



**General Assembly**

Distr.: General  
23 February 2024

Original: English

**United Nations Commission on  
International Trade Law**  
**Fifty-seventh session**  
New York, 24 June–12 July 2024

**Draft provisions on automated contracting**  
**Note by the Secretariat**

**Contents**

	<i>Page</i>
I. About this note . . . . .	2
II. Revised draft provisions. . . . .	2

## I. About this note

1. This note contains a revised set of draft legislative provisions on automated contracting, which has been prepared by the UNCITRAL secretariat at the request of Working Group IV at its sixty-sixth session (A/CN.9/1162, para. 93).<sup>1</sup> At that session, the Working Group outlined a plan to finalize the text of the provisions at its sixty-seventh session, scheduled for 15–19 April 2024, with a view to recommending the provisions to the Commission for adoption at its fifty-seventh session (*ibid.*). As the form in which the provisions are to be adopted has not yet been determined (e.g. a model law or model legislative provisions to supplement other laws on electronic transactions), the present draft uses the term “this instrument” in brackets as a placeholder.

2. The draft provisions contained in this note are accompanied by a draft guide to enactment (A/CN.9/1194), which includes article-by-article remarks offering additional explanations of the text in the present draft. In view of the timetable envisaged by the Working Group (A/CN.9/1162, para. 93), and the postponement of the sixty-seventh session of the Working Group, the Commission may wish to consider the draft provisions for finalization and adoption.

## II. Revised draft provisions

### *Article 1. Definitions<sup>2</sup>*

1. For the purposes of [this instrument]:

(a) “Automated system” means a computer system that is capable of carrying out actions without the necessary review or intervention of a natural person;<sup>3</sup>

(b) “Data message” means information generated, sent, received or stored by electronic, magnetic, optical or similar means.<sup>4</sup>

2. An automated system may be programmed to operate in a deterministic or non-deterministic manner[, and may be part of an information system].

### *Article 2. Scope of application<sup>5</sup>*

1. [This instrument] applies to the use of automated systems to form and to perform contracts, including by:

(a) Generating or otherwise processing data messages that constitute an action in connection with the formation of contracts, such as an offer or acceptance of an offer;<sup>6</sup>

<sup>1</sup> *Earlier revisions*: This is the third revision of the text. The previous draft (the “second revision”), contained in A/CN.9/WG.IV/WP.182 in the form of draft “principles”, was considered by the Working Group at its sixty-sixth session (A/CN.9/1162, paras. 11–58).

<sup>2</sup> *Article 1 – general*: In keeping with the structure of other UNCITRAL legislative texts, principle 1 of the second revision has been split into two provisions, i.e. one provision containing definitions (article 1 of the present draft) and one provision establishing the scope of application (article 2 of the present draft). The headings to the two provisions have been renamed accordingly.

<sup>3</sup> *Article 1(a) – “automated system”*: The definition has been revised to refer to “computer systems” to clarify that the term is concerned with algorithmic systems (see A/CN.9/1162, para. 16(a)). Paragraph 2 of article 1 includes a statement (in brackets) that an automated system as defined may be part of an “information system”, a term that is used (and defined) in other UNCITRAL texts on electronic commerce. The Commission may wish to retain the statement to provide additional clarity.

<sup>4</sup> *Article 1(b) – “data message”*: The term “data message” was used in earlier revisions but was not defined. The definition in the present draft reproduces the definition of “data message” in article 1(b) of the 2022 UNCITRAL Model Law on the Use and Cross-border Recognition of Identity Management and Trust Services (MLIT).

<sup>5</sup> *Article 2 – general*: See note 2 above.

<sup>6</sup> *Article 2(1)(a) – “generating or otherwise processing”*: This provision has been revised to refer to automated systems not only “processing” but also “generating” data messages (A/CN.9/1162, para. 17(a)).

(b) Generating or otherwise processing data messages that constitute an action in connection with the performance of a contract.

2. Nothing in [this instrument] affects the application of any rule of law that may govern the design, commissioning or operation of automated systems.<sup>7</sup>

*Article 3. Technology neutrality*<sup>8</sup>

Nothing in [this instrument] requires the use of a particular method in connection with the formation or performance of contracts.

*Article 4. Legal recognition of automated contracting*<sup>9,10</sup>

1. A contract formed using an automated system shall not be denied validity or enforceability on the sole ground that no natural person reviewed or intervened in any action carried out in connection with the formation [or performance] of the contract.<sup>11</sup>

2. An action carried out by an automated system in connection with the formation of a contract shall not be denied legal effect, validity or enforceability on the sole ground that no natural person reviewed or intervened in the action.

3. An action carried out by an automated system in connection with the performance of a contract shall not be denied legal effect, validity or enforceability on the sole ground that no natural person reviewed or intervened in the action.<sup>12</sup>

<sup>7</sup> *Article 2(2) – “give way” clause*: This paragraph is new and has been included for consideration as a consequence of the reformulation of principle 7 of the second revision (now article 9).

<sup>8</sup> *Article 3 – general*: Article 3 reproduces principle 3 of the second revision. It has been revised to specify that, for the purposes of this instrument, technology neutrality is concerned with methods in connection with the formation or performance of contracts, and not with all possible operations of the automated system. It was suggested at the sixty-sixth session to include a requirement for automated systems to use a reliable method (A/CN.9/1162, para. 26; see also A/CN.9/1125, para. 70). The draft does not take up this suggestion: on the one hand, in UNCITRAL texts on electronic commerce, a reliability standard is usually associated with satisfying functional equivalence rules, which are not included in the present draft; on the other hand, although it has previously been suggested that the reliability of automated systems might play a role in establishing liability associated with the output of those systems, where it is linked with standards on the ethical use of AI systems (A/CN.9/1125, para. 70), the present draft does not deal with liability or with regulating the ethical use and governance of AI systems.

<sup>9</sup> *Article 4 – terminology*: At the sixty-sixth session of the Working Group, it was observed that some non-discrimination provisions refer to “validity and enforceability” while others also refer to “legal effect”, and it was suggested that the secretariat review the references for consistency (A/CN.9/1162, para. 17(c)). These references have been reviewed and are explained in the remarks on article 4 in the draft guide to enactment.

<sup>10</sup> *Article 4 – references to no human intervention*: To address a concern raised at the sixty-sixth session (A/CN.9/1162, para. 18), the provisions on the legal recognition of automated contracting have been reformulated to make express reference to no human intervention as the prohibited ground for denying legal recognition.

<sup>11</sup> *Article 4(1) – contract denied validity or enforceability on grounds of automated performance*: It has previously been suggested within the Working Group that the provisions on the legal recognition of automated contracting should extend to the use of automated systems to perform the contract. Arguments for and against the suggestion were presented at the sixty-fifth session (A/CN.9/1132, para. 65(a)). If it is considered that the provision in paragraph 1 should be so extended, a provision along the following lines could be inserted after that paragraph: “A contract shall not be denied validity or enforceability on the sole ground that an automated system is used in connection with the performance of the contract”. Alternatively, the bracketed words could be retained in paragraph 1.

<sup>12</sup> *Article 4(2) and (3) – separate provisions for formation and performance*: The idea of maintaining separate provisions originated in the deliberations within the Working Group at its sixty-fifth session (A/CN.9/1132, para. 65(a)). The Commission may wish to consider the need for maintaining the two provisions, and whether it is desirable to combine them into a single provision dealing with the use of an automated system in connection with the “formation or performance” of a contract.

*Article 5. Legal recognition of contracts in computer code  
or involving dynamic information*<sup>13</sup>

1. A contract shall not be denied validity or enforceability on the sole ground that the terms of the contract are contained in data messages in the form of computer code.<sup>14</sup>
2. A contract or action in connection with the formation of a contract shall not be denied legal effect, validity or enforceability on the sole ground that:<sup>15</sup>
  - (a) The terms of the contract contain information from a data source that provides information that changes periodically or continuously;<sup>16</sup>
  - (b) The action involves processing data messages containing information from a source that provides information that changes periodically or continuously.<sup>17</sup>

*Article 6. Attribution of actions carried out by automated systems*<sup>18</sup>

1. As between the parties to a contract, an action carried out by an automated system is attributed in accordance with a procedure agreed to by the parties.
2. If paragraph 1 does not apply, an action carried out by an automated system is attributed to the person who uses the system for that purpose.
3. Nothing in this article affects the application of any rule of law that may govern the legal consequences of attributing an action carried out by an automated system to a person.

*Article 7. Intention, knowledge and awareness of the parties  
in respect of actions of automated systems*<sup>19</sup>

For the purposes of determining satisfaction of a legal requirement for the presence of intention, knowledge or awareness of a person in respect of an action carried out by an automated system, and unless otherwise required by law, regard may be had to the design, commissioning and operation of the system, as appropriate.

<sup>13</sup> *Article 5 – general*: Article 5 combines principle 1(c) and principle 2(d) of the second revision. These provisions have been combined in a separate article as they address issues (i.e. contracts in computer code and the use of dynamic information) that are relevant but not specific to automated contracting.

<sup>14</sup> *Article 5(1) – contracts in the form of computer code*: This paragraph reproduces the text in principle 1(c) of the second revision, which affirmed that the terms of a contract could be contained in computer code, and reformulates it as a provision on legal recognition.

<sup>15</sup> *Article 5(2) – dynamic information*: This paragraph seeks to capture the outcome of deliberations within the Working Group at its sixty-sixth session (A/CN.9/1162, paras. 19–24). It deals with two issues that were identified at the session: the legal recognition of the incorporation of dynamic information in the terms of a contract, and the legal recognition of outputs based on dynamic information (ibid., para. 23).

<sup>16</sup> *Article 5(2)(a) – incorporation of dynamic information*: This subparagraph is a revised version of principle 2(d) of the second revision. While the Working Group agreed to retain the provision (A/CN.9/1162, para. 24), it has been revised to clarify that it is concerned with the legal recognition of the incorporation of dynamic information into the terms of a contract, in contrast to subparagraph (b).

<sup>17</sup> *Article 5(2)(b) – actions based on dynamic information*: This subparagraph is new. It has been inserted to provide for the legal recognition of outputs (i.e. actions taken by an automated system) based on dynamic information. The text considered by the Working Group at its sixty-sixth session (A/CN.9/1162, para. 21) has been revised in view of the further deliberations at the session (ibid., paras. 22–24).

<sup>18</sup> *Article 6 – general*: Article 6 reproduces principle 4 of the second revision with amendments agreed to by the Working Group at its sixty-sixth session (A/CN.9/1162, paras. 27–45).

<sup>19</sup> *Article 7 – general*: Article 7 reproduces principle 5 of the second revision with amendments agreed to by the Working Group at its sixty-sixth session (A/CN.9/1162, paras. 46–49). The amended text put forward within the Working Group (ibid., para. 48) has been revised to reflect the formulation of similar provisions in the MLIT that prescribe relevant factors for the decision maker to consider (e.g. articles 25(2) and 26(2)). The placement of the words “unless otherwise required by law” has also been reviewed.

*Article 8. Unexpected actions carried out by automated systems*<sup>20,21</sup>

1. A party to a contract is not entitled to rely on an action carried out by an automated system that is attributed to another party to the contract if[, in the light of all the circumstances, including the information made available to the parties on the design or operation of the system]:<sup>22</sup>

(a) The other party could not reasonably have expected the action; and

(b) The party knew or ought to have known that the other party did not expect the action.<sup>23</sup>

2. Nothing in this article:

(a) Affects the application of any rule of law or agreement of the parties that may govern the legal consequences of an action carried out by an automated system other than as provided for in paragraph 1;

(b) Affects the application of any rule of law that may require a person to disclose information on the design or operation of an automated system, or provides legal consequences for disclosing inaccurate, incomplete or false information, or for failing to do so.

<sup>20</sup> *Article 8 – redraft*: Article 8 reproduces principle 6 of the second revision and has been revised in light of the deliberations of the Working Group at its sixty-sixth session (A/CN.9/1162, paras. 50–54). The revised provision deals exclusively with actions carried out by automated systems that might be said to be “unexpected” or “unintended”. It is thus not concerned with whether the action was the result of an error in programming, third-party interference, or error in transmission. While its drafting originally drew on article 13(5) of the 1996 UNCITRAL Model Law on Electronic Commerce (see A/CN.9/WG.IV/WP.182, para. 43), the focus of article 8 on unexpected outputs (and not on attribution or errors in transmission) suggests that solutions dealing with the legal effect of unexpected outcomes might need to be sought elsewhere. Assuming that article 8 builds on the principle that a party using the system to form or perform bears the risk of doing so (see A/CN.9/WG.IV/WP.182, para. 42), it would seem relevant to look to solutions in other UNCITRAL texts that avoid various types of legal consequences that might otherwise flow in connection with either the formation or the performance of a contract, such as article 14 of the 2005 United Nations Convention on the Use of Electronic Communications in International Contracts (ECC) and article 25 and 79 of the United Nations Convention on Contracts for the International Sale of Goods, that balance the parties’ interests by reference to notions of reasonable expectations and fair dealing.

<sup>21</sup> *Article 8 – retention*: At the sixty-sixth session, some support was expressed for deleting this provision (then as principle 6 of the second revision). As explained in the remarks of article 8 in the draft guide to enactment, the provision in its present form deals with a narrowly defined issue of substantive law that is peculiar to automated contracting, like article 14 of the ECC. If the Commission ultimately does not wish to include the provision, it may wish to consider addressing the issue from a different angle by substituting a provision stating that attribution of the output of the automated system is not to be denied on the sole ground that the party did not expect the outcome. As such, rather than providing a solution to unexpected outputs, the substitute provision would signal that the solution is to be found in other law, such as rules avoiding the contract in case of mistake or excusing non-performance in case of force majeure.

<sup>22</sup> *Article 8 – information requirements*: The Commission may wish to consider whether to include the bracketed text in the chapeau of paragraph 1 to signal the relevance of information on the design and operation of the system, or whether paragraph 2(b), which reproduces principle 6(c) of the second revision, is sufficient.

<sup>23</sup> *Article 8 – objective standard*: In line with a suggestion made at the sixty-sixth session (A/CN.9/WG.IV/WP.182, para. 51), the conditions in subparagraphs (b) and (c) of article 8(2) are formulated to allow for objective determination.

*Article 9. Non-avoidance*<sup>24</sup>

Unless otherwise provided by law, as between the parties to a contract, a party shall not be relieved from the legal consequences of its failure to perform the contract, or otherwise to comply with a rule of law, on the sole ground that it used an automated system for that purpose.

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<sup>24</sup> *Article 9 – general*: Article 9 reproduces principle 7 of the second revision as reformulated by the Working Group at its sixty-sixth session ([A/CN.9/1162](#), para. 58). The text has been further revised to reflect the formulation of similar provisions in the ECC (articles 7 and 13) and the 2017 UNCITRAL Model Law on Electronic Transferable Records (article 5). The Commission may wish to consider whether it is sufficient to address non-avoidance of legal consequences for non-compliance with the contract or rule of law (as per the present draft), or whether the provision should also address non-avoidance of the contract or rule itself, noting that article 9 is not intended to affect rules of mandatory law that might prohibit the use of automated systems for particular transactions, which would be preserved by article 2(2).