA and UCITA apply to the situation that is 'in an automated transaction'. They are common in that they both impose the duty of prompt notification of the error, the requirement of taking reasonable steps accordingly and the condition of non-use of, or non-benefit from, the goods.

Chinese approach

There is no provision of error in electronic communications under the China Electronic Signatures Law. In the absence of particularised legislation errors occurring over the internet in China shall be subject to the Contract Law of the People's Republic of China adopted in 1999. According to Article 54 of the Contract Law of China:

> a party shall have the right to request the people's court or an arbitration institution to modify or revoke the following contracts:
>
> (1) those concluded as a result of significant misconception;
> (2) those that are obviously unfair at the time when concluding the contract.
>
> If a contract is concluded by one party against the other party's true

> intentions through the use of fraud, coercion, or exploitation of the other party's unfavourable position, the injured party shall have the right to request the people's court or an arbitration institution to modify or revoke it.[73]

In the Contract Law of China the terms 'misconception', 'unfair', 'fraud', and 'exploitation' have been introduced to determine the validity of a contract and the legality of modification or revocation of the contract. Such terms are equivalent to mistake and misrepresentation in common law.

4.4.2 Obstacles in regulating electronic errors

Pricing errors often appear on e-commerce websites. For example, when Amazon's UK site advertised iPaq Pocket PCs for £7.32 instead of the normal price of £300 thousands of orders were placed, with some people buying 50 or more.[74] In the US, United Airlines wrongly posted a San Francisco to Paris flight for £24.98. Also, in 2003 Amazon.com wrongly listed the price of television sets at $99.99 instead of $1049 each and received 6,000 orders.

Mistakes occur easily on the internet when users input data because of the automated and speedy features of the internet. Misrepresentation also occurs easily with online shopping as products cannot be actually seen, touched and tested by buyers. When disputes happen online buyers usually find it difficult to prove mistake and misrepresentation.

There are four major concerns about electronic mistakes and misrepresentation in expression: first, who should be responsible for the mistake and misrepresentation? How should the balance be kept between the interest of a mistaken party not to be bound by unintended expressions of promises and the interest of a party relying on a promise to be able to act upon it? Second, how can one know whether it was a mistake or a misrepresentation and not merely a change of mind? Third, what will be the reasonable time bar for mistake or misrepresentation to be discovered and informed? Fourth, what are the conditions for withdrawal or avoidance of electronic communications affected by errors?

Two of the main features of electronic communication are its speed and automation. Both of these features increase the risks of making mistakes that cannot be easily corrected before they reach the addressee and before the addressee takes action in reliance on the mistake.[75] For example, you offered your business partner $20 per product A by email, but immediately realised that the price had increased in line with inflation; thus you sent another email to inform your business partner that the price had to change to $28 per product A. So will this constitute a valid new offer?

In traditional contract law once the offer is accepted the contract is formed. In the electronic environment, the offer may be amended if the person, or the party on whose behalf that person was acting, notifies the other party of the error as soon as possible after having learned of the error and indicates

that he or she made an error in electronic communication.[76] This presumption is based on two conditions: one is the timing – 'notifying the other party as soon as possible', and the other is the indication of the error in electronic communication.

These conditions have the effect of limiting the time within which an electronic communication can be withdrawn pursuant to Article 14 of the UN Convention. Under Article 14(1) the right of withdrawal is only available if the notification of the input error is made 'as soon as possible' after the party had learnt of the error, and the party 'has not used or received any material benefit or value from the goods or services' received.[77] A question arises as to the effect of a withdrawal made pursuant to Article 14. For example, where the erroneous communication formed part of an offer and the automated message system of the other party accepted that offer prior to receiving notice of the withdrawal; under the normal rules of contract formation, a contract would have been formed upon the acceptance. If the withdrawn portion contained some essential term of the contract, what would be the effect of the withdrawal?

There are two possible effects of the withdrawal. Firstly, the effect of a withdrawal of the erroneous portion could be that the electronic communication is to be regarded as never having contained that erroneous portion. Secondly, the effect of the withdrawal of the erroneous portion could be that the electronic communication is to be regarded as having been sent with the erroneous portion, which portion was subsequently withdrawn.[78] During the preparation of the UN Convention, it was argued that the remedy should be limited to the correction of an input error, so as to reduce the risk that a party would allege an error as an excuse to withdraw from an unfavourable contract.[79]

In the author's view 'withdrawal' should be included to protect the right of the party when the party has unintentionally hit a wrong key or web button and sent a message that he did not intend to send. In the online environment, recall or replacement of an error message can sometimes be easier and quicker than in an offline situation.

4.4.3 Solution I: implication from the Microsoft Outlook case

There is an interesting functional tool 'recall or replace a message you've already sent'[80] in Microsoft Outlook software which might also reveal some trends on the conditions of withdrawal or amendment of errors in electronic communications.

To recall or replace an error message online can be easier and quicker than in an offline situation. If you use a Microsoft Exchange Server email account you can recall or replace a message if its recipient is logged on and using Microsoft Outlook and has not read the message or moved it from their inbox. The author's concern is whether 'recall or replace a message' function can comply with the rule of 'error in electronic communications'.

Before answering it, let's look at the Microsoft Message Tool:

Figure 4.1

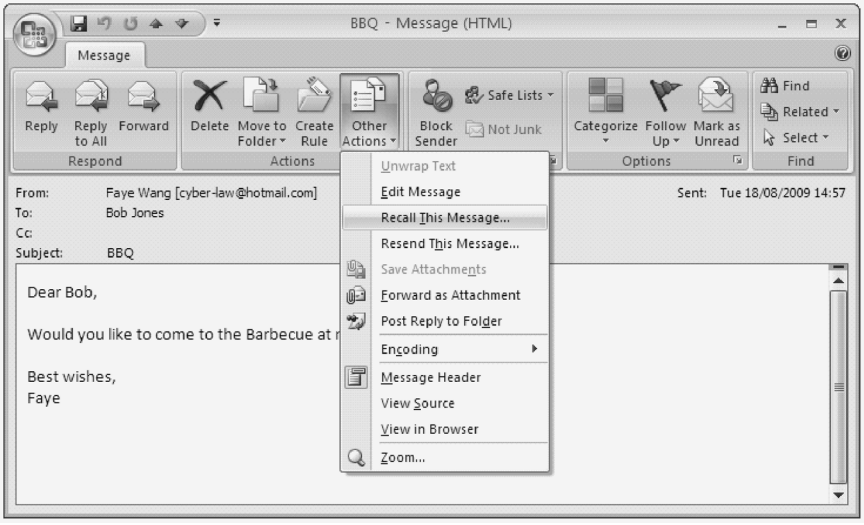

Figure 4.2

According to the above model, the method is:

1) In Mail, in the Navigation Pane, click Sent Items.
2) Open the message you want to recall or replace.
3) In the message window, on the Actions menu, click Recall This Message.

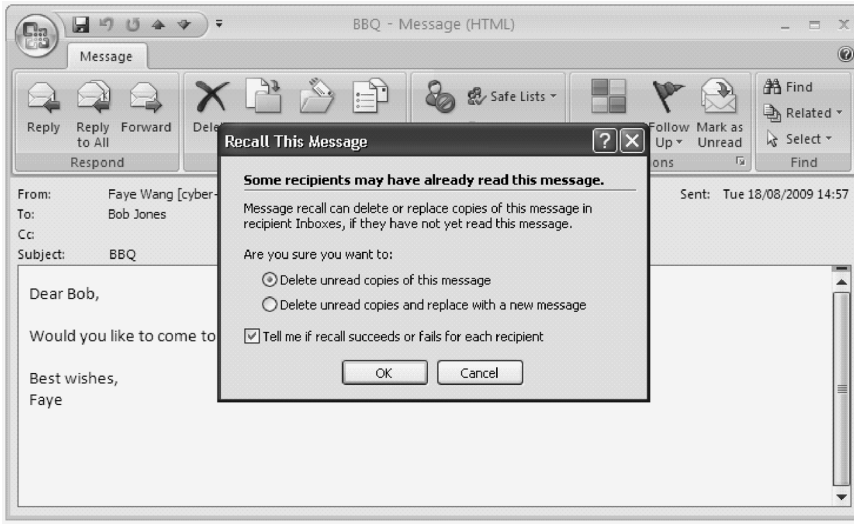

Figure 4.3

Next, do one of the following:

1) Recall the message: Click 'Delete' unread copies of this message and select the 'Tell me if recall succeeds or fails' for each recipient check box if you want to be notified about the success of the recall or replacement for each recipient.
2) Replace the message: Click 'Delete' unread copies and replace with a new message, select the 'Tell me if recall succeeds or fails' for each recipient check box if you want to be notified about the success of the recall or replacement for each recipient, click 'OK', and then type a new message. To replace a message, you must send a new one. If you do not send the new item, the original message is still recalled.[81]

There are two drawbacks to the above function of recall and replacement: first, this technique is limited because the feature can only be used if your emails are handled by a Microsoft Exchange Server, which is a server that picks up the emails for the whole company and then passes them to the right client, so you can't use this feature with your home PC which connects to your email provider directly. Second, the technique is inconsistent with one of the conditions of the rationale behind the error in electronic communications under the UN Convention. Microsoft Outlook requires that a message can be recalled or replaced if its recipient has not read the message or moved it from their inbox without any time limit, whereas the UN Convention sets the restriction that the person or the representative should notify the other party of the error as soon as possible after having learned

of the error, although the UN Convention does not define what 'as soon as possible' is.

In the absence of the time restriction of the message recall mechanism on Microsoft Outlook the principle of 'the intentions of the parties' regarding correction of input data should be deemed to be a criterion in determining whether the recalling or replacing of a message is done in good faith, as indicated by a leading case *Brinkibon Ltd v Stahag Stahl und Stahlwarenhandel GmbH*. It states:

> Some error or default at the recipient's end which prevents receipt at the time contemplated and believed in by the sender. No universal rule can cover all such cases; they must be resolved by reference to the intentions of the parties, by sound business practice and in some cases a judgment where the risks should lie.[82]

In addition, there are two possible legal effects in recalling and replacing an email: first, it would mean that, for example, an offer containing an error in the quantity of goods would be regarded as an offer which never contained any quantity of goods at all. Such an offer would probably not give rise to a valid contract. Second, if the same offer containing the error in the quantity of goods was already accepted, and the erroneous portion was subsequently withdrawn, it would raise a question as to the effect of such a withdrawal on a concluded contract.[83] For example, if a person mistakenly typed 14 when he intended to order just 4 items, the order will not be corrected so as to take effect as an order for 4 items. Under the former scenario, he will instead have the right to withdraw the quantity 14.[84] However, it is noted that Article 14 only applies to 'input errors', that is, errors relating to inputting the wrong data, where an 'automated message system does not provide the person with an opportunity to correct the error', and not other kinds of errors such as a misunderstanding of the terms of the contract.[85]

According to Article 14 of the UN Convention and Article 10 of the EC Directive on Electronic Commerce, before buyers submit the ordering information the website should clearly state that their information is to allow the site owner to decide whether to accept their offer. This allows the site owner to check the product type and cost entered and reject, for example, any offer for a television less than £30 as a minimum price for any television. This application of 'Backstop' logic reduces the cost of mistakes.

In the scenario, if the seller (A) noticed and corrected the price errors before the order was placed, or before the confirmation of acceptance is made, then it would be deemed to be within the above recommendations. But the difference is that contracts made over the world wide web are rarely completed by two humans: a website operates automatically according to a set of instructions, often called a script. It leaves no time for two parties to communicate and negotiate with the conditions, although generally, an acceptance must be communicated to the person making the offer. However,

any person making any offer may waive the general rule and can instead permit acceptance by conduct.[86]

From the author's perspective, a promise to pay over the internet is enough to form the consideration to create a contract. If a clickwrap contract is properly constructed it seems likely that there is consideration to form a binding contract with the viewer. Thus, it makes sense that in the scenario, if the seller (A) delays notification of the price errors, he or she should be responsible for their own negligence, unless they can produce the evidence that the errors occurred due to the computer systems.

4.4.4 Solution II: influence of European Contract Law

According to current legislation there are no clauses concerning the responsibility of mistake, the balance of parties' interest and the reasonable time bar for mistake etc.

How to define 'as soon as possible after having learned of the error' in the UN Convention and EC Directive on Electronic Commerce is the most complicated issue.

In the author's view the appropriate time limit should be defined according to the function of 'withdrawal' of input errors. The fundamental function of 'withdrawal' is to protect the right of the party when the party has unintentionally hit a wrong key or web button and sent a message that he did not intend to send. Provided by appropriate technical means the party should notice the errors **very soon after** inputting the wrong data or clicking the wrong button, a 24 hour time limit seems to be just, depending on the calculation of the starting point of timing. The European Contract Law is consistent with this proposed rule.

The Commission on European Contract Law (also called the Lando-group) presented in 1999 a report called the Principles of European Contract Law (PECL). Many other academic groups have followed up on the Lando-commission and drafted articles related to specific contracts. One of the working groups dealing with specific problems in relation to electronic commerce was established in 2003. The task force's aim is to ascertain that the articles are in harmony with the EC directives related to e-commerce and with other needs that businesses and consumers may have due to the increased use of electronic communication.[87] The report covers six issues. They are, 'input errors', 'cooling off periods', 'unsolicited contracts', 'definitions of sent, received and dispatched', 'definition of writing' and 'definition of signature'.[88] This section will focus on 'input errors' and 'cooling off periods' of the PECL, which complements the EC Directive on Electronic Commerce and the UN Convention on the Use of Electronic Communications in International Contracts.

Article 4:103 of the PECL describes the fundamental mistake as to facts or law, which does not require changing. But changes have been suggested to Article 4:104 as follows:

> Article 4:14 Inaccuracy in Communication
>
> 1 An inaccuracy in the expression or transmission of a statement is to be treated as a mistake of the person which made or sent the statement and Article 4:103 applies.
> 2 Subject to Article 4:103(2), a party concluding a contract at another party's website may avoid the contract for mistake if the other party does not provide effective, accessible and technological means to identify and correct input errors prior to the transmission of a statement.
> 3 The parties cannot derogate from paragraph (2) to the detriment of a consumer.[89]

The above principles express clearly the determination of the errors input which is similar to that in the EC Directive and UN Convention. But neither the EC Directive nor the UN Convention defines the time period of errors input correction. With respect to this point the PECL report further suggests 'cooling off periods (right to withdraw)' in detail.[90] For example, the new suggested Article 2:212(4) expresses clearly that

> the consumer must exercise his right to withdraw from the contract within fourteen days after having concluded the contract, having been informed by the seller or service provider of his right to withdraw and the consequences thereof, and having been supplied with any other data prescribed in any relevant regulation by the European Commission. Whether or not the seller or service provider provided such information, the consumer's right to withdraw expires six months after the date of the conclusion of the contract.[91]

The efforts of the PECL report to unify contracts concluded online are to be welcomed, regardless of whether the PECL electronic contract project can eventually succeed. The two uniform principles of 'input errors' and 'the time period to withdraw' in the report should be highly recommended to electronic commercial transactions at the international legislation level. The current Proposal for a Directive on Consumer Rights, adopted on 28 October 2009 by the European Commission, also introduces identical conditions of 14 days cooling off so that consumers have the right to withdraw the contract, with the web-based withdrawal form, if the contract is concluded online.

Thus, according to the evidence above, in the author's view, a uniform time period of notification of error in electronic communications – in order to retain the right to withdraw input errors – should be within 24 hours in order to promote fairness and certainty in regulating error in electronic communications:

> Option 1: the time period begins when the contract is concluded

and the buyer (including B2B and B2C) is informed of his right to withdraw;

Option 2: the time period begins when an electronic communication becomes capable of being retrieved by the addressee at an electronic address designated by the addressee.

5 Where is the contract made?

With websites and services the concept of establishment, however, is not so straightforward. Popular websites are hosted simultaneously on many so-called duplicating 'mirror services'. They increase resilience, but they may be situated anywhere on the planet. Consequently they may be many thousands of miles from the headquarters of those who control them.[1]

Many electronic contracts are not domestic. One of the great successes of the internet is the creation of a worldwide market place. A trader in Rome can, through a webpage, reach a customer in New York just as easily as one in Sorrento. However, the internet can also create complexity. For example, A's head office is in the UK whilst a team based in China handles technical control of the website and customer support, and credit card processing is conducted in the US. So where is the company established? This cross-border nature of the internet adds a further dimension to electronic contracting, that of international private law, with questions of jurisdiction and choice of law awaiting settlement.[2] That is, the questions will arise as to which law will govern the transaction and which courts will have jurisdiction in the event of a dispute. In the event that a contract is silent on that point, the location where a contract is concluded will be a major factor in determining the choice of law in question.[3]

As internet jurisdiction and choice of law can be very complicated issues, the trader may just want to enter into contracts with certain parties from the local region rather than from any country, avoiding the laws of a particular jurisdiction. In electronic contracting, the place of the contract may be where the offeror is notified of the acceptance of the offer by the offeree, or where the letter of acceptance is posted.

5.1 Place of business

In addressing this issue Article 15 of the Model Law on Electronic Commerce sets out criteria for determining where an electronic message is sent and received. It provides that a message is deemed dispatched at the place where the originator has its place of business, and is deemed received at the place where the addressee has its place of business. In the event that either party has more than one place of business the place of business is the one bearing

the closest relationship to the transaction.[4] If a party does not have a place of business then the party's habitual place of residence is substituted for the place of business.[5]

The UN Convention provides the determination of the location of the parties (Article 6), which is an improvement to the UNCITRAL Model Law on Electronic Commerce. It helps to ascertain jurisdiction, applicable law and enforcement. Its aim is to remove legal obstacles to cross-border electronic commerce. It clearly explicates the definition of 'place of business', 'location of the parties' and 'time and place of dispatch and receipt of electronic communications'. The UN Convention proposes 'place of business' as 'any place maintains a non-transitory establishment to pursue an economic activity other than the temporary provision of goods or services out of a specific location',[6] that is, the place where a party pursues an economic activity through a stable establishment for an indefinite period. Article 6 of the UN Convention regulates the rules of 'location of the parties'. The primary rule is that the parties are taken to be located where they say they are.[7] This is equivalent to 'party autonomy'. In the absence of a party's indicated location the place of business is that which has the closest relationship to the relevant contract.[8] In addition, Article 6(3) provides that 'If a natural person does not have a place of business, reference is to be made to the person's habitual residence'. The UN Convention also clarifies that the location is not merely the place where the equipment and technology are located or a domain name is registered.[9]

In the US the UCITA provides that 'a party is located at its place of business if it has one place of business, at its chief executive office if it has more than one place of business, or at its place of incorporation or primary registration if it does not have a physical place of business. Otherwise, a party is located at its primary residence'.[10]

In China, Article 12 of the Chinese Electronic Signatures Law deals with the main place of business of the sender and the recipient. It states that the place where the data message is sent to or received from shall be deemed to be the main place of business of the sender and the recipient. If there is no main business place the habitual residence of the parties shall be the place of sending or receiving messages.

5.2 Place of performance

Place of performance is another important criterion in determining jurisdiction and applicable law when disputes occur. It can be linked with 'location of the parties', 'place of business' and 'place of dispatch and receipt of electronic communications' under the UN Convention. As discussed earlier, the location of the parties and place of business are regulated by Article 6 of the UN Convention. Article 10(3) of the UN Convention further provides the determination of the place of dispatch and receipt of electronic communications as follows:

> An electronic communication is deemed to be dispatched at the place where the originator has its place of business and is deemed to be received at the place where the addressee has its place of business, as determined in accordance with article 6.

In the old version of the Principles of European Contract Law 1995, Article 2.106 explicitly explains the factors of ascertaining place of performance. It expresses that (1) if the place of performance of a contractual obligation is not fixed by or determinable from the contract it shall be: (a) in the case of an obligation to pay money, the creditor's place of business at the time of the conclusion of the contract; (b) in the case of an obligation other than to pay money, the obligor's place of business at the time of conclusion of the contract. (2) If a party has more than one place of business, the place of business for the purpose of the preceding paragraph is that which has the closest relationship to the contract, having regard to the circumstances known to or contemplated by the parties at the time of conclusion of the contract. (3) If a party does not have a place of business his habitual residence is to be treated as his place of business.

Place of business and habitual residence are the main factors in determining the place of performance in the old PECL. The rules under the Rome I Regulation 2008 are identical to this. For example, Article 4(2) of the Rome I Regulation specifies that 'where the elements of the contract would be covered by more than one of points, the contract shall be governed by the law of the country where the party required to effect the characteristic performance of the contract has his habitual residence'.[11] Compared with the Rome I Regulation, the Brussels I Regulation 2000 provides much more explicit wording in the clarification of place of performance of the obligation that in the case of the sale of goods, the place where the goods were delivered or should have been delivered and in the case of the provision of services where the services were provided or should have been provided.[12] Place of delivery and place of service provided are the performing factors.

Place of performance of an electronic contract is the same as a traditional paper based contract if the performance itself involves physical delivery or presence. The difference lies in the performance that is conducted electronically, i.e. downloading software or an ebook without physical delivery or presence. In this case the time of dispatch and receipt of electronic communications and the determination of the place of computer servers become significant factors to predict and ascertain the actual place of digital performance. Details will be discussed in Part IV.

6 Contemporary issue: electronic battle of forms

Businesses generally wish to contract using their own standard conditions of contract, because they may have drafted their contracts to meet their own product, service, project, technical, commercial and legal requirements.[1] It is called a 'standard contract'. Standard terms are contract terms that one party formulates for use in his contracts generally and provides to other parties for use in their mutual transactions. Typically they are not negotiated but are presented to customers at the conclusion of bargaining over the contract's principal subject matter. Standard terms or general terms are often referred to pejoratively as 'boilerplate'.[2] The boilerplate terms[3] appear on the reverse side of the contract and are usually ignored until a dispute arises. Parties usually reach contracts for international sales of goods utilising standard terms. In standard contracts the party supplying a product or service spells out the terms on which the party does business and which it expects the other party to accept. Sometimes, standard terms designed for use in one country are subject to laws for which they are not designed.[4]

The most crucial issue here is not just the conflict of laws in different countries, but also the determination of whether a contract exists with conflicting terms, whether a particular communication is a rejection of the offer and constitutes a counter-offer, and if the contract was concluded, what the terms of the contract are. This is called a 'battle of forms'. It arises where two companies are in negotiation and as part of their exchanges they each send standard contract forms, but these two sets of forms are incompatible.[5] That is, a battle of forms arises when each party has his own standard terms of trading or business that he wants to prevail over the other party's standard terms.[6]

The 'battle of forms' is one of the most complicated issues in traditional contract law, made even more difficult due to the divergent treatment among jurisdictions. In an English leading battle of form case *Butler Machine Tool Co Ltd v Ex-Cell-O Corpn (England) Ltd*,[7] the sellers offered to sell a machine tool to the buyers, the offer being on the standard terms which 'shall prevail' over any terms and conditions in the buyers' order and which included a price variation clause for increased costs. The buyers' order form contained standard terms materially different from those of the sellers and

stated that the agreed price was fixed. Lord Denning suggested a three-step solution to the battle of forms: first, whether there is an expressed term or implied term from conduct of the last form sent; second, whether the offeree's reply materially affects the contract and he fails to draw the offeror's attention; and third, if there is a concluded contract but the forms vary, the forms can be reconciled so as to give a harmonious result whilst the conflicting terms may have to be scrapped and replaced by a reasonable implication.[8] Lord Denning did not agree to find the existence of the contract first. Instead, he preferred to examine whether there was an agreement on material points, and if there was, determine the agreed and conflicted terms.[9] Professor Forte considered that Lord Denning espoused a more radical approach, because it 'divorces content from formation and does not produce an inevitable finding that the party who fires the last shot must win'.[10]

International legislative instruments have tried to resolve battle of forms in contracts. The Uniform Commercial Code (UCC), the United Nations Convention on Contracts for the International Sale of Goods (CISG), the International Institute for the Unification of Private Law (UNIDROIT), Principles of International Commercial Contracts (PICC), and the Principles of European Contract Law (PECL) have proposed rules of battle of forms that have led to different outcomes.[11] However, the legislations have in common that they follow a 'two-stage' process[12] which first attempts to determine whether there is a contract existing between the parties, and then ascertains it by finding whether the exchanged terms materially differ and what terms prevail.

6.1 International legislation: CISG and PICC

Article 19 of CISG[13] provides that a reply to an offer that contains additions, limitations or other modifications constitutes a counter-offer. The default rule under the CISG is to turn a modified acceptance into a counter-offer that rejects the previous offer. Thus, the original contract does not exist if an acceptance contains additions, limitations or other modifications.

However, the reply purports to be an acceptance, and additional and different terms prevail over the terms of offer if they do not materially differ from those terms of offer. If this reply is the last document to change hands before performance, its terms will bind the parties.[14] Unlike the UCC, §2-207, which will find the existence of a contract as long as the major terms match, the CISG will still allow an offeror to reject an acceptance that contains immaterial variations.[15] However, in contrast with the UCC, §2-207(3), the CISG does not address the question of what happens when conflicting offers and acceptances are exchanged and performance nonetheless begins.[16] The success of the CISG lies in the interpretation of materially altering terms.

6.2 US legislation: UCC

UCC, §2-207[17] states that the contract is concluded even though the acceptance contains additional or different terms. The additional terms of acceptance will become part of the contract, knocking out the terms that materially alter those offered or agreed upon.

The UCC's treatment of battle of forms is far from 'uniform'. While §2-207(1) refers to 'additional or different terms', §2-207(2) only applies to 'additional terms' by providing that 'the additional terms are to be construed as proposals for addition to the contract'.[18] The Cambridge Online Dictionary defines 'different' as 'not the same' while explaining 'additional' as 'extra'.[19] The word 'different' is defined as 'not the same as another or each other' or 'distinct and separate', whilst the Compact Oxford Online English describes 'additional' as 'added, extra, or supplementary'.[20] In the author's opinion, just like 'additional' terms, 'different' terms can alter the original terms materially as well. Under these circumstances the use of the terms 'different' and 'additional' should be treated the same as 'alterations'. However, the concept of 'different' perhaps permits a much broader range of alterations than the definition of 'additional', because whether the offeree or offeror changes some wording of the contract ('different terms') or adds some extra terms and conditions to the contract ('additional terms') it has the same effect on the contract: it makes the contract look different.

§2-207(1) of the UCC is different from the common law, where a 'different' term would create a counter-offer. It mandates that neither 'additional' nor 'different' terms turn an acceptance into a counter-offer; instead, a contract is formed. It is accepted in §2-207(2) that additional terms may become part of the contract except for offer limitations, material alterations or advanced notifications. 'Where documentary exchanges between parties do not disclose a concluded contract', §2-207(3) applies.[21] Under §2-207(3) if the conduct of the buyer and seller is consistent with commercial reality it is sufficient to establish a contract for sale. Terms are those agreed upon by the agreement, whilst the other conflicting terms are left out, and the other provisions of the UCC are supplemented.[22]

6.3 EU legislation: PECL

Differing from the UCC and the CISG, the PICC and PECL separate and treat general conditions conflicts differently from essential terms.[23] Article 2.1.11 and 2.1.22 of the PICC,[24] the same as Articles 2:208 and 2:209 of the PECL,[25] discuss rules separately applying to front-form conflicts (negotiated, essential, or important conditions) and boilerplate conflicts (general conditions).

With regard to conflicting essential terms, both the PICC and PECL are consistent with the CISG in employing that a reply to an offer with additions, limitations or other modifications constitutes a counter-offer, which purports

to be an acceptance if the additional or different terms in reply do not materially alter the offer. The terms of contract are the terms of the offer with the modifications contained in the acceptance. In relation to conflicting general conditions both the PICC and PECL recommend that the contract should be concluded by the agreed standard terms that 'are common in substance'. Thus, the terms of the contract will be formed with the agreed essential terms plus those general terms that 'are common in substance'.[26]

The PICC and PECL attempt to offer both the efficiency and practicality of the CISG in that modified acceptances become counter-offers unless the easily noticed modifications are immaterial, while they apply the 'common in substance' rule to provide a more equitable treatment when differing terms are likely to go unnoticed.[27] The outcomes of conflicting general conditions are the same referring to Article 2.1.22 of the PICC and Article 2:209 of the PECL. The contract is nonetheless formed because both Article 2.1.22 of the PICC and Article 2:209 of the PECL provide that a contract is concluded despite the existence of conflicting general conditions and the general conditions form part of the contract to the extent that they are common in substance.

As analysed above, in summary, the UCC, CISG, PICC and PECL have similarities in that material alteration of an offer is a rejection of an offer and constitutes a counter-offer. However, they are different in relation to whether a valid contract exists despite the existence of conflicting terms and what terms will apply. The CISG, PICC and PECL, compared with the UCC, are more consistent with the ruling of 'different and additional terms'. Another merit of the CISG is that it gives the definition of 'material alterations', which explicitly express the conditions such as the price, payment, quality and quantity of the goods, place and time of delivery, extent of one party's liability to the other or the settlement of disputes. The PICC and PECL are more comprehensive than the UCC and CISG because, as we discussed earlier, they distinguish between essential terms and general conditions.

6.4 Chinese legislation: CLC

The Contract Law of People's Republic of China (CLC) strongly encourages the usage of a standard terms contract. The provisions regulating standard terms are specified in Articles 39 to 41 of the CLC. In accordance with Article 39 parties adopting standard terms in a contract have the duty of fairness, notification and explanation. That is, standard terms shall define the rights and obligations between the parties with fairness. The party who proposes a standard contract shall inform the other party of any exclusion or restriction of liabilities in a reasonable way as well as explain the standard terms upon request by the other party. However, standard terms are not negotiated with the other party when the contract in concluded except for terms depriving the material rights of the other party.[28] Article 41 continues the protection of the parties who are supplied with standard terms, and where

there are two or more kinds of interpretation to the terms, the one that is unfavourable to the party supplying the standard terms shall prevail.

The general issue of battle of forms is governed by the Contract Law of People's Republic of China (hereafter CLC)[29] but without specific provisions directly referring to electronic battle of forms.

The basic article of the battle of forms of CLC is provided by Article 20, which sets four conditions on losing a valid offer. That is, an offer shall lose efficacy if:

1 the notice of rejection reaches the offeror;
2 the offeror revokes the offer in accordance with the law;
3 the offeree fails to dispatch an acceptance before the expiration of the time limit for acceptance;
4 the offeree makes substantial changes to the contents of the offer.

Under the fourth condition in Article 20, 'substantial changes' should be understood as 'material changes'. Article 20 is consistent with Articles 30 and 31, which give more precise details on the validity of substantial changes to offer and acceptance.

With regard to the validity of an offer, Article 30 of the CLC clarifies that the contents of an acceptance shall comply with those of the offer. If the offeree substantially modifies the contents of the offer it shall constitute a new offer. With regard to the validity of an acceptance, Article 31 specifies that if the acceptance does not substantially modify the contents of the offer it shall be effective, and the contents of the contract shall be subject to those of the acceptance, except as rejected promptly by the offeror or indicated in the offer that an acceptance may not modify the offer at all.

The modification relating to the subject matter, quality, quantity, price or remuneration, time or place or method of performance, liabilities for breach of contract and method of dispute resolution shall be regarded as the substantial modification of an offer.[30] This is compatible with the UCC, CISG, PICC and PECL – that material alteration of an offer is a rejection of an offer and constitutes a counter-offer.

6.5 How is 'battle of forms' resolved in electronic contracts?

However, the battle of forms will be even more complicated in electronic contracts because of the features of instantaneous electronic communications. In electronic contracts battle of forms will be related to the issues of dispatch and receipt of an electronic communication,[31] validity of offer and acceptance, availability of contract terms,[32] and errors in electronic communications.[33]

When a buyer submits an order on the seller's website, the seller is able to present its standard terms and conditions to the buyer. Then there are three possibilities: firstly, the buyer can simply accept the standard form, so the contract is concluded with the standard terms of the seller. Secondly, the

buyer can reply to the seller with a notice of another set of standard terms that are posted at a designated URL (Uniform Resource Locator). For example, the buyer might reply to the seller asserting that 'assent is withheld unless the seller assents to the terms and conditions located at http://www.company.com/terms&conditions.html'.[34] Thirdly, the buyer may have no immediate indication of a failed attempt to communicate, and the seller may well only receive a message saying that the email has not been delivered at some time later.[35]

Under the first possibility it is equivalent to a clickwrap agreement presenting standard terms. However, the second possibility is the battle of the URLs in the contract. If an acceptance is followed by a separate email or telephone call, the separate email or telephone call should become part of the contract,[36] if it does not materially alter the original contract. If an agreement is only partially integrated, extrinsic evidence of consistent additional terms is admissible.[37]

According to the previous analysis of rules of battle of forms and the above discussion of specific electronic battle of forms, in the author's view, in electronic contracting, the combination of the ruling of the CISG, PICC and PECL will be practical and appropriate. This means that an electronic acceptance that contains additions, limitations or other modifications is a rejection of the offer and constitutes a counter-offer. However, if the additional or different terms in the general conditions of the acceptance do not materially alter the offer they form part of the contract to the extent that they are common in substance, or otherwise as the parties agree.

Summary

In summary, because of the unique features of the internet, existing regulatory schemes designed to regulate traditional technologies and transactions may not be accurate and sufficiently applicable to electronic contracting. Thus, the solution would be to either apply existing laws and interpret them in a way that reflects the complexities of online contracting or, where appropriate, adopt new regulations or directives to address the development of technology and newly raised disputes. It is worth noting Professor Ramberg's argument that EC Directives are not efficient and it is difficult to reach consensus and harmonisation of laws because they are not based on a voluntary basis in their implementation, and the tradition of not stipulating the sanctions and effects causes the directives to become implemented differently in the different Member States.[38] In the author's opinion, new model laws and conventions governing issues of electronic commercial transactions are necessary because they set simple, basic and core principles at the international level, which is, in return, essential to provide a uniform legal infrastructure for global electronic commercial transactions.

The EC Directive on Electronic Commerce (E-Commerce Directive), the US Uniform Electronic Transaction Act (UETA) and the China Electronic

Signatures Law have provided a legal infrastructure to national or regional electronic commerce markets. At the international level, the UNCITRAL Model Law on Electronic Commerce and the UN Convention on the Use of Electronic Communications in International Contracts (the UN Convention) have made great efforts to modernise and harmonise international electronic commerce laws. They have in common that they employ the principle of functional equivalency for a record or signature in an electronic form. Different from the others, the EC Directive on Electronic Commerce particularly requires that 'the service provider has to acknowledge the receipt of the recipient's order without undue delay and by electronic means'.[39] Professor Ramberg argued that there was no need to have a legal requirement of confirmation under the EC Directive on Electronic Commerce because there is no general rule that a contract be confirmed, and when the contract is already at hand the confirmation has no legal effect at all.[40] In the author's view the ruling of confirmation of the receipt of the recipient's order is necessary, because it will certainly boost the confidence of electronic commercial transactions and give parties the certainty that their corresponding electronic messages have been successfully delivered. However, acknowledgement of receipt is not equivalent to an acceptance, although it might perform the function of acceptance in clickwrap agreements.

The UN Convention complements the UNICTRAL Model laws on electronic commerce and electronic signatures. It enhances legal certainty and commercial predictability of electronic contracting by determining electronic authentication methods, place of business, location of parties, time and place of dispatch and receipt of electronic communications, (automated transactions).[41] The UN Convention uniforms the determination of the location of the parties and time and place of dispatch and receipt of electronic communications where there are various versions of wording in the EC Directive on Electronic Commerce, the UNCITRAL model laws and the UETA.

The UN Convention is a great success in the above aspects. However, the remaining key criticisms of the UN Convention are fivefold. Firstly, there is a need to define 'electronic contracting'. When giving the definition, three concepts should be combined: electronic communications; automated transactions; and data messages.

Secondly, it is necessary to determine when the offer and acceptance take effect. From a legal point of view there is no need to distinguish non-instantaneous contracting, such as emailing, from instantaneous contracting, such as clickwrap agreements, because although it is non-instantaneous contracting by email it is still much quicker than normal postal services. In addition, using different email servers and different internet services can result in different speeds of sending and receiving messages – some emails might be like instantaneous messages so it would be more difficult to reach consensus and efficient harmonisation of the rule to different standard users and make it fair. Therefore, the 'acceptance' or 'receipt' rule would be a more sensible application to electronic contracting.

Thirdly, the UN Convention lacks provisions regulating individual communications of e-contracts, which become a noteworthy issue in electronic transactions. With the improvement of IT industry and e-commerce service online companies can offer customers many more choices when they order products or services online, by pressing different functional buttons and inputting different variations. By suggesting the doctrine of individual communications in concluding an e-contract, the UN Convention should employ 'party content before concluding an e-contract' as a condition. It means that it should be compulsory for parties to be aware of communications and for the servers to provide functions for parties to express their contents.

Fourthly, the technology neutral approach and the time measure of notification of error in electronic communications should be employed in 'errors in electronic communication', because new techniques of amending input errors or wrong messages have been developed dramatically, such as the 'recall or replace a message you've already sent' function in Microsoft Exchange Server, which may conflict with the existing rule of 'duty of notification as soon as possible' under the UN Convention.

Lastly, the UN Convention is silent on battle of forms in electronic commercial transactions, which, in the author's view, should be included since it will occur more often when more and more large or medium-size firms get involved in e-trading. According to the discussion earlier the traditional rules contained in the UCC, CISG, PICC, PECL and CLC should be combined to apply to online battle of forms; that is, electronic acceptance – which contains additions, limitations or other modifications – is a rejection of the offer and constitutes a counter-offer. However, if the additional or different terms in the general conditions of the acceptance do not materially alter the offer, they form part of the contract to the extent that they are common in substance, or otherwise the parties agree.

Overall, nations have made efforts to expedite the development of electronic commerce but different approaches or methodologies have been adopted. It is notable that the US is attempting to drive the international marketplace into the internet age, while the EU approach appears to be more focused on growing the internal marketplace. China, as the second largest internet users' country, has been learning from the Western legislative experience and establishing new laws to adapt to the online market, although there are still additional areas to cover, especially issues regarding electronic cross-border jurisdiction. However, China, along with the rest of the international community, is searching for a harmonious global solution. Nevertheless, regulation, model law or convention should be minimal, clear and simple, and predictable and consistent.[42] But it is necessary to bear in mind that the process of modernisation and harmonisation of the performance of e-contracts and choice of laws through an international instrument is lengthy and arduous and involves the infusion of a prodigious amount of expertise, time and money.