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## **Possible revisions to the UNCITRAL Model Law on Procurement of Goods, Construction and Services— drafting materials addressing the use of electronic communications in public procurement and electronic publication of procurement-related information**

**Note by the Secretariat**

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## **I. Introduction**

1. The background to the current work of Working Group I (Procurement) on the revision of the UNCITRAL Model Law on Procurement of Goods, Construction and Services (the “Model Law”) (A/49/17 and Corr.1, annex I) is set out in paragraphs 5 to 53 of document A/CN.9/WG.I/WP.46, which is before the Working Group at its tenth session. The main task of the Working Group is to update and revise the Model Law, so as to take account of recent developments, including the use of electronic communications and technologies, in public procurement.

2. Such use, including the electronic submission and opening of tenders, and holding meetings, storing information and the publication of procurement-related information electronically, was included in the topics before the Working Group at its sixth to ninth sessions.<sup>1</sup> At its ninth session, the Working Group requested the Secretariat to revise the relevant drafting materials that it had considered at the session.<sup>2</sup> This note has been prepared pursuant to that request, and sets out the drafting materials revised to take account of the Working Group’s deliberations at its ninth session.

## **II. Drafting materials addressing the use of electronic communications in public procurement**

### **A. Means and form of communications**

#### **1. Proposed draft text for the revised Model Law**

3. The Working Group has decided to continue its deliberations on the basis of the following two draft articles for the Model Law, drawing on the drafts before it at its ninth session<sup>3</sup> and the provisions of article 9 of the current (1994) text of the Model Law:<sup>4</sup>

#### **“Article 5 bis. Means of communication**

(1) Any provision of this Law related to communicating [, to writing, to publication of information, to the submission of tenders in a sealed envelope, to the opening of tenders, to a record or to a meeting,] shall be interpreted to include electronic, optical or comparable means [by which such activities take place/of communication], provided that the means chosen are readily capable of being used with those in general [or common] use among suppliers or contractors.

(2) Documents, notifications, decisions and other communications between suppliers or contractors and the procuring entity shall be provided, submitted or effected by the means of communication specified by the procuring entity when first soliciting the participation of suppliers or contractors in the procurement proceedings, provided that the means specified are capable of being used as set out in the preceding paragraph.

(3) The [procurement regulations or the procuring entity] [shall or may] establish measures to ensure the authenticity, integrity, accessibility and confidentiality of communications.

[(4) The provisions of paragraph 1 of this article shall apply equally to any provision of this Law related to writing, to publication of information, to the submission of tenders in a sealed envelope, to the opening of tenders, to a record or to a meeting.]”

**“Article 9 [5 ter.] Form of communications**

(1) Subject to other provisions of this Law, documents, notifications, decisions and other communications to be submitted by the procuring entity or administrative authority to a supplier or contractor or by a supplier or contractor to the procuring entity shall be in a form that provides a record of the content of the communication and is accessible so as to be usable for subsequent reference.

(2) Communications between suppliers or contractors and the procuring entity referred to in articles [7 (4) and (6), 12 (3), 31 (2)(a), 32 (1)(d), 34 (1), 36 (1), 37 (3), 44 (b) to (f) and 47 (1), to update for revisions to Model Law] may be made by a means of communication that does not provide a record of the content of the communication provided that, immediately thereafter, confirmation of the communication is given to the recipient of the communication in a form that provides a record of the content of the communication and is accessible so as to be usable for subsequent reference.”

**Commentary—derivation, location and title**

4. Proposed article 5 bis and the revised article 9 reflect the deliberations of the Working Group at its ninth session regarding the means and form of communications.<sup>5</sup> Proposed article 5 bis contains text that does not appear in the current Model Law, and the revised article 9 draws on the provisions of the current article 9.

5. The Working Group at its ninth session noted that provisions in article 5 bis set out a fundamental principle relating to the use of communications in the procurement process (referring to the term “communications” in its broadest sense), and therefore should be placed early in the Model Law, before any identification of suppliers or contractors. Accordingly, it was agreed on a preliminary basis that they might follow the current article 5.<sup>6</sup>

6. The Working Group deferred its consideration of the title of proposed article 5 bis at its ninth session.<sup>7</sup> The Working Group may consider that this article addresses the means of communication (whether paper-based or electronic), while the revised article 9 addresses the form of communications (in writing rather than oral and the content to be recorded). Accordingly, the Working Group may wish to reflect this difference in the titles of the articles.

7. The Working Group has not finally decided whether the above provisions should be contained in one or two articles, and whether they may usefully be located together (as articles 5 bis and 5 ter, for example). In this regard, the Working Group may wish to consider whether the differences between the “means” and “form” of communications are sufficiently clear and whether seeking to distinguish them may be helpful to the user of the Model Law. Alternatively, the Working Group may wish to provide for the “means” and “form” of communication in one composite article, which could be entitled “Communications” (see further para. 12 below).

### Commentary—the text

8. The Working Group may wish to consider whether the reference to “means” (of communication) in the first paragraph of draft article 5 bis is sufficiently clear, or whether the word “means” should be qualified so as to make it clear that the reference is to “means of communication”. The Working Group may wish to consider the inclusion of a descriptive phrase such as the alternatives in square brackets: “by which such activities take place”, or “means of communication” to provide that reference, though noting that the second alternative would be intended to be interpreted broadly (explanation to such effect would be required in the Guide to Enactment).

9. Furthermore, the Working Group may wish to consider whether the first paragraph of article 5 bis fulfils the Working Group’s expressed wish to present the revised Model Law in a technologically neutral manner.<sup>8</sup> The above draft refers only to “electronic, optical or comparable means” of communication, but not to paper-based means. An alternative formulation, expressed in technologically neutral manner, could read, for example, that:

“[a]ny provision of this Law related to communicating [...] shall be interpreted to include all means [by which such activities take place/of communication], including paper-based, electronic, optical or comparable means”.

10. The Working Group may wish to consider whether article 5 bis provides the functional equivalence desired, because there is no standard or requirement for communications generally, and the functional equivalent approach operates by providing that any requirements for paper can be satisfied by electronic communications.<sup>9</sup> An alternative formulation might be for the provision to refer to such a requirement, which will be satisfied by paper-based or electronic means of communication. The Working Group may also wish to consider the addition of a statement that any communication issued in a procurement governed by the Model Law can be issued using any means of communication, be it paper-based, electronic, optical or comparable.<sup>10</sup>

11. The Working Group has noted that the first paragraph of draft article 5 bis also addresses not only communications, but also writing, publication of information, submission of tenders in a sealed envelope, opening of tenders, records and meetings. However, the second and third paragraphs address communications alone. The Working Group agreed at its ninth session to consider at a subsequent session whether these other references should be included in the first paragraph, alternatively in a separate fourth paragraph in the draft article, or elsewhere in the text. The bracketed text in paragraphs 1 and 4 of draft article 5 bis reflect that outstanding issue.<sup>11</sup>

12. The Working Group may wish to consider that the first paragraph of article 5 bis should be a separate article, placed as article 2 bis and entitled “Interpretation”, as it deals with interpretation of subsequent provisions of the Model Law, including those related to publication of procurement-related information, the first of which appear already in article 5, i.e., before the proposed article 5 bis. The Working Group may also wish to consider that, if that approach is followed, paragraphs 2 and 3 of the proposed article 5 bis should be consolidated

with the revised article 9 under the title “Communications”, or immediately following article 5 as article 5 bis.

13. The Working Group at its ninth session requested that the term “common” should be added to the term “general” as a qualifier to the means of communication in use among suppliers or contractors, so as to ensure that the means of communication should be sufficiently available.<sup>12</sup>

14. As regards the third paragraph of proposed article 5 bis, the Working Group has agreed to consider whether the procuring entity, rather than the enacting State by means of regulations, should address the issues of authenticity, integrity, accessibility and confidentiality of communications set out in that paragraph, and whether either the procuring entity or the enacting State should be given the option or should be required to do so. The bracketed text in the proposed text reflects that outstanding issue.<sup>13</sup>

15. As regards the revised article 9, the Working Group may recall that the text follows paragraphs 1 and 2 of the current text of article 9, with the addition of the phrase “and is accessible so as to be usable for subsequent reference” at the end of each paragraph. That phrase is included so as the requirement that communications should contain a record of their content endures over time, and so as to conform to articles 6 and 10 of the UNCITRAL Model Law on Electronic Commerce, which address the notion of “writing” and the retention of electronic communications, respectively.<sup>14</sup>

16. The Working Group has deferred its final consideration as to whether the current text of article 9 (3)<sup>15</sup> should be retained in some form, so as to establish a general principle of non-discrimination in the use of communications, or whether the proposed article 5 bis, paragraph 1, provides sufficient safeguards. In this regard, the Working Group has observed that the notion of non-discrimination exists in addition to the current article 9 (3), in some other provisions of the current text of the Model Law, such as in positive terms of fair and equitable treatment of suppliers and contractors in the preamble paragraph (d). The Working Group has expressed the view that the current article 9 (3) could be superfluous in the light of the proposed new provisions of article 5 bis and the revised article 9 for communications generally, but that in the context of the possible mandatory submission of tenders electronically, a non-discrimination provision may still be required. The Working Group has also deferred its consideration of where in the text any general non-discrimination provision should be located.<sup>16</sup>

17. The Working Group at its ninth session confirmed that the selection of means and form of communications, be it paper-based or electronic means, or both, were decisions for the procuring entity. It was decided that the text of the Model Law should expressly allow more than one means or form of communications to be selected by the procuring entity.<sup>17</sup> The text of draft article 5 bis and the revised article 9 above allow for more than one means to be selected.

## **2. Guide to Enactment text**

18. The Working Group has requested that the Guide to Enactment text addressing the above provisions should:

(a) Contain an updated illustrative list of examples of “electronic, optical or comparable means” of communication;

(b) Explain that the provisions in draft article 5 bis (1), although deviating from the similar provisions in other UNCITRAL texts, are to the same effect as other UNCITRAL texts, including the United Nations Convention on Electronic Contracting;<sup>18</sup>

(c) State that the provisions of the proposed article 5 bis (1) are intended to be interpreted broadly so as to encompass any provisions in the Model Law implying physical presence or a paper-based environment;

(d) Contain some discussions on the role and place of electronic procurement in the context of electronic government;

(e) Set out situations in which the use of electronic means under the Model Law would be required and provide more guidance on the impact of varying levels of use of electronic commerce in enacting States;

(f) Expand on the notion of general availability of means of communication (from the perspective that procuring entities should take account of the level of penetration of electronic communications and technologies in the relevant market when making their selection of the means of communication for the procurement concerned as well as costs of such means);

(g) Highlight that recourse to which means of communication was objectively justifiable would vary from jurisdiction to jurisdiction and from procurement to procurement;

(h) Address technical issues such as interoperability and compatibility;

(i) Advise that stricter requirements might apply in certain circumstances (for example, under international treaties or imposed by multilateral development banks);

(j) Should stress that the use of mixed systems would be most appropriate during the transitional period after the introduction of electronic means of communications in procurement, and that the use of only electronic means would be promoted where appropriate in the longer term;

(k) Address the notion of discrimination and explain with examples how it might arise in practice;

(l) Clarify that the means of communication chosen should not pose an obstacle to the procurement process, as otherwise they will jeopardize the promotion of the Model Law’s objectives of maximizing economy and efficiency in procurement, as stated in its preamble paragraph (a); and

(m) Discuss in detail the issues raised by the authenticity, integrity, accessibility and confidentiality of communications.<sup>19</sup>

19. The Working Group will be provided with draft Guide to Enactment text to reflect these points and its decisions on the issues set out in paragraphs 6 to 14 and 16 above for consideration at a future session.

**B. Provisions related to legal value of procurement contracts concluded electronically and requirement to maintain a record of the procurement proceedings**

20. The Working Group may recall that its drafting suggestions to the Guide to Enactment provisions before it (made at the ninth session)<sup>20</sup> related to legal value of procurement contracts concluded electronically and requirement to maintain a record of the procurement proceedings. The Working Group will be provided with draft Guide text to reflect those suggestions for consideration at a future session.

**C. Drafting materials addressing the electronic submission of tenders, proposals and quotations**

**1. Proposed draft text for the revised Model Law**

21. The Working Group decided to continue its deliberations regarding the electronic submission of tenders based on the following draft text for article 30 (5)(a):

“A tender shall be submitted [by the means specified in the solicitation documents, and shall be submitted] in writing, signed and in a sealed envelope”.<sup>21</sup>

**Commentary**

22. The Working Group noted at its ninth session that the proposed text addressed both the “means” and “form” of submission of tenders. Although the “means” of submission are in fact addressed in proposed article 5 bis (because tenders are “communications” within the ambit of that proposed article), the Working Group expressed the view that an express reference in article 30 (5)(a) to those means may be helpful, so as to make it clear that the words “in writing, signed and in a sealed envelope” address the “form” of tenders and not the “means” by which they are to be submitted.<sup>22</sup>

23. As regards the “form” in which the tenders are to be submitted, the Working Group has noted that the form requirements that tenders should be submitted “in writing, signed and in a sealed envelope” are critical safeguards for the submission of tenders. Consequently, and despite the context of a paper-based environment that such a phrase implies, the Working Group decided that technologically neutral equivalents should not replace the terms “in writing, signed and in a sealed envelope”.<sup>23</sup>

24. In this regard, the Working Group also decided to remove an option contained in the current article 30 (5)(b) for the procuring entity to relax the form requirements. Article 30 (5)(b) in material part, which the Working Group has decided to delete, stated that tenders could be submitted “in any other form specified in the solicitation documents that provides a record of the content of the tender and at least a similar degree of authenticity, security and confidentiality”. (The reference to “other form” in this paragraph is to any form other than “in writing, signed and in a sealed envelope”).



25. Although proposed article 5 bis makes it clear that the terms “in writing” and “in a sealed envelope” are intended to address both traditional, paper-based notions and their electronic counterparts, it does not address any requirements for signatures. Article 7 of the UNCITRAL Model Law on Electronic Commerce provides that requirements for signatures are satisfied by a reliable “method used to identify” a person and “to indicate that person’s approval” of the information contained in the electronic communication. Issues arising in the use of electronic and digital signatures are discussed in detail in the UNCITRAL Model Law on Electronic Signatures, whose text is derived directly from the UNCITRAL Model Law on Electronic Commerce.<sup>24</sup>

26. The Working Group may recall that the use of electronic signatures varies widely from jurisdiction to jurisdiction, and in some cases electronic signatures are independently certified (in which case they are known as “digital signatures”).<sup>25</sup> However, commentators have noted that requiring the use of electronic and digital signatures may involve unnecessary technical burdens and operate as a disincentive to the take-up of electronic procurement. As the Working Group noted at its ninth session, some jurisdictions have sought to avoid the technical consequences of requiring an electronic document to be signed by referring to such documents simply as being capable of authentication.<sup>26</sup> The Working Group may wish to consider whether the Model Law should provide expressly for the functional equivalence of traditional signatures and their electronic counterparts, and if so the location of such a provision. The Working Group may recall that there is a signature requirement in the Model Law only as regards tenders and procurement contracts, and therefore a provision addressing signature could be located either in proposed article 5 bis, or in the articles governing the submission of tenders, and procurement contracts. Alternatively, the Working Group may consider that the functional equivalence of traditional and electronic signatures could be addressed in the Guide to Enactment.

## **2. Guide to Enactment text**

27. The Working Group has noted that the Guide to Enactment text should address the following issues regarding the electronic submission of tenders: (i) that the reference to “means” of submission of tenders implies the use of a purely electronic, purely paper-based or mixed system (in which suppliers may submit tenders in paper-based format or electronically, or in which suppliers may submit some parts of their tenders, such as samples, technical drawings or legal certificates, in paper-based format); (ii) the desirability of promoting electronic submission in the longer term, and the use of mixed systems as an interim measure; (iii) the equivalent safeguards to “in writing, signature and a sealed envelope”; (iv) the use of technologies such as virus-scanning software to mitigate the risk of tenders being deleted as a result of virus (so as to enhance confidence and transparency in the electronic environment); and (v) whether procuring entities should allow duplicate tenders in a different format as a safeguard against system failure and the safeguards that should also be applied to guard against abuse.<sup>27</sup>

28. The Working Group will be provided with draft Guide to Enactment text to reflect these points and its decisions on the issue set out in paragraph 26 above, for consideration at a future session.

## **D. Electronic opening of tenders**

29. The Working Group preliminarily agreed on the wording of the proposed text for article 33 (4) of the Model Law, which reads:

### **“Article 33. Opening of tenders**

(4) Where the procurement proceedings were conducted electronically in accordance with [insert provisions dealing with electronic communications, reverse auctions and other fully automated procedures], suppliers or contractors shall be deemed to have been permitted to be present at the opening of the tenders in accordance with the requirements of article 33 (2) if they are capable of following the opening of the tenders contemporaneously through the electronic, optical or comparable means of communication used by the procuring entity.”<sup>28</sup>

## **E. Electronic publication of procurement-related information**

### **1. Proposed draft text for the revised Model Law**

30. At its ninth session, the Working Group preliminarily agreed to retain the current text of article 5 of the Model Law without change and reflect the proposed additional points<sup>29</sup> in the Guide.<sup>30</sup>

31. The Working Group is to decide at its tenth session whether the Secretariat, in preparing the revised article 5, should split the article into two paragraphs as was suggested at the Working Group’s ninth session: the first paragraph dealing with legal texts that had to be published (law, procurement regulations and directives of general application), with respect to which the requirements to “systematically maintain” would remain; and the second paragraph dealing with significant important judicial decisions and administrative rulings, with respect to which the requirement to “systematically maintain” would be replaced with the requirement “to update on a regular basis if need be”. That suggestion was met with some support in the Working Group; however, no definitive decision was taken.<sup>31</sup>

32. The Working Group is expected to continue considering at its tenth session desirability of including in the Model Law provisions on the publication of information on forthcoming procurement opportunities, either as a part of article 5 or a separate article, in the light of deliberations at its ninth session.<sup>32</sup> The suggestion was made at that session that in the consideration of this issue, the Working Group should assess whether the practice of publication of this type of information would be consistent with objectives of the Model Law, and if so whether there would be the need for a specific enabling provision in the Model Law to promote the practice.<sup>33</sup>

33. Also at that session, some changes were suggested to the proposed wording on the publication of information on forthcoming procurement opportunities, and the text as amended in the light of those changes reads as follows:

“As promptly as possible after beginning of a fiscal year procuring entities [shall/may] publish information of the expected procurement opportunities for

the following [the enacting State specifies the period], and this information shall not constitute the solicitation documents or parts thereof.”<sup>34</sup>

34. The Working Group is to consider whether the text, if it is included in the Model Law, should be enabling or prescriptive (“shall publish” or “may publish”).<sup>35</sup> The Working Group may wish to consider whether an alternative formulation, such as noting that the procurement regulations may address the publication of additional procurement-related information, with the Guide to Enactment providing appropriate guidance as to the extent of publication to be required, might provide additional flexibility in the matter.

## **2. Guide to Enactment text**

35. The Working Group has requested that the Guide to Enactment should address desirability of making available to public and of updating as need be the following information:

(a) Judicial decisions with precedent value and of general application on the application of procurement law;<sup>36</sup>

(b) Additional information regarding internal controls, guidance or other information;

(c) All other documents and information that the Model Law requires to be published with specific references thereto;<sup>37</sup> and

(d) Information on forthcoming procurement opportunities.<sup>38</sup>

36. The Guide will also address practical difficulties of making legal texts available and accessible, media and manner of publication, and the notion of “systematic maintenance” referred to in the current article 5.<sup>39</sup>

37. The Working Group has also requested making minor amendments to the proposed text for the Guide to Enactment before it at its ninth session.<sup>40</sup> The Working Group will be provided with the revised draft Guide to Enactment text, reflecting those suggestions and suggestions in paragraphs 35 and 36 above as well as the Working Group’s decisions on the outstanding issues set out in paragraphs 31, 32 and 34 above, for consideration at a future session.

## *Notes*

<sup>1</sup> As regards electronic reverse auctions, see A/CN.9/WG.I/WP.48.

<sup>2</sup> A/CN.9/595, paras. 10-79.

<sup>3</sup> A/CN.9/WG.I/WP.42, paras. 7, 17 and 20.

<sup>4</sup> A/CN.9/595, paras. 40 and 44.

<sup>5</sup> A/CN.9/595, paras. 11 to 46.

<sup>6</sup> A/CN.9/595, para. 37.

<sup>7</sup> A/CN.9/595, para. 37.

<sup>8</sup> While discussing a related issue, the Working Group noted “an inconsistency between the principle of “technological neutrality” in [this text] where a reference was made to a specific technology, which would have to be reconsidered in due course” (A/CN.9/595, para. 15). The

Working Group's attention is also drawn to the discussion at its ninth session regarding the submission of tenders, in which it was noted that a significant proportion of tenders are submitted in traditional format (A/CN.9/595, para. 55).

- <sup>9</sup> The Guide to Enactment accompanying the Model Law on Electronic Commerce notes in paragraph 16 that the "functional equivalent approach" "[...] is based on an analysis of the purposes and functions of the traditional *paper-based requirement* with a view to determining how those purposes or functions could be fulfilled through electronic-commerce techniques". [emphasis added].
- <sup>10</sup> The Working Group may also consider that a formulation of this type would enable the introduction of a functional equivalence provision governing electronic signatures in article 5 bis. See, further, paragraph 26 of this note.
- <sup>11</sup> A/CN.9/595, para. 41.
- <sup>12</sup> See draft text following paragraph 40 of A/CN.9/595. In this regard, the Working Group recalled that the term "generally" involves the notion of universality, and that the term "commonly" means that the technology is widely available, but perhaps not to all or nearly all users, as set out in A/CN.9/WG.I/WP.42, paragraph 18 (a).
- <sup>13</sup> A/CN.9/595, para. 43.
- <sup>14</sup> For the text of the Model Law on Electronic Commerce, see *Official Records of the General Assembly, Fifty-first session, Supplement No. 17 (A/51/17)*, annex I (also published in the UNCITRAL Yearbook, vol. XXVII:1996 (United Nations publication, Sales No. E.98.V.7), part three, annex I). The Model Law and its accompanying Guide to Enactment have been published as United Nations publication, Sales No. E.99.V.4, and are available in electronic form at the UNCITRAL website: [http://www.uncitral.org/uncitral/en/uncitral\\_texts/electronic\\_commerce/1996Model.html](http://www.uncitral.org/uncitral/en/uncitral_texts/electronic_commerce/1996Model.html). The explanatory note to article 6 (see para. 50 of the Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce) provides that "article 6 focuses upon the basic notion of the information being reproduced and read. That notion is expressed in article 6 in terms that were found to provide an objective criterion, namely that the information in a data message must be accessible so as to be usable for subsequent reference. The use of the word "accessible" is meant to imply that information in the form of computer data should be readable and interpretable, and that the software that might be necessary to render such information readable should be retained. The word "usable" is not intended to cover only human use but also computer processing. As to the notion of "subsequent reference", it was preferred to such notions as "durability" or "non-alterability", which would have established too harsh standards, and to such notions as "readability" or "intelligibility", which might constitute too subjective criteria."
- <sup>15</sup> The current text reads: "The procuring entity shall not discriminate against or among suppliers or contractors on the basis of the form in which they transmit or receive documents, notifications, decisions or other communications." The Guide to Enactment text addressing this provision states that: "In view in particular of the as yet uneven availability and use of non-traditional means of communication such as EDI, paragraph (3) has been included as a safeguard against discrimination against or among suppliers and contractors on the basis of the form of communication that they use."
- <sup>16</sup> A/CN.9/595, paras. 26 to 36 and 60.
- <sup>17</sup> A/CN.9/595, paras. 59 and 60.
- <sup>18</sup> General Assembly resolution 60/21.
- <sup>19</sup> A/CN.9/595, paras. 11, 12, 14, 18 to 22, 30, 34, 38, 43 and 61.
- <sup>20</sup> A/CN.9/595, paras. 47-51.
- <sup>21</sup> A/CN.9/595, para. 63.

<sup>22</sup> A/CN.9/595, para. 62.

<sup>23</sup> A/CN.9/595, para. 54.

<sup>24</sup> For the text of the Model Law on Electronic Signatures, see *Official Records of the General Assembly, Fifty-sixth Session, Supplement No. 17 (A/56/17)*, annex II. The Model Law and its accompanying Guide to Enactment have been published as United Nations publication, Sales No. E.02.V.8, and are available in electronic form at the UNCITRAL website ([http://www.uncitral.org/uncitral/en/uncitral\\_texts/electronic\\_commerce/2001Model\\_signatures.html](http://www.uncitral.org/uncitral/en/uncitral_texts/electronic_commerce/2001Model_signatures.html)).

<sup>25</sup> Digital signatures involve encryption, sometimes using public key infrastructure, and require significant investment to set up. The private sector operates electronic commerce without digital signatures. For further detail, see the Final Report of the Conference on Electronic Government Procurement (E-GP) held by the multilateral development banks, Manila, 26-28 October 2004, available at <http://www.mdb-egp.org/data/international.htm>.

<sup>26</sup> A/CN.9/595, para. 56.

<sup>27</sup> A/CN.9/595, paras. 57-59.

<sup>28</sup> A/CN.9/595, paras. 64 and 65, and A/CN.9/WG.I/WP.42, paras. 35-37.

<sup>29</sup> A/CN.9/WG.I/WP.42, para. 38.

<sup>30</sup> A/CN.9/595, paras. 66-74.

<sup>31</sup> A/CN.9/595, para. 71.

<sup>32</sup> A/CN.9/595, paras. 75-78.

<sup>33</sup> A/CN.9/595, para. 78.

<sup>34</sup> A/CN.9/595, para. 76.

<sup>35</sup> A/CN.9/595, paras. 76 and 77.

<sup>36</sup> A/CN.9/595, paras. 68 and 74.

<sup>37</sup> A/CN.9/595, para. 74.

<sup>38</sup> A/CN.9/595, paras. 76-78.

<sup>39</sup> A/CN.9/595, paras. 69, 70 and 72.

<sup>40</sup> A/CN.9/595, para. 79.

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