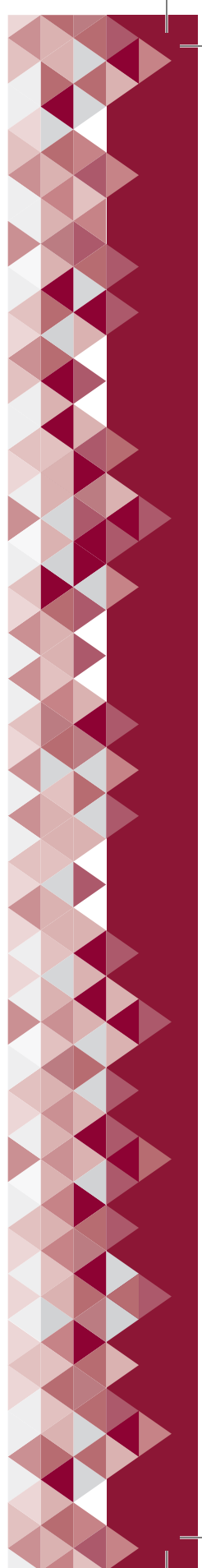


The validity of Electronic Contracts in Emerging Technologies in light of Qatar E-Commerce Law

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مُلَخَّصُ البَحْثِ

الحجية القانونية للتطبيقات الحديثة للعقود الإلكترونية في ضوء القانون القطري للتجارة الإلكترونية

أصبحت العقود الإلكترونية وسيلة غاية في الأهمية لإنجاز الأعمال التجارية؛ نظرا للتوسع في استخدام الإنترنت الذي يعتمد على تقنيات حديثة مثل: الحوسبة السحابية، والأنظمة الحاسوبية الموجهة لإنجاز خدمات معينة. هذه التقنيات تعتمد على خوارزميات تقوم بتطبيق الشروط والأحكام الموجودة في العقود الإلكترونية وتحدد الشركاء التجاريين المحتملين والعملاء عبر الإنترنت؛ مما يُساهم في إبرام الاتفاقيات التجارية بسرعة وكفاءة دون تدخل بشري، وهو الأمر الذي يسهل التجارة الدولية دون وجود عوائق تتعلق بالحدود الدولية.

بالرغم من تلك المزايا، إلا أن العديد من التحديات قد أثرت بشأن مدى حجية هذه العقود من الناحية القانونية، ومكان إبرامها، والقانون المطبق على النزاعات التي قد تنشأ بصددّها. لذا أصبح لزاماً على القائمين على التشريع المحلي معرفة الخصائص المميزة لهذه العقود التي يتم إبرامها عبر تلك التقنيات الحديثة؛ وذلك حتى يتمكنوا من إيجاد تكييف قانوني سليم لها يضمن حل أي نزاعات تنشأ في هذا السياق بشكل عادل وقانوني.

على الرغم من أن التعديلات التي طرأت على القانون التجاري الدولي في التسعينيات من القرن الماضي كانت تقي بالغرض في ذلك الوقت؛ حيث

اقتصرت العقود الإلكترونية على تحويل الأموال الإلكترونية ودمج البيانات، إلا أن التغييرات المستمرة في تقنيات التعاقد الإلكتروني أدت إلى استحداث أنماط مختلفة من العقود الإلكترونية أصبحت لا تلائم التشريع الدولي الحالي. حتى الوقت الحالي، لا توجد إشارة، في أي تشريع وطني أو دولي، إلى أي قواعد موضوعية صريحة تحكم موضوع صلاحية الإيجاب والقبول في العقود الإلكترونية، أو تحدد شكلاً معيناً للعقد الإلكتروني، أو أنواع خاصة به.

تعرض هذه المقالة دراسة لحجية العقود الإلكترونية التي يتم إبرامها عبر التقنيات التكنولوجية الحديثة، وتسلط الضوء على قانون المعاملات والتجارة الإلكترونية في قطر رقم ١٦ لعام ٢٠١٠، وكذلك الإطار الدولي لهذه العقود بما في ذلك اتفاقية الأمم المتحدة بشأن استخدام الاتصالات الإلكترونية في العقود الدولية ٢٠٠٥، وقانون الأونسيترال النموذجي بشأن التوقيع الإلكتروني، وتوجيهات الاتحاد الأوروبي بشأن التجارة الإلكترونية الصادرة عن البرلمان الأوروبي والمجلس الأوروبي، بالإضافة إلى السوابق القضائية في العديد من الدول والمتعلقة بهذه العقود. كما تستعرض المقالة نماذج من التكنولوجيا الحديثة التي تستخدم العقود الإلكترونية وتحديداً: الحوسبة السحابية، والبيتكوين، وتطبيقات (Apple Pay) و Apple Watch .

وتوصي المقالة في ختامها بضرورة قيام المشرع القطري بالنص في القانون الحالي للمعاملات والتجارة الإلكترونية رقم ١٦ لعام ٢٠١٠ على التوقيات المحدد الذي يتم فيه إبرام العقد الإلكتروني؛ وذلك لتعزيز الحجية القانونية له. كما توصي بضرورة قيام المشرعين بإيجاد طرق غير تقليدية

لإزالة عدم اليقين القانوني تجاه التطبيقات الحديثة للعقود الإلكترونية اعتمادًا على الطبيعة الجديدة لهذه التقنيات بدلاً من المفاهيم القانونية التقليدية للعقود. يجب الإسراع في ذلك قبل أن تستجيب هذه التقنيات للضغوط الاقتصادية لسوق البرمجيات ويُصبح استخدامها عادة يألفها الأفراد؛ مما يقيد اللجوء إلى الأساليب المستخدمة حاليًا في إبرام العقود الإلكترونية.

1. Introduction:

Electronic contracts recently became a significant way of performing business. The expansion of Internet usage that relies on emerging technologies like cloud computing, in addition to the service-oriented computer systems that negotiate and interpret terms and conditions in electronic contracts and locate potential commercial partners and online customers, had contributed effectively in concluding commercial agreements swiftly, efficiently and without human intervention. This facilitates International commerce without any territorial boundaries.⁽¹⁾

Despite these advantages, new challenges emerged on the surface, relating to the validity of the electronic contracts, the place where the electronic contract is concluded and the law applicable to the resulting disputes. These challenges entailed that the legislators have to be aware of the special characteristics of electronic contracts concluded via new technologies and construe new legal understanding that ensures resolving any disputes arising in

1 - Faye Fangfei Wang, Law of electronic commercial transactions: Contemporary issues in the EU, US and China (Second edition, Routledge London & New York 2014) 3, 8. See also, Jane K. Winn, 'Emerging Issues in Electronic Contracting. Technical Standards and Law Reform' [2003] 700 < <http://www.unidroit.org/english/publications/review/articles/2002-3-winn-e.pdf> > accessed 10 October 2018

that context fairly and lawfully.⁽¹⁾ Although the commercial law reforms introduced in the 1990s were sufficient at that time, where the electronic contracts were limited to electronic funds transfer and data messages, yet due to the continuous changes in electronic contracting technologies, doubts appeared concerning the adequacy of such reforms to govern rapid development in electronic contracts.⁽²⁾ Surprisingly, for the time being, there is no reference, in any national or International legislation, to any explicit rules governing the subject matter of the validity of offer and acceptance in electronic contracts nor a definite shape to an electronic contract or an obligation that certain types of contracts should be in an electronic form.⁽³⁾

This paper shall critically examine the validity of electronic contracts concluded via emerging technologies, shedding the light on the Electronic Commerce and Transactions Law in Qatar number 16 of 2010 (hereinafter the Qatari law). In addressing such issue, it shall first discuss the legal issues in electronic contracting. Against the backdrop of this, it shall define the electronic contract showing its methods and shedding the light on the offer

1 - Faye Fangfei Wang, Internet Jurisdiction and Choice of Law: Legal Practices in the EU, US and China (First edition, Cambridge University Press UK 2010) 4, 6

2 - Jane K. Winn, n 1, 699

3 - Faye Fangfei Wang, n 1, 31

and acceptance rule. Furthermore, it shall illustrate the International jurisdictions governing the electronic contracts and how such contracts are addressed in the Qatari Legislation. Then the paper shall demonstrate several types of emerging technologies and shall tackle the challenges that these new technologies pose to electronic contracts. The paper shall not attempt to find solutions to these challenges but shall only show the factors that invalidate the electronic contracts concluded by such technologies.

Electronic Contracts:

An Electronic contract can be defined as “An automated process of entering into contracts via the parties’ computers, whether networked or through electronic messaging.”⁽¹⁾

2.1 Methods of Electronic Contracts:

Electronic contracts may be concluded via E-mail, where the text documents containing the offer and acceptance are exchanged from the email of one party to the other.⁽²⁾ This is the most common way and internationally acknowledged, where most of the legislations consent on the validity of E-contracts concluded via Emails. A salient

1 - Faye Fangfei Wang, n 1, 35

2 - Sharon Christensen et al, ‘Electronic contract administration – legal and Security Issues’ [2006] Icon.Net Pty Ltd Australia, Report No. 2005-025-A, 10

case manifesting such notion is the case of *Bernuth Lines Ltd v. High Seas Shipping Ltd*, where the U.K. court stated that emails are valid forms to conclude electronic contracts even though they were considered as spam emails by the computer system.⁽¹⁾ Electronic contracts may also be formed using what is known as “Click-Wrap Agreements” and “Shrink-Wrap Agreements”.

2.2 Offer and Acceptance:

An electronic contract is the same as a paper-based one, it requires a valid offer and acceptance, a valid consideration, in addition to the legitimacy of the subject of the contract.⁽²⁾ It is vital to note that determining when an online contract has been validly concluded is essential because it determines the validity of the electronic contract. To clarify this, it is worth mentioning that in paper-based contracts, an offer is deemed to be accepted when the offeree sends his letter of acceptance either by post or telegram to the offeror, even if the latter is lost or delayed in the post, which is known as the “Postal Rule.”⁽³⁾

1 - *Bernuth Lines Ltd v. High Seas Shipping Ltd*, [2005] EWHC 3020. See also, *Rosenfeld v. Zerneck*, 4 Misc.3d 193, 776 N.Y.S.2d 458, where the court considered that offers can be accepted via an email and thus the contract becomes valid

2 - Dennis M. Power, *The Internet legal guide: Everything you need to know when doing business online* (first edition, John Wiley & Sons New York 2002) 86

3 - John Dickie, ‘When and where are electronic contracts concluded?’ (1998) 49(3) *Northern Ireland Legal Quarterly* 332-334 < http://heinonline.org/HOL/Page?handle=hein.journals/nilq49&div=34&g_sent=1&collection=journals > accessed 10 October 2018

However, the postal rule cannot be used with electronic contracts due to practical difficulties which may appear if the postal rule is applied. For example, if the acceptance letter did not reach the offeror, yet he considered that the contract is concluded, or if it contains some amendments to the offer not known to the offeror where he thought that the agreement was concluded,⁽¹⁾ or if the offeror withdraws the offer by sending a notification to the offeree before the acceptance reaches him, and after the offeree sends his acceptance, which leads to the acceptance of an offer in spite of being withdrawn by the offeror.⁽²⁾

To avoid the consequences mentioned above, the acceptance rule was adopted in electronic contracts. According to this rule, the contract shall be concluded when the E-mail system of the offeror receives the acceptance letter from the offeree and is available to be read.⁽³⁾

The acceptance rule was acknowledged in courts' rulings in many countries by virtue of the eminent English case *Entores v Miles Far West Crop*, which is considered to be the point of departure for applying the acceptance rule on electronic contracts.⁽⁴⁾ According to this case, the court

1 - Faye Fangfei Wang, n 1, 60

2 - Rachel Burnett & Paul Klinger, *Drafting and negotiating computer contracts* (Second edition, Tottel Publishing West Sussex, 2005) 61

3 - Richard Stone, *The modern law of contract* (Sixth edition, Cavendish London, 2002) 52

4 - *Entores v Miles Far East Corp* [1955] 2 QB 327; [1955] 2 All ER 493

of appeal perceived that if two individuals are forming a contract by way of shouting across a river, the contract would be deemed void up until the acceptance of the offer was received or heard by the offeror. Considering this as the point of departure, the court claimed by similarity that the same approach adopted must be applied to all contracts that are made electronically.

Internationally, the UN Convention on the Use of Electronic Communications in International Contracts 2005 (hereinafter the ECC) stipulated that the acceptance letter should be capable of being retrieved by the offeror when it reaches his electronic address. The ECC stipulated in its article 10/2 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”. In stating this, the convention takes into account the increasing use of security filters such as spam filters and virus programs that prevent harmful email messages from getting into user’s inbox.⁽¹⁾ Also, the European Union Directive of the European Parliament and of the Council on Electronic Commerce (hereinafter the

1 - Explanatory note by the UNCITRAL Secretariat on the United Nations Convention on the Use of Electronic Communications in International Contracts, 61
< http://www.uncitral.org/pdf/english/texts/electcom/06-57452_Ebook.pdf >
accessed 10 October 2018. See also, UN Convention on the Use of Electronic Communications in International Contracting, Nov. 23, 2005, U.N. Doc. A/60/21, art 10/2

E-Commerce Directive) ensured the obligations that lie on the burden of the seller to inform the buyer that the request was received, and the contract shall be concluded when the confirmation email reaches the buyer and accessed by him.⁽¹⁾

Furthermore, in current email notifications, a message reaches the offeree once his acceptance message is delivered to the offeror and read by him as well. This reaffirms that applying the acceptance rule in electronic contracts is more efficient than the postal rule.⁽²⁾

Electronic contracts may be also concluded via what is called “Web-Wrap or Click-Wrap agreements,” where the offeror displays his products online which is deemed to be an invitation to treat,⁽³⁾ and the offeree after reviewing the products displayed by the offeror and checking the terms and conditions, sends an offer by clicking accept. When the offeror receives the offer, an order confirmation email containing all the details of the order and its terms and conditions is sent to the offeree. This is not considered yet an acceptance to the offer. The electronic contract is not considered to be concluded until the offeree receives

1 - E-Commerce Directive, 2000/31/EC, art 11. See also, Mariana Rudareanu, et al, ‘The law and Information society: Electronic signature and Electronic contract’ (2011) 6(2) Economics, Management, and Financial market, 401-406

2 - Faye Fangfei Wang, n 1, 60-61

3 - Rachel Burnett & Paul Klinger, n 11, 62

another email “Dispatch Confirmation Email” which is considered the acceptance of the offer.⁽¹⁾

Finally, electronic contracts may be formed by accepting a “shrink-wrap agreement” which is similar to contracts of adhesion based on the concept of take it or leave it.⁽²⁾ A commonly recognized example is software license agreements, where the customers are bound by standard terms and conditions found in the purchased product, and they only have the opportunity to review it after purchase without any possibility for negotiation with the other party.⁽³⁾

Shrink-Wrap agreements rise many questions concerning the acceptance of the terms and conditions in Shrink-Wrap form, therefore, the validity of the electronic contract. It is worth mentioning that the judicial systems do not have a unified opinion regarding these types of agreements. For example, the U.S courts issue different rulings regarding terms and conditions in shrink-wrap agreements. In *Klocek v. Gateway, Inc.*, the U.S. court stated that Standard terms and conditions sent with products in a shrink-wrap form are considered an expression of acceptance from the seller to the offer from the purchaser. If there are additional

1 - Faye Fangfei Wang, n 1, 37

2 - Bataya Goodman “Honey, I shrink wrapped the consumer: The shrink-wrap agreement as an adhesion contract” (1999) 21(1) Cardozo Law review, 319-320

3 - Faye Fangfei Wang, n 1, 60-61

terms and conditions, this is considered a counter offer that requires the acceptance of the purchaser in order to validate the new terms. Failing to do so makes the contract not binding.⁽¹⁾

However, in *Brower v. Gateway 2000, Inc.* which is a similar case like the one previously mentioned, the court held that shrink-wrap terms and conditions are valid, and they do not form contracts of adhesion.⁽²⁾

Moreover, in *ProCD, Inc. v. Zeidenberg*, the court stated that shrink-wrap agreements containing terms and conditions inside the product package and are not clear to the purchaser before opening the package are binding and constitutes a valid electronic contract because he has the chance to reject and return the product. If he did not return it, this means he implicitly accepted such terms and conditions.⁽³⁾

However, in EU, it can be inferred from the E-Commerce Directive that terms and conditions have to be available to the purchaser before considering an electronic contract valid. The directive prescribed that “Where the service provider provides terms and conditions applicable to the contract to the recipient, the service provider shall make

1 - *Klocek v. Gateway, Inc.*, 104 F. Supp. 2d 1332

2 - *Brower v. Gateway 2000, Inc.*, 676 N.Y.S.2d 569 (N.Y.A.D. 1 Dept. 1998)

3 - *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996)

them available to him in a way that allows him to store and reproduce them.”⁽¹⁾

The availability of the terms and conditions for review before concluding an electronic contract and for subsequent reference, which appears mainly in Shrink-Wrap agreements, can be solved by displaying the terms on a website via a hyperlink, through a downloadable pdf file, word document or by an email message.⁽²⁾

The United Nations Commission on International Trade Law (UNCITRAL) affirmed the importance of accessibility and subsequent reference to the terms and conditions of electronic contracts in its Model Law on Electronic Commerce 1996 (hereinafter UNCITRAL Model Law on E-Commerce or UNCITRAL E-Commerce law). It stated that “Where the law requires information to be in writing, that requirement is met by a data message if the information contained therein is accessible so as to be usable for subsequent reference.”⁽³⁾ Similarly, the ECC stated 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

1 - E-Commerce Directive, n 15, art 9/3

2 - Faye Fangfei Wang, n 1, 68-71. See also, *Specht v. Netscape Communications Corp.*, 306 F.3d 17 (2d Cir. 2002), *Ryanair Ltd v Billigfluege.de GmbH* [2010] IEHC 47, *EBay International AG v Creative Festival Entertainment Pty Ltd* [2006] FCA 1768 (18 December 2006)

3 - UNCITRAL Model Law on Electric Commerce, 24 ILM 1302 (1996), art 6

an electronic communication if the information contained therein is accessible so as to be usable for subsequent reference.”⁽¹⁾

Eventually, the way the terms and conditions are accurately incorporated into an electronic contract is subject to the domestic contract law. However, it is widely agreed by many legal jurisdictions that the incorporation of terms and conditions in an electronic contract can be made by signature, notice/reference or by course of dealings.⁽²⁾

International jurisdictions governing Electronic Contracts:

The ECC acknowledged the use of electronic communications in concluding contracts.⁽³⁾ Yet it did not put any conditions on the form of E-contracts.⁽⁴⁾ It further states that an electronic message is considered to be sent when it enters an Information system uncontrollable by the sender, and it is considered to be received when it becomes possible to retrieve it on a designated electronic address or another electronic address provided that the addressee becomes aware of it.⁽⁵⁾ However, the convention did not

1 - ECC, n 14, art 9/2

2 - Jonathan Reuvid, *The secure online business handbook: a practical guide to risk management and business continuity* (Fourth edition, Kogan Page Publishers 2006) 123

3 - ECC, n 14, art 8

4 - Ibid, art 9

5 - Ibid, art 10

mention when an offer and acceptance in an electronic form is deemed valid.⁽¹⁾

On the European Union level, the E-Commerce Directive recognized the validity of contracts concluded electronically.⁽²⁾ It applies the principal of accessibility regarding when an electronic message is received, but it did not give an explanation about the actual meaning of accessibility.⁽³⁾

Also, the Uniform Electronic Transactions Act of the United States (1999) acknowledges contracts performed by electronic means.⁽⁴⁾ It is different from the ECC in its explanation to when the electronic message is deemed sent. It states that the electronic message is deemed sent when it enters an Information system under the control of the recipient, and the message is being capable of being processed or retrieved.⁽⁵⁾ This approach, regarding the time of sending, is considered better than that of the ECC as the latter ignores the fact that in many times both the sender and receiver are on the same Network.⁽⁶⁾

1 - Faye Fangfei Wang, n 1, 31

2 - E-Commerce Directive, n 15, art 9

3 - Faye Fangfei Wang, n 1, 47. See also, Ibid, art 11

4 - United States Uniform Electronic Transaction Act (1999), sec 7/b

5 - Ibid, sec 15

6 - Farisa Tasneem, 'Electronic Contracts and Cloud Computing' (2014) 9(2) Journal of International Commercial Law and Technology 109 < <http://www.jiclt.com/index.php/jiclt/article/view/206/203> > accessed 10 October 2018

Electronic Contracts in Qatari Legislation:

Coinciding with the rise of Qatar economy, the volume of electronic transactions started a piecemeal increase since the last decade. Relying on electronic means in import and export transactions became salient, and the dire need to find a legal framework regulating the electronic commerce was inevitable. Realizing such fact, Qatar issued the Electronic Commerce and Transactions Law (hereinafter Qatari E-Commerce Law) on 19 August 2010. The law has two main goals: first: to organize, regulate and protect electronic commercial transactions. Second: to resolve any disputes that may arise from them.

This section shall discuss the provisions of the Qatari E-Commerce law which was enacted following the principles of the UNCITRAL Model Law on E-Commerce and the UNCITRAL Model Law on Electronic Signatures (2001).

The Qatari E-Commerce Law outlines rules and regulations concerning electronic business and gives legal weight to business transactions conducted over electronic communications such as e-mails. It includes the legal validity of electronic contracts and signatures. The legalization of electronic signature by virtue of this law makes it more convenient for people to conduct business

online. In addressing the electronic contracts in the Qatari E-Commerce Law, the following criteria shall be illustrated.

The Requirement of Writing:

One Key requirement for any contract, is that the offer and acceptance (elements of a contract) should be in a written form or available to be read. The validity of a contract that is concluded in writing is a contentious matter among Islamic legal scholars. Some scholars consider writing is inevitable and indispensable for the validity of a contract, while others consider writing to be an invalid means of forming a contract. They purport that a verbal contract is the valid form of contract based on strict traditional notions. They assume that writing entails a high risk of forgery and envisage writing as only a tool to record what has been agreed upon verbally between the parties and to mention the time and place of concluding the contract.⁽¹⁾

Clearly, considering drafting a contract in writing to be invalid would stifle the legitimacy and validity of electronic transactions. Moreover, the potential risk of forgery to occur is not a convincing reason to render the formation of a contract in writing invalid. Instead, it raises the importance of the means of authentication such as

1 - Mohammed Al-Farfor, 'Rule of Modern Means of Communication Contracts in Islamic Jurisprudence' (1990) 2(6) Islamic Jurisprudence Journal

signature and methods of online security, which is highly appreciated in the field of e-commerce.

The cornerstone of a valid contract in Islamic jurisprudence is the expression of the mutual consent of the parties, which is not limited to a specific form but is accepted using any method used in commercial practice inter alia, the electronic form.

The Qatari E-Commerce law followed the UNCITRAL Model Law on E- Commerce when it affirmed that contracts shall have full effect and their validity and enforceability shall not be denied on the grounds that they are wholly or partially conducted by one or more electronic communications.⁽¹⁾ It also stipulated that the Information in a data message shall not be denied legal effect, validity or enforceability solely on the grounds that they are in the form of a data message.⁽²⁾ The Qatari E-Commerce law asserted that the only condition for a document stored or sent in electronic form to be deemed to have satisfied the requirement of writing is that the information contained therein is accessible so as to be used for subsequent reference by every person that has a right to access the information or document.⁽³⁾

1 - Electronic Commerce and Transactions Law in Qatar, art 4

2 - Ibid, art 20

3 - Ibid, art 21

However, the Qatari legislator did not follow the UNCITRAL Model Law on E-Commerce except when the later stated that ‘unless otherwise agreed by the parties,’ i.e. a contract can be concluded in the form of a data message unless the parties to the contract disagree on such form.⁽¹⁾ The Qatari legislature chose to omit such phrase from the law in order to avoid situations where some parties may refuse to accept an electronic contract. Such argument cannot be vindicated as the well-known principle in contracts is the total freedom and discretion of the parties as to every matter relating to the contract. Thus, omitting the previous phrase restricts the freedom of the parties.

The Requirement of the Original Document:

Paper-based contracts must be retained in its original form or as a copy. Similarly, in electronic contracts, given that the original document serves as a medium of information that is fixed for the first time, the concept of an original data message acquires a narrower sense as it only involves sending a copy of the data message. Due to the importance of the status of the original document, it has to be kept and preserved in a safe place, same as the matter in traditional paper-based environment, so as to assert the notion of uniqueness of the original.

1 - UNCITRAL Model Law on Electronic Commerce, n 26, art 11

The E-Commerce Directive requires the concluded contract to be filled by the service provider and to be accessible, in addition to the availability of the contract terms and conditions provided to the recipient, in a way that allows them to be stored and reproduced.⁽¹⁾ This is considered a significant issue since some electronic platforms do not make the electronic contract available after placing the order, or the hyperlink relating to the provisions incorporated by reference might have been removed or updated.

On the contrary, the ECC has chosen only to include a reminder of the applicable domestic legislation if the contract is not accessible or its terms and conditions cannot be reproduced. The ECC avoided the creation of any substantive rule and did not impose any requirements for contracting parties to make contractual terms and conditions available or state any consequences for failure to perform the aforementioned obligation.⁽²⁾

The Qatari law considers that if certain information or a documents are required to be presented or retained in its original form, that requirement is satisfied by presenting or retaining such information or document in the form of a data message with the following provisos: First,

1 - E-Commerce Directive, n 15, art 9/2

2 - ECC, n 14, art 13

the integrity and reliability of the information, from the time when it was first produced in its final form as a data message until the time that the information is subsequently accessed and presented, can be reasonably demonstrated. Second, the data message is accessible so as to be used for subsequent reference by every person that has a right to access and use the information or document. Remarkably, the same article specified the technical standards needed for assessing the integrity of the information. It specified that the information must remain complete and unaltered, apart from any change arising from the mere communication, storage or display of the information and which does not alter the content of the information or document, and the reliability of the information or document shall be assessed in the light of the purpose for which the information or document was produced and in the light of all other relevant circumstances.⁽¹⁾ With regard to such point, the Qatari legislation in e-commerce is considered salient as it combined all the relevant conditions and specify appropriate standards for assessing the integrity of data messages.

Admissibility and Evidential Weight of Data Messages:

The Qatari Electronic Commerce Law protects the offeree (online consumer) by stating that spam e-mails

1 - Electronic Commerce and Transactions Law in Qatar, art 23

do not count as electronic communication, and also by giving the consumer up to three days to rescind or cancel any contract they enter into electronically or terminate a contract if there is a delay of service delivery of more than 30 days.⁽¹⁾

The Qatari E-Commerce law stipulated that a data message is deemed attributed to the offeror if it was sent by himself or from a person authorized to act on his behalf in respect to data messages or sent by an information system or automated message system programmed to operate by or on behalf of the operator. Also, the data message shall be attributed to the offeror, if the offeree properly applied a procedure previously agreed to by the offeror for that purpose in order to ascertain whether the data message was that of the offeror or not.⁽²⁾ From another hand, the data message shall not be deemed from the offeror, if he notifies the offeree in a reasonable time that the message received is not sent from him, or if the offeree knew or should have known, had he exercised reasonable care or used any agreed procedure, that the data message was not from the offeror, or if the offeree knew or should have known, had he exercised reasonable care or used any agreed procedure, that data message as received was subject to error resulting from the process of telecommunication.⁽³⁾

1 - Ibid, art 57

2 - Electronic Commerce and Transactions Law in Qatar, art 5

3 - Ibid, arts 6, 7

Moreover, the effectiveness and validity of a contract is based on the existence of an expression of mutual consent by both parties. It is common in e-commerce transactions to program the computer to initiate actions or to send and resend a message or email without any human intervention. Such transactions could also occur by programming an interactive website to process orders and conclude contract with buyers without any human interaction; the other frequently used method is to program an email system to send a message to conclude a contract. Although the UNCITRAL Model Law on Electronic Commerce did not address this matter, the UNCITRAL Commission realized the importance of enhancing certainty in automated systems and it inserted into the ECC an article stipulating that ‘A contract formed by the interaction of an automated message system and a natural person, or by the interaction of automated message systems, shall not be denied validity or enforceability on the sole ground that no natural person reviewed or intervened in each of the individual actions carried out by the automated message systems or the resulting contract.’⁽¹⁾ Qatar followed a similar approach in its E-Commerce law regarding automated message systems, where it sets no limitation on any means customarily used in business practice to indicate the consent of the parties. In that regard, Qatar E-commerce

1 - ECC, n 14, art 12

law prescribed that “A contract formed by the interaction of an automated message system and a natural person, or by the interaction of automated message systems, shall not be denied validity or enforceability on the sole ground that no natural person reviewed or intervened in each of the individual actions carried out by the automated message systems or the resulting contract.”⁽¹⁾ Such an approach by the Qatari legislator is considered superior, however, requiring a natural person to know or to say that they ought to have known that the other party is an automated system could cause confusion in the invalidation of contracts if the party claims that he/she did not know and there is no presumption that he/she ought to have known, or if there is a dispute about determining the extent of admissibility of such a presumption. It could be argued that nowadays the majority of e-commerce users would be aware of the nature of electronic transaction, and the possibility that the other party could be an automated system; therefore, such condition could be meaningless and open the door to uncertainty, which does not suit electronic commerce laws.

Attribution of data messages:

The Qatari E-Commerce law followed the UNCITRAL model law on E-Commerce in addressing such issue. It stated that a data message shall be deemed to have been

1 - Electronic Commerce and Transactions Law in Qatar, art 27

issued by the originator and identifies three possible types of originator: the originator personally, a person who has the authority to act on behalf of the originator or an automated system programmed by the originator to send data messages on his behalf. The Qatari law was one of the pioneers in the region when it acknowledged the addressee role in data messages when it stated that the data message shall also be deemed sent from the originator in two cases: if the addressee properly applied a procedure previously agreed to by the originator in order to ascertain whether the data message was that of the originator; and if the data message as received by the addressee resulted from the actions of a person whose relationship with the originator, or with any agent of the originator, enabled that person to lawfully gain access to a method used by the originator to identify the data message as its own.⁽¹⁾

Moreover, the Qatari law addresses situations in which it would not be valid to attribute the data message to the originator, namely: if the addressee has received notice from the originator that the data message is not from the originator and has had a reasonable time to act accordingly; and if the addressee knew, or was supposed to know, that the data message was not issued by the originator, and that they exercised reasonable care or used any agreed

1 - Electronic Commerce and Transactions Law in Qatar, art 5. See also, UNCITRAL Model Law on E-Commerce, n 26, art 13

procedure; also if the addressee, upon exercising reasonable care or used any agreed procedure, should know or should have known that the data message as received was subject to error resulting from the process of telecommunication.⁽¹⁾

As to the acknowledgment of receipt of electronic records, such procedure is considered to be a commercial procedure used by businesses and stores and not a legal principle required by law. UNCITRAL Model Law divides the situation as follows: If the originator has not agreed with the addressee that the acknowledgment is to be in a particular form or by a particular method, an acknowledgment of receipt may be given by: a) any communication by the addressee, whether automated or otherwise, or; b) any conduct of the addressee sufficient to inform the originator that the electronic record has been received. Furthermore, if the originator has stated that the data message is conditional on receipt of an acknowledgment, it shall be treated as if it was not sent from the originator until receipt of the acknowledgment. But if the originator has not stated that the data message is conditional on receipt of an acknowledgment, the originator may give notice to the addressee stating that the previous data message requires an acknowledgment of receipt, specifying a reasonable time by which the acknowledgement must be received.

1 - Electronic Commerce and Transactions Law in Qatar, arts 6, 7

If the acknowledgement is not received within the time specified, it may be possible, upon notice to the addressee, to treat the data message as though it had never been sent or exercise any other rights the originator may have.⁽¹⁾ The E-Commerce law in Qatar followed the UNCITRAL model law in such provisions.

Although the purpose of such provisions is to enhance legal certainty, it cannot be left without being criticized, on the grounds that it overstates protection by requiring additional notification. Also, if the acknowledgement is not received within the time specified, the electronic record may be treated as void. However, there is an additional support for the former issue, for instance when the originator wants to transfer the offer to another party.

Finally, the Law maintains that the addressee has the right to consider each data message as a separate data message, and to act on that assumption, except to the extent that it duplicates another data message and the addressee knew or should have known, if exercising reasonable care or using any agreed procedure that the data message was a duplicate.⁽²⁾

1 - UNCITRAL Model Law on E-Commerce, n 26, art 14

2 - Electronic Commerce and Transactions Law in Qatar, art 8

Time and Place of Dispatch of Electronic Record:

Shifting to another point, it is more likely for e-commerce to take place between parties in different countries having variable time zones. Additionally, sometimes a specific business has multiple sites, i.e. operations could shift between them, consequently, jurisdiction and applicable law may vary accordingly. Therefore, it is of vital importance to determine the issue of the time of dispatch and of receipt, as well as the place of the parties using objective and measurable standards.

As for the time of dispatch, Qatar follows UNCITRAL Model law on E-Commerce envisaging two scenarios for such issue. In the usual situation, when the data message enters an information system outside the control of the originator's system, the dispatch of the data message occurs once it enters that other information system. Alternatively, if the data message successively enters two or more information systems outside the control of the originator, then the dispatch of the data message occurs when it enters the first of those information systems.⁽¹⁾ However, the outcomes of these two formulations would be the same, since the method used to prove that the data message has left the information system would be the reference to the same data protocol as for the time of receipt.

1 - Article 14 of the Electronic Commerce and Transactions Law in Qatar, art 14

Meanwhile, as for the time of receipt of a data message, the Qatari law adopted the ECC approach which considers that the time of receipt is when the data message is accessible by the addressee at an assigned electronic address or when the addressee becomes aware that the data message has been sent or when retrieved by him, whichever is earlier, if the electronic address is not assigned.⁽¹⁾

The provision of the place of dispatch and receipt is considered to be one of the most significant issues, since the place of the parties determines the applicable law. This is one of the issues that varies between the UNCITRAL Model Law on Electronic Commerce and the ECC. The Qatari law follows the ECC stating that unless the parties agree otherwise, the place of dispatch is deemed to be the place where the originator has its place of business, whilst place of receipt is where the addressee has its place of business. Three criteria are used for determining the place of the parties: First: if the originator or the addressee has more than one place of business, then the place of business is the one which has the closest relationship to the underlying transaction. Second: If there is no underlying transaction, the headquarters or principal place of business is considered the place of business. Third: if they do not

1 - Ibid, art 15. See also, ECC, n 14, art 10

have any place of business, the reference would be to their habitual residence.⁽¹⁾

Similar to the ECC, the Qatari E-Commerce law added further precautions regarding possible further sources of confusion in relation to electronic data including domain names, Internet protocol addresses or the geographical location of information systems. Therefore, a location shall not be a place of business merely because it is the place of the equipments or any other part of an information system.⁽²⁾ The Qatari law revokes the legal value of determining the place of business; furthermore, the location of equipment and supporting technology does not indicate the place of business.⁽³⁾

It is clear that the Qatari law and the ECC took a cautious approach due to the specific nature of virtual enterprises, where the place of registration may be thousands of miles from the target market. Registration of domain names can be done online in a very short time and can be used to gain some benefit such as tax avoidance; in such circumstances, the place of business should not carry any value.

1 - ECC, n 14, art 10/3. See also, Electronic Commerce and Transactions Law in Qatar, art 16

2 - Electronic Commerce and Transactions Law in Qatar, art 17

3 - Ibid, art 16

Electronic Signature:

The E-Commerce law in Qatar addressed the electronic signature following the UNCITRAL Model law on Electronic Signatures which realized the vital importance of e-signature. Since the introduction of the electronic signature, it has widely dominated the market due to the fact that it has not only taken the role of the traditional paper-based signature for proving the identity of a signatory and indicating his consent, but also because it assures the message's integrity and authenticity, making it very hard or, in the case of the most sophisticated technologies, impossible to hack the message or change any of its content.

However, there are significant variations relating to the technical requirements relevant to electronic signature in Qatar E-Commerce law. The law separated discussions relating to the recognition of the legal validity of electronic signature from those which address any technical issues arising from its usage. It stipulated that where any law requires a signature on a document or provide for certain consequences if such signature is absent, an electronic signature that is reliable within the meaning of article 28 of the e-commerce law satisfies that requirement.⁽¹⁾ Then, the law identifies four conditions for an electronic signature

1 - Ibid, art 22

to be reliable, namely: the signature creation information have to identified with the signatory and no other person. Second, the signature creation information was, at the time of signing, under the control of the signatory and of no other person. Third, no change to the electronic signature is made after the signing is detectable. Fourth, the purpose of the requirement of a signature is to legally confirm the integrity of the information to which the signature is attributed, and no change made to that information after the time of signing should be detectable.⁽¹⁾

Such separation is very important from my own point of view, as it first confirms the validity of electronic signatures and then deal with the technical issues arising in a separate detailed clause.

Responsibilities are also defined for the party relying on the electronic signatory. The Qatari law accepts a wide range of electronic signatures and they do not limit recognition to advanced digital signatures associated with a certificate. The e-commerce law affirmed that in the case of non-digital signatures, the relying party would bear the responsibility and the legal consequences in the failure to take reasonable steps to verify that the electronic signature is created by the signatory.⁽²⁾ However, in the case of digital

1 - Ibid, art 28

2 - Ibid, art 30

signatures associated with a licensed certificate, Qatari law follows the UNCITRAL Model Law on Electronic Signatures which obliges the relying party to verify the validity, suspension or revocation of the certificate, and to observe any limitation to the certificate.⁽¹⁾

As for protecting the electronic signature, the Qatari law did not prescribe any rules that obliges the parties to exercise a secure authentication procedure that would protect the electronic signature from any alteration and that would ensure the signature would be treated as a protected electronic signature.

Finally, despite the great benefits that e-commerce brings to merchants and consumers, still online commerce has some limitations due to the physical separation between buyers and sellers. This may lead to uncertainty and lack of consumer trust and confidence in buying online. Therefore, some legislations have preferred to follow the regulatory approach to reduce the barriers and develop a trustworthy relationship between seller and buyer to foster consumer trust in online transactions. The regulatory approach is crucial because it affects a number of factors that are essential to online transactions inter alia, prior information requirements and commercial communication.⁽²⁾

1 - UNCITRAL Model Law on Electronic Signatures (2001), art 11. See also, Electronic Commerce and Transactions Law in Qatar, art 31

2 - Teo Thompson SH and Jing Liu, «Consumer Trust in E-Commerce in the United States, Singapore and China» (2007) 35(1) Omega 22-38

Qatar E-Commerce law provides all relevant information concerning the seller's name, address, contact details as well as the place of business. It also provides all the information and basic terms and conditions relating to transactions of goods and services including but not limited to technical steps required to conclude the contract, the main characteristics and the price of the product including taxes and delivery costs, terms and conditions of the contract and the validity of the contract and whether it could be cancelled or amended.⁽¹⁾ Moreover, Qatari law requires all commercial offers to be described with precision and clarity and to clearly include whether they include any discounts, bonuses or gifts and to ensure that the conditions of the product being advertised via electronic communication are not misleading or deceptive and presented clearly, unambiguously and are easily accessible.

It is worth mentioning at the end of this section that up till now there is no court ruling either from preliminary courts or Courts of appeal in Qatar concerning electronic contracts.

Emerging Technologies in Electronic Contracting:

Recently Electronic contracts are not only concluded via exchanging emails or Web-Wrap and Shrink-Wrap

1 - Electronic Commerce and Transactions Law in Qatar, arts 51, 55

agreements, but by using emerging technologies, inter alia, Cloud computing which is widely used in business, Bitcoin and Apple Watch.⁽¹⁾ Such technologies shall be demonstrated in the following context, tackling the challenges they pose to electronic contracts that invalidate contracts concluded by such technologies, without attempting to find solutions to such challenges.

5.1. Cloud Computing:

Cloud technology can be illustrated as a group of computers and servers linked with each other forming an environment called “The Cloud” that allows uploading various documents and applications on the Internet. People can access their data and applications from any place via the cloud technology without being tied to a particular computer. This technology is nowadays adopted by major enterprises like Google, Microsoft, Sun and Amazon.⁽²⁾ In spite of using cloud computing technology on a wide scale in businesses recently, yet many challenges appear when it is used to form electronic contracts.

An Important issue in determining the validity of an electronic contract is to determine when and where it was concluded as mentioned before. Cloud Computing notion ignores the location totally as the location of data is not

1 - Faye Fangfei Wang, n 1, 8-9. See also, Jane K. Winn, n 1, 700

2 - Farisa Tasneem, n 37, 105

known. The place of concluding the contract is important as it entails the time of dispatch and receipt.⁽¹⁾

Another issue is the data placement, i.e. how the data is going to be stored, processed and used. With the concept of data being stored in the cloud, it is likely that others may gain access to the data by any means of cyber-attacks. And, with the lack of comprehensive legislation on liability in cloud computing, data can be altered easily, deleted, accessed by another person, or the identity of one of the parties may be impersonated. Moreover, there is no control over documents created in the cloud environment or the way they are stored or processed. This is opposite to paper-based documents or documents saved on a computer's hard disk where it is possible to retrieve them or collect them in one place. ⁽²⁾

Another risk that Cloud Computing poses to electronic contracting is the inability to confine and restrict the contents of the contracts on a cloud computing because it uses what is called Hyper Text mark Up Language (HTML) to link the papers of a certain document together in one file. It also

- 1 - Zaigham Mahmood, 'Data Location and Security Issues in Cloud Computing' [2011] International Conference on Emerging Intelligent Data and Web Technologies 51 < <http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=6076420> > accessed 10 October 2018
- 2 - Jennifer Ferreira et al, 'Emerging Issues and Challenges In Cloud Computing - A Hybrid Approach' (2012) 5(11A) Journal of Software Engineering and Applications 926 < http://file.scirp.org/Html/5-9301544_25179.htm > accessed 10 October 2018

merges contents from several websites to appear as if it is the content of one website, thus creating ambiguity and uncertainty to electronic contracts.⁽¹⁾

Nevertheless, using Cloud Technology in electronic contracts does not contradict with the UNCITRAL model law on Electronic Commerce, where the law did not limit the communication methods used in electronic commerce. An electronic contract can be concluded using Electronic Data Interchange (EDI), email, or any means of electronic technology⁽²⁾. Also, the UNCITRAL model law stipulates that messages are deemed to be sent if it reaches the operating system of the recipient. It does not mention whether the operating system is under the control of the recipient or not.⁽³⁾

5.2 BitCoin:

BitCoin is a digital peer to peer currency network for electronic payment produced by open community of people via computer systems which produce the currency and controls its transaction. It emerged up in 2009 due to the wide range of Internet usage and the flourishing of online trading aiming to be used in buying and selling goods and services online, where it is exchanged for traditional

1 - Ross Shannon, 'The History of HTML' [1998] Addison Wesley Longman < <https://www.w3.org/People/Raggett/book4/ch02.html> > accessed 10 October 2018

2 - UNCITRAL Model Law on Electronic Commerce, n 26, art 2/1

3 - Ibid, art 13

currencies in which its price is set due to the market demand and supply.⁽¹⁾ Recently, it is also used in real world trading in few locations and consulting services.⁽²⁾

Bitcoin accounts can be opened easily without following banks procedures, providing names, addresses or paying any fees. Transactions are recorded instead in a public ledger using an encrypted username, thus, the identity of the traders are kept anonymous while trading online. However, the record of the trader stored on the ledger makes it possible to trace the identity of the trader.⁽³⁾

Since Bitcoin is not controlled by any central authority or bank or subjected to variable monetary policies, it is an easy, instant and straightforward environment for commercial trading with low transaction fees in comparison to traditional currency. However, the fact that Bitcoin is not based in real world currency and the identity of the traders are anonymous, may create problems regarding the true value of such virtual money, the security breaches, and the legal issues arising from illegal activities such

1 - 'What is Bitcoin?' < <http://www.coindesk.com/information/what-is-bitcoin/> > accessed 10 October 2018. See also, Marcin Szczepański, 'Bitcoin: Market, Economics and regulation' [2014] European parliamentary research service 2 < [http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2014/140793/LDM_BRI\(2014\)140793_REV1_EN.pdf](http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2014/140793/LDM_BRI(2014)140793_REV1_EN.pdf) > accessed 10 October 2018

2 - Nikolei M. Kaplanov, 'Nerdy money: Bitcoin, The private digital currency, and the case against its regulation' [2012] Temple University Legal Studies Research Paper 123 < <http://ssrn.com/abstract=2115203> > accessed 10 October 2018

3 - Marcin Szczepański, n 73, 2

as money laundering, sales of illegal goods, fraud, and illegal contracting.⁽¹⁾ These risks are contrary to the basic principles that form any valid contract regarding the validity of consideration and the legitimacy of the subject matter of contracts.

Firstly, BitCoin value is volatile, i.e. its value may increase or decrease very quickly depending on its value at market. This creates legal uncertainty concerning the validity of the consideration element in contracts. Taking into account that in the absence of a controlling authority, there is hardly any reimbursement and the goods or services purchased cannot be returned.⁽²⁾

Secondly, the issue of privacy and anonymity that the BitCoin environment offers to traders allows good chances for practicing illegal activities, for example, online gambling which is prohibited in the United States⁽³⁾ and money laundering.⁽⁴⁾ This invalidates a contract due to the element of the legitimacy of the subject matter.

Finally, in the absence of a central authority controlling BitCoin, it is doubtful whether the parties would always find terms and conditions that govern their online agreements.

1 - Emily M. Little, 'BitCoin' (2014) 21(5) *The Investment Lawyer* 22-23

2 - Ibid, p.23. See also, Nikolei M. Kaplanov, n 74, 160

3 - 'Online Gambling. Don't Roll the Dice' < https://www.fbi.gov/news/stories/2007/june/gambling_060607 > accessed 10 October 2018

4 - Emily M. Little, n 76, 23

The absence of any case law or legislation that forms a legal framework for BitCoin trading flags legal issues concerning the availability of terms and conditions in an electronic contract to be reviewed and accessible at any time which is previously discussed in the paper.⁽¹⁾

However, no banks intervention may be an advantage in terms of lowering costs due to the absence of bank fees, yet in payments made by debit or credit cards through commercial websites, the customer can contact the bank who issued the card to stop the transaction or refund the money whenever any illegal transaction occurs. This is not applicable in BitCoin due to the absence of a third-party intervening in the payment. This provides less protection to electronic contracts concluded via BitCoin.⁽²⁾

Many countries banned Bitcoin as a currency and some are in a waiting mode till they notice its consequences. Other countries like Canada imposed taxes on profits earned by BitCoin.⁽³⁾ In the United States, the Treasury Financial Crimes Enforcement Network stated that people

1 - Nikolei M. Kaplanov, n 74, 130, 139

2 - United States Government Accountability Office, «Virtual Currencies: Emerging Regulatory, Law Information and Consumer Protection Challenges» (Report, Report to the Committee on Homeland Security and Governmental Affairs, U.S. Senate, U.S. Government Accountability Office, May 2014)

3 - Adrienne Jeffries, 'Law Library of Congress releases report on BitCoin's legal status around the world' [2014] < <http://www.theverge.com/2014/2/3/5374562/law-library-of-congress-releases-report-on-bitcoins-legal-status> > accessed 10 October 2018

who transfer or administer the transmission, buy or sell virtual currency, including BitCoin shall be considered as money transmitters by virtue of its regulations, and they are obliged to register their BitCoin account with the network as a money transfer business. Failing to do so may subject them to potential anti-money laundering while performing BitCoin businesses.⁽¹⁾ Also, the European Central Bank as well as New York Department of Finance is considering issuing a regulation governing the virtual currency in which a license may be issued to regulate BitCoin online goods and services contracts.⁽²⁾ Finally, Texas district court in the US held that BitCoin is considered to be a form of money which can be used in electronic transactions including Investment contracts.⁽³⁾

5.3 Apple Watch (Apple Pay):

It is a form of electronic payment using Apple devices either mobile phones or smart watches instead of credit or debit cards.⁽⁴⁾ Payments are conducted via contactless communication between the watch and the payment terminal in which the encrypted card information is stored

1 - Emily M. Little, n 76, 22

2 - Ibid, 22-23

3 - SEC v. Trendon T. Shavers and Bitcoin Savings and Trust (Case No. 4:13-CV-416) (E.D. Tex. 2013)

4 - Ooi Wei Shen and Rashad Yazdanifard, 'Has Mobile Payment Finally Live Up to Its Expectation in Replacing Cash and Credit?' (2015) 2(5) International Journal of Management, Accounting and Economics 489

on a secured chipset of Apple watch. The chipset transfers the stored credit card data to the payment terminal using Near-Field-Communication Chip (NFC) which forms a wireless link with the payment terminal when they are a few cm. apart, thus transferring data without any pairing codes linking them with each other.⁽¹⁾

Apple watch protects the security of credit cards of customers because a bank verification is required before saving the data of the cards in the watch, in addition to the bank approval to add the data to Apple pay.⁽²⁾ Furthermore, an authentication is required before performing the transaction which occurs as long as there is a skin contact with the watch. Hence stolen Apple Watches cannot be used in making purchases.⁽³⁾ Moreover, Apple watch does not upload the stored encrypted data to the I-Cloud or Apple's servers, nor transfers bank card details to merchants. Instead, it uses a method called "Tokenisation" to defuse this information and send it with a unique security code that prevents the usage of the information if it was intercepted.⁽⁴⁾ This prevents fraud, misrepresentation and allows suspending payment transactions if the watch got lost or stolen.⁽⁵⁾

1 - 'How does Apple make money from Apple Pay?' [2015] Wigley + company New Zealand & UK 2 < <http://www.lexology.com/search> > accessed 10 October 2018

2 - 'Apple Pay flaws revealed' (2015) 2015(3) Computer Fraud & Security 3

3 - 'How does Apple make money from Apple Pay?' n 87, 2

4 - Ibid, 3

5 - 'Apple Pay Security, Privacy and Fraud' < <http://www.macworld.co.uk/feature/apple/> > accessed 10 October 2018

Regardless the security measures adopted by Apple watch, which may decrease the possibility of invalidating electronic contracts concluded via Apple Pay, yet still there are some concerns regarding mobile payments.

The financial transactions may be subjected to sophisticated hacking attempts, ex. the hack occurred in 2014 on Target's payment systems, where cybercriminals hacked the data security system of one of the largest U.S companies "Target" stealing the personal and financial information of a large number of its customers⁽¹⁾. Also, the famous incident when the Bank of America charged his customers who were using Apple Pay twice for one purchase.⁽²⁾ Fraud and hacking attempts indeed invalidate electronic contracts, but again due to the lack of a legislative framework which governs and regulates explicitly cyberspace trading, it might be not easy to prove that a particular commercial transaction is not performed with one's device.⁽³⁾

However, Apple assumes that they do not collect users' data as it is only a matter between the user, the bank, and the

1 - N. Eric Weiss and Rena S. Miller, 'The Target and Other Financial Data Breaches: Frequently Asked Questions' [2015] Congressional Research Service 7-5700

2 - Buster Hein, 'Apple Pay glitch makes some pay double (but refunds are on way)' [2014] < <http://www.cultofmac.com/300574/apple-pay-customers-getting-charged-twice-purchases/> > accessed 10 October 2018

3 - W.B.King, 'Fraud not taking a bite out of Apple Pay adoption' (2015) 19 (7) Journal of The Credit Union < <http://www.cujournal.com/news/technology/fraud-not-taking-a-bite-out-of-apple-pay-adoption-1024207-1.html> > accessed 10 October 2018

merchant, yet Apple knows the purchase time, as well as the place of purchase if the location settings are activated. If this data is stored in the I-Cloud, the same legal issues addressed before when mentioning Cloud Computing shall exist. For example, the place of the contract which is substantial in determining the time of dispatch and receipt.⁽¹⁾

Nevertheless, such legal concerns, businesses started a piecemeal increase in Apple Pay usage. It is possible in the United States to make small transactions by Apple Pay. In the UK, it was launched on 2015 and since then, many UK banks and commercial businesses support Apple Pay service.⁽²⁾

There is a dire need that legislators draft a comprehensive legal framework to regulate cyberspace contractual agreements before the usage of emerging technologies in such contracts become inevitable.

Conclusion:

Although contract basics apply to any form of contract, yet there are noticeable differences between standard forms and electronic forms of contracts which are not addressed neither by the national law of each country nor by the International law of electronic contract. There is a

1 'How does Apple make money from Apple Pay?' n 87, 3, 4

2 W.B.King, n 94

difference in the process of offer and acceptance in the real world from the Internet. Also, there are some difficulties regarding determining the place of dispatch and the place of receipt due to the nature of the cyberspace.

Furthermore, terms and conditions to a contract are of great importance, as it entails its validity afterwards if any dispute arises. Therefore, they should always be available for negotiation before concluding the contract, and they should also be available for storage and further review. The E-Commerce Directive and the ECC gave no solution for failure to make them storable, and the UNCITRAL Model law on E-Commerce did not state that the availability of terms and conditions in electronic contracts shall be compulsory.

The Electronic Commerce and Transactions law in Qatar affirms the admissibility value of an electronic document and electronic signature and considers the originality status of electronic records with some conditions. Before the emergence of e-commerce, the most significant condition of the validity of a contract is mutual consent, however, after the wide spreading of e-contracts, the Qatari e-commerce law realises the utmost importance needed to be given to recognizing the electronic contract and giving it complete

legal effect. It considers the time of conclusion of the contract focusing on determining the time of dispatch and the time of receipt and relying on the general principles of contract law. However, the Qatari law did not include any provisions concerning the exact moment as to when the contract is considered to be concluded. Such reference would enhance the legal certainty of e-contracts. On the other hand, the Qatari law provided detailed rules that would enhance consumer confidence and trust in online commerce influenced by the EU directives and regulations.

With the appearance of new cyber technologies and utilizing them in concluding contracts, a level of uncertainty regarding the validity of such contracts appeared due to the nature of the cyberspace. Legislators have to find untraditional methods to remove this uncertainty depending on the new nature of modern technologies rather than the traditional law concepts. This should be done before the emerging technologies respond to the economic pressure of the software market and its usage become a custom in a way that limits resorting to the currently used methods in concluding electronic contracts. This has to be done before the occurrence of practical difficulties, making the performance of any modification in the system of the new technology would be very hard and costly to change or

amend an installed software or hardware with expensive investment and momentous. A clear example for such difficulty is the case of United States Telecom Ass'n v. FCC, in which the telecom companies challenged the US government upon issuing an act to allow wire traps in a new technology in phones claiming that the cost of providing the service after installing the new technology is very high.⁽¹⁾

1 - United States Telecom Ass'n v. FCC, 227 F.3d 450 (D.C.Cir.2000)

Bibliography

Primary Sources:

Cases:

- Bernuth Lines Ltd v. High Seas Shipping Ltd [2005] EWHC 3020
- Brower v. Gateway 2000, Inc 676 N.Y.S.2d 569 (N.Y.A.D. 1 Dept. 1998)
- eBay International AG v Creative Festival Entertainment Pty Ltd [2006] FCA 1768 (18 December 2006)
- Entores v Miles Far East Corp [1955] 2 QB 327; [1955] 2 All ER 493
- Kloeck v. Gateway, Inc. 104 F. Supp. 2d 1332
- ProCD, Inc. v. Zeidenberg 86 F.3d 1447 (7th Cir. 1996)
- Rosenfeld v. Zerneck 4 Misc.3d 193, 776 N.Y.S.2d 458
- Ryanair Ltd v Billigfluege de GmbH [2010] IEHC 47
- SEC v. Trendon T. Shavers and Bitcoin Savings and Trust (Case No. 4:13-CV-416) (E.D. Tex. 2013)
- Specht v. Netscape Communications Corp. 306 F.3d 17 (2d Cir. 2002)

- United States Telecom Ass'n v. FCC, 227 F.3d 450 (D.C.Cir.2000)

Legislation:

- European Union Directive of the European Parliament and of the Council on Electronic Commerce, 2000/31/EC

- Qatari Electronic Commerce and Transactions Law No. 16 of 2010

- UN Convention on the Use of Electronic Communications in International Contracting, Nov. 23, 2005, U.N. Doc. A/60/21

- UNCITRAL Model Law on Electric Commerce, 24 ILM 1302 (1996)

- UNCITRAL Model Law on Electronic Signatures (2001)

- United States Uniform Electronic Transactions Act 1999 (UETA)

Secondary Sources:

Books:

- Burnett R & Klinger P, Drafting and negotiating computer contracts (Second edition, Tottel Publishing West Sussex, 2005)

- Power D, The Internet legal guide: Everything you need to know when doing business online (first edition, Wiley, John & Sons New York 2002)
- Reuvid J, The secure online business handbook: a practical guide to risk management and business continuity (Fourth edition, Kogan Page Publishers 2006)
- Stone R, The modern law of contract (Sixth edition, Cavendish London, 2002)
- Wang F, Internet Jurisdiction and Choice of Law: Legal Practices in the EU, US and China (First edition, Cambridge University Press UK 2010)
- Wang F, Law of electronic commercial transactions: Contemporary issues in the EU, US and China (Second edition, Routledge London & New York 2014)

Articles:

- Al-FarforM, 'Rule of Modern Means of Communication Contracts in Islamic Jurisprudence' (1990) 2(6) Islamic Jurisprudence Journal.
- 'Apple Pay flaws revealed' (2015) 2015(3) Computer Fraud & Security
- Dickie J, 'When and where are electronic contracts concluded?' (1998) 49(3) Northern Ireland Legal Quarterly

- Ferreira J and others, 'Emerging Issues and Challenges in Cloud Computing - A Hybrid Approach' (2012)5(11A) Journal of Software Engineering and Applications

- Goodman B 'Honey, I shrink wrapped the consumer: The shrink-wrap agreement as an adhesion contract' (1999) 21(1) Cardozo Law review

- Kaplanov N, 'Nerdy money: Bitcoin, The private digital currency and the case against its regulation' [2012] Temple University Legal Studies Research Paper

- King W, 'Fraud not taking a bite out of Apple Pay adoption' (2015) 19 (7) The Credit Union Journal

- Little E, 'BitCoin' (2014) 21 (5) The Investment Lawyer

- Rudareanu M and others, 'The law and Information society: Electronic signature and Electronic contract' (2011)6(2) Economics, Management, and Financial market

- Shen O and Yazdanifard R, 'Has Mobile Payment Finally Live Up to Its Expectation in Replacing Cash and Credit?' (2015) 2 (5) International Journal of Management, Accounting and Economics

- Tasneem F, 'Electronic Contracts and Cloud Computing' (2014)9(2) Journal of International Commercial Law and Technology

- Thompson T. and Liu J, “Consumer Trust in E-Commerce in the United States, Singapore and China” (2007) 35(1) Omega

- Winn J, ‘Emerging Issues in Electronic contracting. Technical standards and law reform’ [2003]

Law Reports:

- Christensen S, and others, ‘Electronic contract administration – legal and Security Issues’ [2006] Icon.Net Pty Ltd Australia, Report No. 2005-025-A

- Explanatory note by the UNCITRAL Secretariat on the United Nations Convention on the Use of Electronic Communications in International Contracts

- Jeffries A, ‘Law Library of Congress releases report on BitCoin’s legal status around the world’ [2014]

- United States Government Accountability Office, ‘Virtual Currencies: Emerging Regulatory, Law Information and Consumer Protection Challenges’ (Report, Report to the Committee on Homeland Security and Governmental Affairs, U.S. Senate, U.S. Government Accountability Office, May 2014)

- Weiss N and Miller R, ‘The Target and Other Financial Data Breaches: Frequently Asked Questions’ [2015] Congressional Research Service 7-5700

Online Articles:

- ‘Apple Pay Security, Privacy and Fraud’ < <http://www.macworld.co.uk/feature/apple/> >

- Hein B, ‘Apple Pay glitch makes some pay double (but refunds are on way)’ [2014] < <http://www.cultofmac.com/300574/apple-pay-customers-getting-charged-twice-purchases/> >

- ‘How does Apple make money from Apple Pay?’ [2015] Wigley + company New Zealand & U.K < <http://www.lexology.com/search> >

- Mahmood Z, ‘Data Location and Security Issues in Cloud Computing’ [2011] < <http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=6076420> >

- Online Gambling. Don’t Roll the Dice’ < https://www.fbi.gov/news/stories/2007/june/gambling_060607 >

- Shannon R, ‘The History of HTML’ [1998] Addison Wesley Longman < <https://www.w3.org/People/Raggett/book4/ch02.html> >

- Szczepański M, ‘BitCoin: Market, Economics and regulation’ [2014] European parliamentary research service < [http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2014/140793/LDM_BRI\(2014\)140793_REV1_EN.pdf](http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2014/140793/LDM_BRI(2014)140793_REV1_EN.pdf) >

- ‘What is BitCoin?’ < <http://www.coindesk.com/information/what-is-bitcoin/> >