

# **Comments on the Implementation and Implications of the UNCITRAL *Model Law on Electronic Transferable Records* in Trade Finance in Australia**

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## *Introduction*

Australia has implemented the UNCITRAL *Model Law on Electronic Commerce* (MLEC)<sup>1</sup> and the *United Nations Convention on the Use of Electronic Communications in International Contracts* (Electronic Communications Convention).<sup>2</sup> The adoption of the *Model Law on Electronic Transferable Records* (MLETR) will complete the suite of instruments for the functional equivalence of electronic documents covering effectively all forms for trade documents and instruments used in international trade. The adoption is to be commended. Several nations have already implemented legislation based on the MLETR, most notably the UK with its *Electronic Trade Documents Act 2023*. The adoption will create greater efficiencies in the management of goods and documents in international trade, creating a multi-billion-dollar boost for international commercial parties and regulatory authorities. This is an opportunity to provide merchants with the tools to transform international practice and provide a cheaper, faster and more sustainable option. These comments summarise aspects of the MLETR and provide a background to the deliberations by the Working Group of UNCITRAL which drafted the Model Law.

## *Background*

The background to the *Model Law on Electronic Transferable Records* (MLETR) requires an appreciation of the approach taken in, and the purposes underlying, the previous texts promulgated by Working Group IV (Electronic Commerce) of UNCITRAL.<sup>3</sup> UNCITRAL was formed by resolution of the United Nations General Assembly in December 1966 and its purpose is to further the progressive harmonisation and unification of the law of international trade.

In 1996, UNCITRAL released what is currently the most popular model law for ensuring consumer and commercial protection in an electronic environment. The (MLEC) provides nations with a template of internationally acceptable and robust rules that would remove legal obstacles to electronic commerce and create a more secure legal environment for those participating in such activity. The MLEC was intended to facilitate the use of electronic forms of communication and the digital storage of information in electronic records. To this end, the MLEC provides standards to assess the legal force of electronic messages and legal rules for electronic commerce in specific areas, such as the carriage of goods. In relation to the former,

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<sup>1</sup> UNCITRAL, 'Model Law on Electronic Commerce with Guide to Enactment 1996 with additional article 5 bis as adopted in 1998' (1999) UN Publication No E.99.V.4.

<sup>2</sup> Convention on the Use of Electronic Communications in International Contracts (adopted 23 November 2005 UNGA Res 60/21, entered into force 1 March 2013).

<sup>3</sup> Dr Alan Davidson has been an active delegate to all sessions of the United Nations Commission on International Trade Law ('UNCITRAL') Working Group IV (Electronic Commerce) since 2014, including MLETR.

the MLEC incorporates the fundamental principles of functional equivalence and non-discrimination. That is, where the electronic form is functionally equivalent to the traditional paper-based form, it should be treated equally by the law; and the law should not discriminate against transactions because of their electronic form. These core principles permeate virtually all domestic legislation based on the MLEC.

More specifically, the MLEC addresses the legal recognition of data messages; the notion of 'writing' in the electronic sphere; the legal validity of electronic signatures; the recognition of an electronic record as an 'original' record; the legal admissibility of, and evidentiary weight to be attributed to, data messages; the retention of data messages; the formation and validity of contracts by electronic means; the recognition by parties of data messages; the attribution of data messages to particular parties; the acknowledgement of receipt for data messages; and the determination of the time and place of dispatch and receipt of data messages.<sup>4</sup>

The MLEC represented a significant step forward in relation to the regulation of electronic commerce and largely achieved its objectives of removing legal obstacles, promoting commercial certainty, providing a more secure legal environment for electronic commerce, and being 'of use to individual users of electronic commerce in the drafting of some of the contractual solutions that might be needed to overcome the legal obstacles'.<sup>5</sup> The MLEC has gained significant international acceptance, being incorporated into legislation in 83 States and a total of 163 jurisdictions.<sup>6</sup> Notwithstanding this global success and adoption, the MLEC represents 1990s thinking and reflects the limited understanding of the issues at that time. In 2005, the United Nations released the *UN Convention on the Use of Electronic Communications in International Contracts* (Electronic Communications Convention). The Electronic Communications Convention is intended to assure commercial parties and financial institutions internationally that contracts negotiated electronically are as valid and enforceable as traditional paper-based transactions. The provisions build on and improve both the MLEC and the UNCITRAL *Model Law on Electronic Signatures* promulgated in 2001.<sup>7</sup>

The Electronic Communications Convention implemented several improvements to the MLEC. First, certain definitions were refined and extended. For example, 'communication' and 'electronic communication' were added to expand the limited meaning of 'data message'. 'Communication' now includes 'any statement, declaration, demand, notice or request, including an offer and the acceptance of an offer, that the parties are required to make or choose to make in connection with the formation or performance of a contract'.<sup>8</sup> 'Automated messaging system' was inserted to address the issue of transactions and messaging being

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<sup>4</sup> Ibid, arts 5–15.

<sup>5</sup> UNCITRAL, 'Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce (1996)' UN (1999) Publication No E.99.V.4 [2] <[https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/19-04970\\_ebook.pdf](https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/19-04970_ebook.pdf)>

<sup>6</sup> See UNCITRAL, 'UNCITRAL Model Law on Electronic Commerce (1996)—Status' <[https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic\\_commerce/status](https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic_commerce/status)>

<sup>7</sup> Australia did not adopt the UNCITRAL *Model Law of Electronic Signatures* (2001) as approach of the Australian Government was to adopt a light touch regulatory approach; and its enacted functional equivalence signature provisions taken from the MLEC provided to be adequate coverage and has proven so by judicial interpretation over the past two decades.

<sup>8</sup> UNCITRAL, 'Electronic Communications Convention' art 4.

generated by a computer program without human review or intervention. 'Originator' and 'addressee' were refined to apply to the expanded meaning of electronic communications.

Second, the test for the functional equivalence of a 'signature' was expanded. The MLEC test invoked only a 'reliability test', namely that the electronic signature must be 'as reliable as appropriate' to be deemed the functional equivalent of a manuscript signature. Whilst this provided greater flexibility, it also produced more uncertainty. UNCITRAL expressed its concern that a party might seek to 'invoke the 'reliability test' to repudiate its signature in cases where the actual identity of the party and its actual intention could be proved'.<sup>9</sup> The 'reliability test' should not be used to 'lead a court or trier of fact to invalidate the entire contract on the ground that the electronic signature was not appropriately reliable' where there is no dispute regarding the identity of the signor or the fact of signing.<sup>10</sup> Hence, the Electronic Communications Convention inserted an alternative test for validating the method of signature where that method is 'proven in fact' to have identified the signatory and indicated the signatory's intention in respect of the information contained in the electronic communication.

Third, the test for determining the time of dispatch and receipt was outmoded. The MLEC test for ascertaining the time of dispatch did not take into account the possibility that the sender might retain the ability to retrieve a sent message. The MLEC test for determining time of receipt referred to a communication entering a 'designated information system' without any further explanation. As regards email, courts were unsure whether 'designated information system' meant the Internet generally, the recipient's internet service provider or the recipient's email inbox. This was rectified by the Electronic Communications Convention using the expression 'capable of being retrieved'.<sup>11</sup>

The MLEC and the Electronic Communications Convention were intended to apply to electronic forms of writing, signatures, transactions, and contracts. They were not intended to apply to negotiable instruments, documents of title, and similar trade documents. Indeed, Article 2(2) of the Electronic Communications Convention specifies certain exclusions, which include:

[B]ills of exchange, promissory notes, consignment notes, bills of lading, warehouse receipts or any transferable document or instrument that entitles the bearer or beneficiary to claim the delivery of goods or the payment of a sum of money.

The reason for this deliberate exclusion was a concern regarding the potential consequences of unauthorised duplication of documents of title and negotiable instruments. Indeed, any transferable instrument that entitles the bearer or beneficiary to claim the delivery of goods or the payment of a sum of money makes it necessary to develop mechanisms to ensure the 'singularity' of those instruments. Additionally, the issues raised by negotiable instruments

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<sup>9</sup> UNCITRAL, 'Explanatory note by the UNCITRAL secretariat on the United Nations Convention on the Use of Electronic Communications in International Contracts' (2007) UN Publication No E.07.V.2 [164] <[https://www.uncitral.org/pdf/english/texts/electcom/06-57452\\_Ebook.pdf](https://www.uncitral.org/pdf/english/texts/electcom/06-57452_Ebook.pdf)> (UNCITRAL, Explanatory note (2007)).

<sup>10</sup> Ibid,

<sup>11</sup> UNCITRAL, 'Electronic Communications Convention' art 10(2).

and similar trade documents involve considerations that go beyond merely ensuring the equivalence between paper-based and electronic forms. In particular, the Working Group IV (Electronic Commerce) determined that it would need to deal with the question of the ‘uniqueness’ of electronic instruments. In this regard, UNCITRAL stated:

[F]inding a solution for this problem required a combination of legal, technological and business solutions, which had not yet been fully developed and tested.<sup>12</sup>

The Working Group quite deliberately put aside the thorny issues of the functional equivalence of electronic transferable records until a later time. That time came in 2011 when UNCITRAL held a colloquium ‘with a view to identifying a roadmap for future work by the Commission in the area of electronic commerce, with particular regard to legal issues relating to electronic transferable records’.<sup>13</sup> As a result of that colloquium, UNCITRAL mandated Working Group IV (Electronic Commerce) with drafting rules concerning electronic transferable records. In the first few sessions, the delegates debated whether the work should take the form of a convention, a model law or some other form of text. The Working Group eventually settled on a model law.

### *Model Law on Electronic Transferable Records 2017*

#### *A. Purpose*

In making the MLETR available, UNCITRAL intends to provide a platform for ensuring harmonisation, legal certainty, and commercial predictability for the increased participation in electronic commerce. The purpose of the MLETR is to facilitate the legal use of ‘electronic transferable records’ (‘ETRs’) domestically and internationally. ETRs ought to be fundamental in the world of electronic commerce and contribute to trade facilitation.

The MLETR applies to ETRs that are functionally equivalent to paper-based transferable documents or instruments. Article 2 defines a ‘transferable document or instrument’ as ‘a document or instrument issued on paper that entitles the holder to claim the performance of the obligation indicated in the document or instrument and to transfer the right to performance of the obligation indicated in the document or instrument through the transfer of that document or instrument’. Such ‘transferable documents and instruments’ are vital in international trade, in particular transport, logistics, and trade finance (popularly referred to as ‘fintech’) and would typically include bills of lading, bills of exchange, promissory notes, consignment notes, and warehouse receipts. In other words, the concept of the ‘transferable document or instrument’ covers those instruments previously excluded by the Electronic Communications Convention and would also extend to those obligations owed to beneficiaries under commercial and standby letters of credit and independent guarantees. The principle of technological neutrality entails adopting a system-neutral approach, enabling the use of a variety of technological models, whether based on registry, token, distributed

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<sup>12</sup> UNCITRAL, ‘Explanatory Note (2007)’ [80]–[81].

<sup>13</sup> UNCITRAL, Colloquium on Electronic Commerce (14-16 February 2011, New York) <[https://uncitral.un.org/en/colloquia/electronic\\_commerce/2010](https://uncitral.un.org/en/colloquia/electronic_commerce/2010)>. The writer was an invited speaker at the colloquium.

ledger, or other technology. By using such technology, the commercial risks become more than acceptable for commercial parties in dealings that involve significant transaction value, the transfer of property rights and the imposition of obligations. Transactions can also proceed with greater efficiency, speed, and security.

This potential framework for regulation will also provide some comfort to commercial parties developing blockchain technology.<sup>14</sup> Blockchains can passively and faithfully store records and information or can be used actively as a mechanism for facilitating commercial transactions. An example of the latter use is the 'smart contract'. In essence, a 'smart contract' is an agreement or part of an agreement converted into code. A 'smart contract' permits the increased use of automation in the commercial world, computer systems are effectively trusted with greater autonomy through artificial-intelligence platforms and the expanding use of blockchain or distributed-ledger technology. To form a 'smart contract' using such technology,<sup>15</sup> parties encrypt a message or messages, forming a block of data, using precise and predetermined protocols, which then 'inform' all the nodes on the network of the new block. The nodes validate the transaction by rigorously verifying the parties' identity and then record the acceptance of the block on the ledger. This process is shared (or 'distributed') amongst the nodes. In due course, an additional encrypted block of data is typically added to the ledger (after it has been verified with the same level of rigour) after the previously verified block, thereby forming a chain of blocks. All network nodes continue verification and authentication of each new submission of a block. The integrity of the ledger is said to be immutable.<sup>16</sup> The 'smart contract' can be self-executing, which belies the underlying complexity. In that regard, the Ethereum system permits tokens to represent and incorporate smart contracts; and most importantly to be self-executing and self-enforcing.

Any number of contracts can be put into 'smart' form. One example is an option agreement: where the requirements of the option are satisfied, the 'smart contract' is activated and the necessary consequential actions are automatically taken, including execution and payment. Each step is recorded on the blockchain. In the international trade context, payment under the sale contract may be triggered when the vessel reaches a set GPS position, or a financial penalty might be automatically imposed should the vessel fail to reach that position by a specified time and date. Such technology can also facilitate the financing of international trade and can be used in connection with letters of credit, independent guarantees, bills of

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<sup>14</sup> For the use of blockchain technology in relation to electronic bills of lading and cargo insurance certificates, see Miriam Goldby, "Digitalisation of Shipping and Insurance Documents: Implications for Trade Finance", Chapter 10 in *Trade Finance: Technology Innovation and Documentary Credits*, Christopher Hare and Dora Neo (editors) Oxford University Press, Oxford (2021). For scepticism over the use of blockchain technology in trade finance, see Jane Winn, "Will Blockchain Transform Trade finance?", Chapter 12 in *Trade Finance: Technology Innovation and Documentary Credits*, Christopher Hare and Dora Neo (editors) Oxford University Press, Oxford (2021).

<sup>15</sup> The expression originates from the seminal article by Satoshi Nakamoto where the expression used is a 'chain of blocks': see Satoshi Nakamoto, 'Bitcoin: A Peer-to-Peer Electronic Cash System' <<https://bitcoin.org/bitcoin.pdf>>

<sup>16</sup> See, for example, Christopher Millard, 'Blockchain and Law: Incompatible Codes?' (2018) 34 *Computer Law & Security Review* 843.

exchange, promissory notes, and so forth. This trade finance innovation is facilitated by the advent of ETRs and the introduction of the MLETR.

## *B. Operation*

The MLETR builds on the core principles of non-discrimination against the use of electronic means of transacting, the functional equivalence of paper-based and electronic methods and technology neutrality underpinning all UNCITRAL texts on electronic commerce. In regard to the last issue, Working Group IV (Electronic Commerce) barely discussed the underlying technology involved, since the delegates and observers were typically lawyers. Indeed, there was an underlying, unspoken assumption that the technical experts regarded any issues concerning the originality or duplication of ETRs as resolved. Accordingly, the text of the MLETR remains largely neutral in its references to the underlying technology, although the Explanatory Note to the MLETR does refer to ‘enabling the use of various models whether based on registry, token, distributed ledger or other technology’.<sup>17</sup> The reference to a ‘registry’ could include a centralised, decentralised, or distributed registry. Accordingly, the MLETR does not represent an abandonment of the idea of using a central registry for its purposes, even though experimentation with centralised registries has had mixed results. The reference to distributed-ledger technology clearly envisages the possible use of blockchain technology, which involves a ledger that is available to all, immutable, and supplemented by stringent crypto-methods. That said, no attempt is made in the explanatory notes to consider how, where, or when blockchain technology should or could be utilised, so the matter has been left to merchants and financiers to implement this in due course. Finally, the reference to ‘other’ technologies in the explanatory notes provides for the possibility of future technologies that commercial parties may develop and incorporate into their dealings. Ultimately, the MLETR may acclimate various forms of technology, including registries, tokens, and distributed ledgers.

Chapter II of the MLETR contains provisions on the ‘functional equivalence’ of paper-based and electronic methods. More specifically, articles 8 and 9 provide for the functional equivalence of electronic writing and electronic signatures, so that writing and signatures should be treated equally by the applicable whether in electronic or paper-based form. Whilst many nations have already enacted electronic writing and signature provisions in conformity with the MLEC, the Working Group recognised the potential for a jurisdiction to adopt the MLETR without previously having enacted the equivalent of the MLEC or the Electronic Communications Convention. In relation to trade finance, most financial institutions are members of SWIFT,<sup>18</sup> which since 1975 has provided a secure electronic network for financial institutions to send, receive, and authenticate information about financial transactions. It could be regarded as financial institutions own secure private intranet, which existed prior to the Internet. Recognising the advantages of such a network, banks became early adopters. If the domestic law of a specific jurisdiction casts doubt upon the validity of electronic

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<sup>17</sup> UNCITRAL, ‘Explanatory Note to the UNCITRAL Model Law on Electronic Transferable Records’ (2017) UN Publication No E.17.V.5 [18] <[https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/mletr\\_ebook\\_e.pdf](https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/mletr_ebook_e.pdf)> (hereafter UNCITRAL, ‘Explanatory Note (2017)’).

<sup>18</sup> SWIFT is an acronym for the ‘Society for Worldwide Interbank Financial Telecommunication’ <[swift.com](http://swift.com)>

transactions concluded through SWIFT, the adoption of the MLEC, Electronic Communications Convention, and now the MLETR will effectively settle that issue. This will facilitate the more widespread adopting of electronic trade finance.

The key provision of the ML-ETR is article 10. Where the law requires a transferable document or instrument, that requirement is met by an electronic record where two conditions are met. First, the electronic record must contain the information that would be required to be contained in the corresponding paper-based transferable document or instrument.

Second, a 'reliable method' must be used 'to identify that electronic record as the electronic transferable record'; 'to render that electronic record capable of being subject to control from its creation until it ceases to have any effect or validity'; and 'to retain the integrity of that electronic record'.

The first of those conditions recognises the necessity to comply with the applicable substantive law for the relevant transferable document or instrument. The second condition imposes requirements concerning identity, control, and integrity upon the validity and effectiveness of the ETR. These elements will be considered in turn.

#### 1. *Reliable Method*

The MLETR uses the expression 'reliable method' in several key provisions to establish the standard to be met by electronic forms for functional equivalence to operate. This expression is used in the key articles that define ETRs (article 10); define the notion of 'control' (article 11); permit the use of electronic signatures (article 9); deal with indications of time and place in ETRs (article 13); allow the amendment of ETRs (article 16); permit the replacement of a transferable document or instrument with an ETR (article 17); or permit the replacement of an ETR with an equivalent paper-based transferable document or instrument (article 18). The expression 'reliable method' is nebulous and flexible. As described above, a similar approach was taken with regard to the functional equivalence of electronic signatures in the ML-EC,<sup>19</sup> where the expression used was that the method had to be 'as reliable as appropriate'. Without any further guidance, this expression was unclear, difficult to apply and could lead to unintended results. Some courts expressed concern, if not bewilderment at its interpretation.<sup>20</sup> The Explanatory Note to the Electronic Communications Convention attempted to provide some assistance in determining what might be considered 'as reliable

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<sup>19</sup> UNCITRAL, MLEC art 7(1) provides: 'Where the law requires a signature of a person, that requirement is met in relation to a data message if: (a) a method is used to identify that person and to indicate that person's approval of the information contained in the data message; and (b) that method is *as reliable as was appropriate for the purpose for which the data message was generated or communicated, in the light of all the circumstances, including any relevant agreement*' (emphasis added).

<sup>20</sup> For example, in *Getup Ltd v Electoral Commissioner* [2010] FCA 869 [14]–[17], the Federal Court of Australia was required to hear an issue concerning 'reliability' in circumstances where there was no doubt that the electronic signature was that of the signor, who had signed with the requisite intention. The court expressed some frustration at having to apply a 'reliability' test in those circumstances. In particular, Perram J stated that 'because s 10(1)(b) (the reliability test) is pitched at a very high level of generality it understandably eschews identifying any of the parties to the communication at all.' Accordingly, his Honour concluded: 'I cannot accept that the slightly pixilated nature of Ms Trevitt's signature rendered it unreliable for the Commissioner's purposes.'

as appropriate' in the context of article 9 of that Convention (concerning electronic signatures):

Legal, technical and commercial factors that may be taken into account in determining whether the method used . . . *is appropriate*, include the following: (a) the sophistication of the equipment used by each of the parties; (b) the nature of their trade activity; (c) the frequency at which commercial transactions take place between the parties; (d) the kind and size of the transaction; (e) the function of signature requirements in a given statutory and regulatory environment; (f) the capability of communication systems; (g) compliance with authentication procedures set forth by intermediaries; (h) the range of authentication procedures made available by any intermediary; (i) compliance with trade customs and practice; (j) the existence of insurance coverage mechanisms against unauthorised communications; (k) the importance and the value of the information contained in the electronic communication; (l) the availability of alternative methods of identification and the cost of implementation; (m) the degree of acceptance or non-acceptance of the method of identification in the relevant industry or field both at the time the method was agreed upon and the time when the electronic communication was communicated; and (n) any other relevant factor.<sup>21</sup>

The difficulty of interpreting, implementing, and applying the notion of 'reliability' by reference to the multi-factorial approach in these explanatory notes is, however, immediately apparent. Indeed, those drafting the notes immediately recognised the problem, describing it thus:

[T]he courts in some States might be inclined to consider, for instance, that only signature methods that employed high-level security devices are adequate to identify a party, despite an agreement of the parties to use simpler signature methods. The requirement that an electronic signature needs to be 'as reliable as appropriate' should not lead a court or trier of fact to invalidate the entire contract on the ground that the electronic signature was not appropriately reliable *if there is no dispute about the identity of the person signing* or the fact of signing, that is, no question as to authenticity of the electronic signature. *Such a result would be particularly unfortunate*<sup>22</sup>

The solution to this problem was to incorporate an additional and alternative control or test that operated to limit the potentially negative consequences of the more open-textured approach to the notion of 'reliability'. Accordingly, in the context of electronic signatures, article 9 of the Electronic Communications Convention went on to provide that, where the technological method for inserting an electronic signature is '[p]roven in fact to have fulfilled the functions [required] by itself or together with further evidence',<sup>23</sup> then it is to be regarded

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<sup>21</sup> UNCITRAL, 'Explanatory Note (2007)' [162] (emphasis added).

<sup>22</sup> Ibid [163]–[164] (emphasis added).

<sup>23</sup> UN, 'Electronic Communications Convention' art 9(3)(b)(ii).



as functionally equivalent to a manual signature. This addition prevents electronic signatures becoming too susceptible to legal challenge on technological grounds.

The MLETR unsurprisingly duplicated this approach. Hence, article 12 of the MLETR establishes a 'general reliability standard' for determining whether the technological method used for an ETR is 'as reliable as appropriate'. That provision commences with a non-comprehensive list of seven factors to guide the determination of whether a particular method is 'as reliable as appropriate':

[T]he method referred to shall be: (a) As reliable as appropriate for the fulfilment of the function for which the method is being used, in the light of all relevant circumstances, which may include: (i) Any operational rules relevant to the assessment of reliability; (ii) The assurance of data integrity; (iii) The ability to prevent unauthorized access to and use of the system; (iv) The security of hardware and software; (v) The regularity and extent of audit by an independent body; (vi) The existence of a declaration by a supervisory body, an accreditation body or a voluntary scheme regarding the reliability of the method; (vii) Any applicable industry standard<sup>24</sup>

As in the Electronic Communications Convention, there is then an alternative approach to demonstrating the reliability of the technological method, namely if it can be 'proven in fact to have fulfilled the function by itself or together with further evidence'. Most likely, it will be the latter test that is invoked in future disputes and analysis, as it bolsters the extent to which commercial parties may rely upon ETRs.

## 2. *Identity*

The nature of electronic duplication is that digital copies can be made that are indistinguishable from the original. The latest technologies available to commercial parties, however, provide solutions in a modern commercial context to minimise the risk of duplication of the electronic record. Working Group IV (Electronic Commerce) recognised this difficulty, and took expert advice, initially through the 2011 Colloquium, about what technical and practical solutions were available. Both the Working Group and the Explanatory Note to the MLETR considered expressions such as 'uniqueness' and 'singularity' when addressing this issue.<sup>25</sup> Despite the fact that electronic commerce will arguably reduce, rather than increase, the commercial and instrument risk that has been part of the use of paper-based documents, the Note explains, however, that 'uniqueness is a relative notion that poses technical challenges in an electronic environment, as providing an absolute guarantee of non-replicability may not be technically feasible'.<sup>26</sup> Of course, in the paper-based world, such a guarantee is not required. Even when forgery and fraud remain an ever-present risk, the original paper-based document or instrument may still be described as being unique. Centuries of commercial practice have permitted sophisticated trade parties to weigh and balance the underlying risks of forgery and fraud and to take appropriate, if not full-proof,

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<sup>24</sup> Ibid art 12(a) (emphasis added).

<sup>25</sup> UNCITRAL, 'Explanatory Note (2017)' [81]–[85], [94]–[96], [112].

<sup>26</sup> Ibid [82].

actions. Indeed, such practices have developed to the point where, in the paper-based world, some instruments no longer need to be 'unique'. For example, bills of lading are commonly issued in triplicate. Each is valid and acceptable, but not necessarily 'unique'.<sup>27</sup> Accordingly, the Explanatory Note adopts the term 'singularity' in preference to the term 'unique' and explains that the former term 'requires reliable identification of the electronic transferable record that entitles its holder to request performance of the obligation indicated in it, so that multiple claims of the same obligation would be avoided'.<sup>28</sup> The other effect of the notion of singularity is 'the prevention of unauthorised replication of an electronic transferable record by the system'.<sup>29</sup>

Linked to the issue of 'singularity' is how the ETR can be transferred without duplication the record. Working Group IV (Electronic Commerce) discussed in particular how an 'electronic record' could become an 'electronic transferable record' without undermining that record's 'singularity'. For a short time, the Working Group used the expression the 'operative electronic transferable record' to distinguish it from a non-operative copy of that record. Later, the expression 'authorised electronic transferable record' was debated. In the end, it was determined that no additional descriptor was necessary and that it sufficed for reference to be made simply to 'the' electronic transferable record, which was then defined and described as containing the features required by article 10. Indeed, the Explanatory Note to the MLETR makes clear that the '[i]nsertion of a further qualifier might create uncertainty'.<sup>30</sup> Using the definite article 'the' did, however, cause concern for those nations in the session whose language did not have a corresponding word, but this issue was left to the translating personnel (and not considered further by the Working Group per se).<sup>31</sup> On the basis of these discussions, 'electronic record' was defined as 'information generated, communicated, received or stored by electronic means, including, where appropriate, all information logically associated with or otherwise linked together so as to become part of the record, whether generated contemporaneously or not'.<sup>32</sup> An 'electronic transferable record' was in turn defined as 'an electronic record that complies with the requirements of article 10'.<sup>33</sup>

### 3. *Control, Exclusive Control, and Transfer of Control*

In the paper-based world, possession, including constructive possession, of the transferable document or instrument typically confers specific rights, economic value, legal possession, and/or ownership upon the holder. The concept of 'control' was intended by Working Group IV (Electronic Commerce) to be the electronic functional equivalent of the paper-based notion of possession. In essence, the notion of 'control' focuses upon 'the use of a reliable method to identify the person in control of the electronic transferable record'.<sup>34</sup> Indeed, given the

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<sup>27</sup> See Miriam Goldby, 'A Re-Assessment of the CMI Rules for Electronic Bills of Lading in the Light of Current Practices' [2008] *LMCLQ* 56; Nick Gaskell, 'Bills of Lading in an Electronic Age' [2010] *LMCLQ* 233.

<sup>28</sup> UNCITRAL, MLETR 'Explanatory Note (2017)' [84]

<sup>29</sup> *Ibid* [85].

<sup>30</sup> *Ibid* [93], [97].

<sup>31</sup> *Ibid* [96].

<sup>32</sup> UNCITRAL, MLETR art 2.

<sup>33</sup> *Ibid*

<sup>34</sup> UNCITRAL, MLETR, Explanatory Note (2017) [84].

concerns over the uniqueness of the ETR, the requirement of control must necessarily involve the exercise of exclusive control.

This issue is dealt with in article 11 of the MLETR. Sub-article 11(1) provides that, 'where the law requires or permits the possession of a transferable document or instrument, that requirement is met with respect to an electronic transferable record if a reliable method is used . . . [t]o establish *exclusive control* of that electronic transferable record by a person; and to identify that person as the person in control'.<sup>35</sup> The Explanatory Note to the MLETR considers that the reference to 'exclusive' control in this provision is for reasons of 'clarity', although in a somewhat circular (and unclear) manner then states that 'the notion of "control", similarly to that of "possession", implies exclusivity in its exercise'.<sup>36</sup> Furthermore, the Note explains that the 'concept of "control" does not refer to "legitimate" control, since this is a matter of substantive law'.<sup>37</sup> Furthermore, the Note provides that the notions of 'control' and 'singularity' (considered above) in the MLETR operate independently and should be distinguished from one another, since 'it is possible to conceive of exclusive control over a multiple record', as well as 'non-exclusive control over a single record'.<sup>38</sup> Accordingly, in the absence of more concrete guidance in the Explanatory Note, the notion of exclusivity of control will essentially be a question of fact and depend to a large degree on the precise technology used.

Despite the lack of clarity over the determination of control over the ETR, this notion also underpins sub-article 11(2), which deals with the 'transfer' of control. This is the functional equivalent of transferring possession of a paper-based document or instrument. In the paper-based world, transferable documents and instruments are typically those that evidence or create some form of property right that is capable of transfer. In such cases, the transfer of possession typically occurs by the simple delivery, or the endorsement and de- livery, of the relevant document. In that regard, sub-article 11(2) provides that '[w]here the law requires or permits the transfer of possession of a transferable document or instrument, that requirement is met with respect to an electronic transferable record by the transfer of control over the electronic transferable record'.<sup>39</sup> How precisely this transfer occurs will de- pend upon the nature of the technology used; but, whatever the precise mechanism, it must simultaneously satisfy the 'exclusive control' and 'identity' requirements in article 11(1) with respect to the transferee.

#### 4. *Integrity*

As well as ensuring the 'singularity' of the ETR, the MLETR also addresses the need to maintain the integrity of the ETR in the sense of ensuring that it is not subject to any un- authorised alteration. According to the Explanatory Note to the MLETR, '[t]he notion of integrity is an absolute one', since '[i]t refers to a fact, and as such, is objective, i.e. either an electronic

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<sup>35</sup> UNCITRAL, MLETR (art 11(1) (emphasis added).

<sup>36</sup> UNCITRAL, MLETR Explanatory Note (2017) [111].

<sup>37</sup> Ibid.

<sup>38</sup> Ibid [112].

<sup>39</sup> UNCITRAL, MLETR art 11(2).

transferable record retains integrity or it does not'.<sup>40</sup> In this regard, sub-article 10(2) provides the 'criterion for assessing integrity' of an ETR, namely 'whether information contained in the electronic transferable record, including any authorized change that arises from its creation until it ceases to have any effect or validity, has remained complete and unaltered apart from any change which arises in the normal course of communication, storage and display'.<sup>41</sup> Accordingly, the ETR's integrity will usually depend upon the security features of the underlying technology.

### C. *Implementation*

Despite the obvious advantages of the MLETR for international trade generally, and trade finance in particular, implementation is likely to be slow and cautious. Typically, paper-based transferable documents or instruments were used to transfer significant value or property rights. Accordingly, traders will initially be circumspect with respect to their own property and that of their clients. Similarly, banks will be concerned that their rights of recourse and rights as pledgee under the trade documents are not diminished. Accordingly, for the MLETR to be a worthwhile venture, a few nations need to be 'pioneers' by embracing the new MLETR. In that regard, nations such as Singapore, the UK, Bahrain, Belize, Papua Ne Guinea, Paraguay, the United Arabs Emirates and Tuvalu have already commenced the process.

Broadly, there are three possible approaches to implementing the ML-ETR. First, the principles of the MLETR could be enacted in new or existing generic legislation dealing with the issue of electronic transactions.<sup>42</sup> Second, industry- or sector-specific legislation could be amended to allow ETRs as a substitute for particular paper-based instruments. For example, legislation dealing with the carriage of goods by sea could be amended to permit ETRs in place of a bill of lading; and bills of exchange legislation could be amended to allow for a similar step in respect of those instruments.<sup>43</sup> Third, a combination of these approaches could be used to ensure both the specific and general application of the MLETR. The disadvantage of the first approach, however, is that it does not signal to any particular industry or sector the specific changes in practice that the legislative amendment is intended to encourage. Traders, lawyers, financiers, and insurers will typically only make themselves aware of the specific legislation, regulations, and amendments that are applicable to that particular industry or sector. If the pertinent electronic standard appears in, for example, generic electronic transactions legislation, questions will remain as to the legislature's intention behind the changes. It may be cogently argued that, if it is Parliament's intention to alter established common law principles in a particular area, then such changes should be made directly in industry-, sector- or instrument-specific legislation. These specific amendments may be more likely to encourage the use of ETRs by 'pioneers' and accordingly promote the diffusion of

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<sup>40</sup> UNCITRAL, MLETR Explanatory Note (2017) [100].

<sup>41</sup> UNCITRAL, MLETR art 10(2).

<sup>42</sup> Such legislation exists in more than 160 jurisdictions. See, for example, the *Electronic Transactions Act 1999* (Cth), and the *Electronic Transactions Act* (Cap 88, 2011 rev ed) in Singapore.

<sup>43</sup> *Carriage of Goods by Sea Act 1992* (Cth); *Bills of Exchange Act 1909* (Cth).

innovation.<sup>44</sup> Accordingly, it is submitted that the principles of control, identity, and transfer in the MLETR, as well as the definitions of ‘electronic record’ and ‘electronic transferable record’, would be more appropriately incorporated into domestic legislation dealing specifically with, for example, bills of lading or bills of exchange.<sup>45</sup> That said, the third possible approach is to combine the first two suggestions. This is the view preferred in this submission. This will have the advantage of both targeting particular industries or sectors and providing a general platform for all electronic transactions and instruments across the board. The result would be to embrace functional equivalence fully, to promote electronic media and trade, and to align economic and trade concerns with commercial reality.<sup>46</sup>

#### *D. Electronic Trade Documents Act 2023 (UK)*

In 2023 the UK passed the *Electronic Trade Documents Act 2023*. The UK Law Commission strongly encouraged the adoption of the Act, influenced strongly by the UNCITRAL MLETR. The stated aim is to boost UK’s international trade, which is estimated to be more than £1.4 trillion. It is expected to benefit UK businesses over the next 10 years to more than £1.1 billion. It is stated:

The UK Commission has stated:

We have estimated that global container shipping generates billions of paper documents a year. Across so many documents, the potential positive impacts of using electronic trade documents – including financial and efficiency gains, and environmental benefits – are vast... Over the past decade, the development of technologies such as distributed ledger technology has made trade based on electronic documents increasingly feasible. Without reform, the law will continue to lag behind.<sup>47</sup>

The underlying law had been based on practices developed by merchants hundreds of years ago. The law did not allow an electronic document to be “possessed”. Technologies such as distributed ledger technology now makes this innovation feasible and advisable.

The International Chamber of Commerce estimates 80% of trade documents around the world are based off English law, and this Bill serves as the cornerstone to truly digitalising international trade.

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<sup>44</sup> For the term ‘pioneer’ as connoting an entity involved in the spread of innovation and ideas, see Everett Rogers, *Diffusion of Innovations*, (5th edn, Simon and Schuster 2003); Myles McGregor-Lowndes and Alan Davidson, *The Internet for Lawyers* (LBC Sydney 1997) ch 2.

<sup>45</sup> See further Benjamin Geva, “The Electronic Bill of Exchange and Its Use in International Trade”, Chapter 9 in *Trade Finance: Technology Innovation and Documentary Credits*, Christopher Hare and Dora Neo (editors) Oxford University Press, Oxford (2021).

<sup>46</sup> See also Alan Davidson, “Implementation and Implications of the UNCITRAL Model Law on Electronic Transferable Records in Trade Finance”, Chapter 11, Christopher Hare and Dora Neo (eds), *Trade Finance - Technology, Innovation and Documentary Credits*, Oxford University Press. 2021.

<sup>47</sup> UK Law Commission, *Electronic Trade Documents*; <<https://www.lawcom.gov.uk/project/electronic-trade-documents/>>

The Secretary General International Chamber of Commerce United Kingdom Chris Southworth stated:

The Electronic Trade Documents Act is a game changing piece of law not just for the UK but also for world trade. The Act will enable companies to finally remove all the paper and inefficiency that exists in trade today and ensure that future trade is far cheaper, faster, simpler and more sustainable. This presents a once in a generation opportunity to transform the trading system and help us drive much needed economic growth.<sup>48</sup>

Lord Holmes of Richmond of the House of Lords and member of the legislative committee said:

It has been an honour to sit on the Special Public Bill Committee for this ground-breaking, potentially, game-changing, Act.

This is a small change in the law with the potential to make a colossal impact, unleashing innovation and investment in digital trade solutions and delivering significant economic and environmental benefits. Currently it can take days to transfer documents of title – with digital trade documents that will melt into minutes.<sup>49</sup>

Although the UK has used principles and expressions derived from the MLETR, it has nevertheless not copied the UNCITRAL terminology precisely. The UK version has gone in a direction with language that is quite concise. However in this submission, the Australian adoption should follow more closely the wording of the UNCITRAL MLETR. This will aid in acceptance by commercial parties in international trade. International commercial parties will become aware of the types of legislation in place, and those which closely resemble each; hence the more likely that there will be consistent and harmonised interpretation, both by the parties and the courts of the various laws and regulation. This is clearly encouraged by the interpretation provisions in article 3 MLETR:

3. (1) This Law is derived from a model law of international origin. In the interpretation of this Law, regard is to be had to the international origin and to the need to promote uniformity in its application.

(2) Questions concerning matters governed by this Law which are not expressly settled in it are to be settled in conformity with the general principles on which this Law is based.

### *III. Conclusion*

The universal implementation of the MLETR will enhance international and domestic trade by facilitating the incorporation of electronic instruments and communications. As well as encouraging business and enterprises to engage in international trade, the MLETR will support

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<sup>48</sup> UK Government Press release. UK economy to receive £1 billion boost through innovative trade digitalisation act. <<https://www.gov.uk/government/news/uk-economy-to-receive-1-billion-boost-through-innovative-trade-digitalisation-act>>

<sup>49</sup> Ibid.

ancillary enterprises providing transport, logistics, finance, and insurance. Implementation of the MLETR would almost certainly improve the speed and security of trade-finance transactions and would facilitate the development of self-executing, 'smart' finance contracts. Moreover, the MLETR will facilitate technological innovation and electronic design, providing clarity and certainty regarding the use of ETRs in trade finance, whether bills of lading, bills of exchange, promissory notes, or warehouse receipts. ETRs are likely to prove fundamental to the future of the trade finance environment.

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Dr Alan Davidson

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