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Stocktaking of Developments in Dispute Resolution in the Digital Economy – progress report

Note by the Secretariat

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I. Introduction

1. At its fifty-sixth session in 2023, the Commission requested the secretariat to continue to implement the project on the stocktaking of developments in dispute resolution in the digital economy (DRDE) and report on further progress made.[1] This note contains background information on the project and the details of the activities on the stocktaking project carried out by the secretariat after the session mentioned above,[2] namely, the inputs received in the discussions in the "World Tour" and from the Inclusive Global Legal Innovation Platform on Online Dispute Resolution (iGLIP).

II. Background

2. The Commission, at its fifty-third session in 2020, considered a proposal put forward by the Government of Japan that the secretariat should collect and compile information on the latest trends regarding international dispute resolution (A/CN.9/1037). The proposal noted that the coronavirus disease (COVID-19) pandemic had highlighted the need to improve resilience towards such global crises and to advance modernization efforts. It was suggested that there was a need to monitor the changing landscape of dispute resolution, the evolving practices and the development of new forms of dispute resolution. General support was expressed for the secretariat to conduct research and take stock of the wide range of relevant developments. At that session, the Commission requested the secretariat to explore possible means to implement such activities and report back to the Commission at its fifty-fourth session.[3]

3. At its fifty-fourth session in 2021, the Commission considered a report by the secretariat, which contained a summary of the activities undertaken in relation to the stocktaking of developments in dispute resolution in the digital economy and proposals on the way forward based on the outcome of those activities, with an emphasis on the need for a continued stocktaking exercise (A/CN.9/1064/Add.4). After considering that report, and with the offer by the Government of Japan to contribute the necessary financial resources, the Commission endorsed the implementation of the stocktaking project through which the secretariat would compile, analyse and share relevant information.[4] The Commission requested the secretariat to organize a colloquium during the seventy-fifth session of Working Group II to further explore the relevant legal issues and to identify the scope and nature of possible legislative work.[5]

4. At its fifty-fifth session in 2022, the Commission was informed that a colloquium had been held during the seventy-fifth session of Working Group II (New York, 28 March–1 April 2022) on possible future work on dispute settlement and that a report of the colloquium had been prepared (A/CN.9/1091). The Commission expressed its gratitude to the Government of Japan for contributing the funds necessary for the implementation of the stocktaking project and its willingness to continue to support the project. During deliberations, it was underscored that the work in that area should be coordinated with the work of Working Group IV and that there could be merit in the approach taken by the secretariat to map the issues by developing a legal taxonomy on emerging technologies, which informed the current work of the Working Group IV. Additionally, it was also emphasized that the

[1] *Official Records of the General Assembly, Seventy-eight Session, Supplement No. 17* (A/78/17), para. 215.

[2] See A/CN.9/1154 and A/CN.9/1155 for details of activities carried out by the secretariat before the fifty-sixth session of the Commission in 2023. Some of the recordings of the discussions are available on the dedicated webpage of Working Group II under additional resources: https://uncitral.un.org/working_groups/2/arbitration.

[3] *Official Records of the General Assembly, Seventy-fifth Session, Supplement No. 17* (A/75/17), Part two, para. 85.

[4] Ibid., *Seventy-sixth Session, Supplement No. 17* (A/76/17), paras. 231–232.

[5] Ibid., para. 233.

stocktaking project should prioritize upholding fundamental principles of dispute resolution, including due process and fairness, while also enhancing procedural efficiency, both of which would build confidence of the users. After discussion, the Commission requested the secretariat to continue to implement the stocktaking project and to report on the preliminary findings at the next session in 2023.[6]

5. At its fifty-sixth session in 2023, the Commission considered the notes by the Secretariat on taxonomy and preliminary findings of the stocktaking of developments in dispute resolution in the digital economy (A/CN.9/1154 and A/CN.9/1155). The Commission took note that, in response to its request, the notes by the Secretariat were prepared to: (a) identify, define and categorize new and conventional digital technologies and technology-enabled services and discuss their application to and impact on dispute resolution; (b) assess whether there were normative gaps in existing UNCITRAL texts and identify areas where there was a need to update or complement those texts or develop new ones; and (c) outline preliminary findings on the suggested way forward, including on possible future work. The Commission expressed its gratitude to the Government of Japan for the generous contribution necessary to implement the stocktaking project for an additional 12 months.[7]

6. After discussion, the Commission noted with great appreciation the work carried out by the secretariat and, in light of the broad support expressed, requested the secretariat to continue to implement the stocktaking project, including the "World Tour", to put forward legislative work proposals with a focus on the topics on the recognition and enforcement of electronic arbitral awards and on electronic notices of arbitration and their delivery, and to report on further progress made overall, taking into account the discussions which took place at that session.[8]

III. Summaries of the discussions in the "World Tour"

7. The discussions in the "World Tour", an integral part of the DRDE project to seek inputs from different parts of the world, were continued as requested by the Commission at its fifty-sixth session in 2023. These discussions continued to attract significant attention and participation from a diverse audience, including practitioners, academics and other relevant stakeholders.[9] Below are summaries of the discussions in chronological order in which they were held.

A. Abidjan

8. On 27 July 2023, the secretariat of UNCITRAL was invited to hold a panel discussion on the DRDE project at the second edition of the African Arbitration and Mediation Days, in which panellists took part both online and in person.

9. At the outset, the landscape as to how Africa embraced the use of technology in alternative dispute mechanisms with a focus on the OHADA (l'Organisation pour l'Harmonisation en Afrique du Droit des Affaires) arbitration regime and the challenges faced in the African region were discussed. For example, it was mentioned that the rules that governed OHADA arbitration, the OHADA Uniform Act on Arbitration and the Common Court of Justice and Arbitration (CCJA) Rules, provided that the arbitral tribunal could hold, with the parties' agreement, case management conferences in the form of a telephone conference or videoconference[10] and enable arbitral tribunals to hold online hearings as part of their discretionary power to conduct the proceedings by using all appropriate means.[11] It was stressed, however,

[6] Ibid., *Seventy-seventh Session, Supplement No. 17* (A/77/17), paras. 220–222.
[7] Ibid., *Seventy-eight Session, Supplement No. 17* (A/78/17), para. 204.
[8] Ibid., para. 215.
[9] Some of the recordings of the discussions are available on the dedicated webpage of Working Group II under additional resources: https://uncitral.un.org/working_groups/2/arbitration.
[10] See article 15 of the CCJA Rules.
[11] See ibid., article 19(1).

that the use of technology in Africa faced continuing challenges, including connectivity and access to technology.

10. Practice regarding online arbitration at the Permanent Court of Arbitration (PCA) was shared by a representative of its office in Mauritius. It was reported that, as of the date the panel took place, the PCA had administered a total of 65 arbitration cases fully or partially online, based on its arbitration rules, which provided the flexibility to integrate electronic means into arbitral proceedings. It was pointed out that, going forward, there was a need to consider ways to ensure data protection and cybersecurity and that the value of in-person interactions should not be overlooked.

11. The potentials and challenges in using artificial intelligence (AI) to improve access to justice were also discussed. It was said that AI could simplify access to information and optimize resource allocation, leading to increased efficiency and effectiveness of dispute resolution. It was pointed out that efforts to leverage AI in dispute resolution were underway, such as in Nigeria. It was, nonetheless, underscored that maintaining a balance and ensuring that AI would complement rather than replace human intelligence in the decision-making process were essential and that regulation might be necessary.

12. The panel further discussed the experience in Rwanda, where most services, including dispute resolution, were provided digitally. In 2015, the judiciary in Rwanda introduced the Integrated Electronic Case Management System to digitize the administration of judicial proceedings. As for alternative dispute resolution, the arbitration rules of the Kigali International Arbitration Centre (KIAC) enabled the parties and the arbitral tribunal to use electronic means, including for the making and delivery of arbitral awards. It was reported that, since 2018, more than 80 per cent of the arbitration cases were filed electronically and that, since the pandemic, the majority of the cases had been conducted fully or at least partially online. It was also reported that, from 2017 to July 2023, there had been 80 awards rendered in arbitral proceedings administered by KIAC. Of the 80 awards, 8 were signed electronically and delivered to the parties via electronic means, and 32 were signed in wet ink but delivered to the parties via electronic means. Forty awards were signed in wet ink and delivered via physical mail.

B. Singapore

13. A panel discussion in Singapore, themed “Dispute Resolution in the Digital Economy (DRDE)” and co-organized by the secretariat of UNCITRAL and the Ministry of Law of Singapore during the Singapore Convention Week 2023, was held in person on 29 August 2023. In that panel discussion, three speakers shared their respective insights on (i) electronic awards; (ii) use of AI in dispute resolution; and (iii) digital evidence and electronic document production.

Electronic awards

14. Starting the discussions, the reason as to why paper-based awards were prevalent was examined. It was pointed out that article IV(1) of the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York Convention) mandated that “[t]he duly authenticated original award or a duly certified copy thereof” be supplied, which implied that awards supplied for their cross-border recognition and enforcement were paper-based. It was said that the reliance on paper-based awards was a cause of existing and potential issues, such as unexpected disruptions due to pandemics and the inconvenience faced by tribunal members when signing paper-based awards.

15. To overcome the challenges associated with the New York Convention, it was suggested that the adoption of a supplementary instrument or a text complementing the Convention which enables the use of electronic awards in relation to article IV of the New York Convention should be considered, as an alternative to revising the New York Convention. The adoption of a supplementary instrument might indeed provoke

discussions akin to those which surrounded the amendment on the electronic formation of arbitration agreements to the UNCITRAL Model Law on International Commercial Arbitration (MAL) in 2006. However, it was argued that the concerns raised during those discussions were specific to the formation of arbitration agreements and would not necessarily apply when developing instruments for the enforcement of electronic awards. In addition, it was commented that the framework of the New York Convention remained rooted in the 1958 perspective, thus highlighting the need to complement and modernize it to fit future development.

16. Regarding the potential risk of creating a two-tier system where some States adopted a more digital-friendly approach than others, it was said that such a risk should not be overstated. Contracting States to the New York Convention had already embraced varying degrees of arbitration friendliness, which aligned with the Convention's concept of setting a ceiling, while permitting States to adopt requirements that were more favourable to the recognition and enforcement of arbitral awards.

Use of AI in dispute resolution

17. It was stated that there was an imbalance on the use of AI in their tasks between legal counsels and arbitral tribunals. AI was increasingly being deployed by legal counsels and law firms for knowledge management strategies, such as due diligence, contract review, generation of legal documents and textual content. AI had also been used for strategic decision-making, for example, by automation through predictive justice tools that helped predict an adversary's arguments and foresee the outcome of the case. Hence, the substantial development of generative AI was expected to drive growth in this field.

18. Conversely, it was pointed out that there was limited indication of AI use by the arbitral tribunal in their decision-making processes. Given the growing trend in the use of AI by counsels and other stakeholders, it was said that there was significant untapped potential for decision-making tasks. For instance, in factual analysis, text mining and text analysis tools could be harnessed to assist in processing complex factual information. Additionally, AI could enhance evidence evaluation, such as detecting conflicting statements. At the stage of legal analysis and research, the combined use of extractive, predictive and generative AI tools could trigger substantial transformation by bringing further efficiency in the research, aiding the decision-making, and automating the drafting of awards and orders.

19. It was mentioned that, despite its benefits, using AI posed potential challenges, including concerns about confidentiality, cyber security, due process, equality, and resource disparities between the parties involved. To evaluate the necessary legal restrictions on the usage of AI in legal practice, it was stressed that lawyers needed to understand not only the potentials but also the challenges of AI, such as the generation of fictional outputs (sometimes referred to as "hallucination"), unconscious biases, and lack of transparency in machine learning tools. In Canada, a court issued a practice direction mandating the disclosure of the specific tool employed and the intended purpose when AI was used. Similarly, in the United States, a judge mandated in a standing order that attorneys appearing before the court submit a certificate confirming either that no portion of the filing was drafted by generative AI or that language drafted by generative AI was checked by a human being. The impact of AI on the role of arbitrators and the enforceability of arbitral awards was also said to be a source of concerns. Some foreseeable issues in this respect included those pertaining to (i) the personal and individual nature of the arbitrator's role that would require carefully limiting the use of AI; (ii) the incapability of AI tools so far to produce reasoned decisions; (iii) the systematic unconscious bias in AI tools; and (iv) the transformative effects AI might have on party autonomy, the principle of due process, and efficiency of proceedings.

20. It was stated that the DRDE initiative was important as it discussed the parameters in using technology in the legal field, addressed essential developments and identified key issues for the dispute resolution community. Lastly, it was said that

arguments of user-friendliness and efficiency should be carefully balanced against the normative values upon which dispute resolution was based.

Digital evidence and electronic document production

21. The crucial role of digital evidence to most arbitration or litigation processes was highlighted, as parties increasingly submit emails, instant messages, audio and video recordings to present their case.

22. The use of digital evidence was said to bring forth practical challenges. Retrieving digital evidence, often stored in multiple locations, was time and cost-intensive during the disclosure process. Moreover, the preservation of evidence entailed cost implications for businesses. Two major concerns associated with digital evidence were highlighted: first, electronic evidence was susceptible to tampering, rendering authentication and maintaining integrity difficult; and second, there were serious concerns about data protection, as information systems could be infiltrated to access trade secrets and confidentially protected documents.

23. It was underscored that the obligation to protect digital evidence lied with all stakeholders. Cyber security measures, including regular software updates, up-to-date system management, forced logout and monitoring by AI-based software, were suggested as examples. Also, blockchain was referred to as a technology that offered a means of securing evidence against tampering and manipulation.

24. Regarding the preservation, production and taking of digital evidence, article 27 of the UNCITRAL Arbitration Rules (UARs), and the IBA Rules on the Taking of Evidence in International Arbitration were mentioned as relevant rules. These rules grant arbitral tribunals sufficient flexibility in determining the procedure, admissibility, relevance and weight of electronic evidence. As for data protection and information security, soft law instruments such as the Protocol on Cybersecurity in International Arbitration by the International Council for Commercial Arbitration, the New York City Bar Association and the International Institute for Conflict Prevention, and the Protocol for Online Case Management in International Arbitration by the Working Group on LegalTech Adoption in International Arbitration were mentioned to be relevant.

25. Lastly, it was said that UNCITRAL could play a role in developing best practices regarding digital evidence production. UNCITRAL could establish standards for the storage, production and management of digital evidence in dispute resolution, including on the use of software and authentication processes, encrypted communications and robust administrative controls. This would ensure the integrity and security of digital evidence, while informing and educating parties and stakeholders about the importance of preserving privacy and cybersecurity.

C. Hong Kong

26. On 8 November 2023, an event in Hong Kong, China titled “2023 Dispute Resolution in the Digital Economy Forum: Asia and Beyond” and co-organized by the secretariat of UNCITRAL, South China International Arbitration Center (Hong Kong), and Shenzhen Court of International Arbitration (SCIA), was held in person.

27. Discussions were led by two panels. The first panel focused on electronic notices of arbitration and electronic arbitral awards, and the second panel explored issues on online dispute resolution and the use of technology in arbitral proceedings.

Electronic notices of arbitration

28. It was observed that courts in Hong Kong were generally receptive to substituted service via electronic means, such that they permitted electronic service via QR code posters at public areas, social media, and online data rooms. The large number of defendants or potential defendants and the large volume of documents to be served appeared to be factors taken into account by the Hong Kong courts when permitting

electronic means of service. It was mentioned that, similarly, courts in the United Kingdom of Great Britain and Northern Ireland allowed substituted service by various electronic means when delivery via physical means were impracticable to effect service. It was further mentioned that service by electronic means had evolved to service by non-fungible tokens (NFTs) when defendants were anonymous.[12] Drawing from the experience of the courts in Hong Kong, it was said that electronic means of service proved to be a cost-effective and efficient method that overcame the limitations of traditional means of service. If properly integrated into arbitral proceedings with a legal basis, delivery of notices of arbitration via electronic means would further increase certainty in terms of effecting delivery and arbitrations being duly commenced, even to those individuals that attempted to evade service.

29. However, some practical considerations in relying on electronic means to deliver notices of arbitration were raised. For instance, to rely on electronic service of notices, it was essential that the parties' agreement or the applicable arbitration rules permitted electronic service. There should be evidence of delivery, which could be obtained by using tools to track electronic communications. Under certain institutional rules, the party using an online arbitration platform administered by the institution was required to explicitly confirm the intent to notify the other party electronically. This precautionary step was aimed to prevent inadvertent sending of notices, as once sent, the notice would not be retrievable.[13]

30. It was noted that courts in China had generally taken a cautious approach towards electronic delivery of notices of arbitration in both domestic arbitrations and cross-border arbitrations. Courts in China would typically inquire whether the claimant had taken adequate steps to notify the respondents, in order to safeguard the respondents' right to present the case. Reference was made to a case in China in which the Supreme People's Court refused enforcement pursuant to article V(1)(b) of the New York Convention on the grounds that the claimant failed to provide evidence that the notice of arbitration was properly served on the respondent via email.[14]

Electronic awards

31. It was indicated that, in China, electronic awards were rarely seen in practice due to (i) the legal uncertainty on originality, (ii) concerns on formal validity and notification process, and (iii) practical concerns on integrity. On the other hand, since 1 January 2022, Chinese courts had been rendering electronic judgments, which could be delivered by electronic means with the parties' consent.[15] Electronic judgments were commonly used in Internet courts. An electronic judgment would be deemed to be delivered successfully when it was sent to the address provided or confirmed by the recipient, and when the recipient responded, or the recipient's system showed that the message had been read. Under domestic law, it was said that an electronic judgment had the legal effect of an original, i.e. a copy of the data identical to the original, or a printout directly from the data, was deemed to be the original judgement.[16]

32. Compared to electronic judgments, it was pointed out that the legal uncertainty in the enforceability of electronic awards remained an obstacle to electronic awards becoming established in practice. Reference was made to article IV(1) of the New York Convention, which provided that "[t]he duly authenticated original award or a duly certified copy thereof" be supplied for the recognition and enforcement of awards. It was said that the same article implied a reliance on paper-based awards. Additionally, as national laws might require original awards, for the time being, awards continued to be made and signed on paper and physically served on the parties.

[12] United Kingdom, High Court of England and Wales, *D'Aloia v Person Unknown & Others* [2022] EWHC 1723 (Ch).

[13] Article 6(5) of the SCIA Arbitration Rules.

[14] China, Supreme People's Court, *Cosmos Marine Managements S.A. v. Tianjin Kaiqiang Trading Ltd* (2006) Min Si Ta Zhi No. 34.

[15] China, Civil Procedure Law of China article 90.

[16] China, Civil Evidence Provisions of China article 15(2).

33. Nevertheless, it was acknowledged that electronic awards offered undeniable advantages of efficiency, convenience, cost-effectiveness, and environmental friendliness. It was said that electronic awards were by no means riskier than paper-based awards. With modern technology such as the use of electronic seals, electronic awards were made more secure and even less likely to be tampered with compared to their paper-based counterparts. Hence, it was suggested that UNCITRAL carry out legislative work to remove the uncertainty that persisted with respect to the enforceability of electronic awards.

Online dispute resolution

34. It was stated that the COVID-19 pandemic had served as a catalyst for the advancement of online dispute resolution (ODR), extending beyond the mere conduct of online hearings. Reference was made to the UNCITRAL Technical Notes on Online Dispute Resolution (Technical Notes), which broadly defined ODR as "a mechanism for resolving disputes through the use of electronic communications and other information and communication technology". Reference was also made to an initiative implemented by the Asia-Pacific Economic Co-operation (APEC), APEC Collaborative Framework for Online Dispute Resolution of Cross-Border Business-to-Business Disputes aimed at offering technology-enabled dispute resolution services for low-value business-to-business (B2B) claims through negotiation, mediation, and arbitration. At the time of this event, there were five APEC member economies that had opted into the collaborative ODR framework, along with the relevant procedural rules.

35. Furthermore, several projects on ODR were mentioned, including: (i) the Practical Guide to Access to Justice for International Tourists and Visitors of the Hague Conference on Private International Law (HCCH), providing information on available ODR mechanisms, and the relevant HCCH legal instruments; (ii) the exploratory work carried out by the International Organisation for Standardization (ISO) on transaction assurance in e-commerce, including ODR framework to protect online consumer rights; (iii) the ODR standards developed by the International Council for Online Dispute Resolution (ICODR).

36. It was reported that, recently, the Government of China, namely the China Standardization Administration, had regulated the use of ODR by the adoption of two important documents: (i) Cross-border E-commerce–Specification for online dispute resolution document GB/T 41127-2021 (31 December 2021); and (ii) Specification for online dispute resolution in E-commerce GB/T 42498-2023 (17 March 2023). It was indicated that the development of an ODR framework by both national and international regulatory bodies would provide a rule-based ODR framework and instil trust in the adoption of ODR by its users.

Use of technology in arbitral proceedings

37. The panel discussed an ongoing project at SCIA aimed at integrating a specific generative AI software to assist arbitration. While concerns surrounding the use of AI in arbitration, such as confidentiality, data privacy, bias, and accuracy were mentioned, it was stressed that generative AI was certain to bring significant efficiencies to arbitral proceedings and that its use should be promoted, while ensuring that the principles of dispute resolution were safeguarded.

38. The discussions concluded with remarks highlighting how the DRDE project and the stocktaking efforts already contributed to raising awareness and addressing developments related to the use of technologies in dispute resolution and to the overarching aim to safeguard key principles of dispute resolution, such as due process, fairness and impartiality, while concurrently advocating for the effective integration of technologies.

D. Cologne

39. On 8 February 2024, the secretariat of UNCITRAL was invited to the "Lunch DIScussion" series, held online from Cologne, Germany and organized by the German Arbitration Institute (DIS), to explore whether UNCITRAL should develop an instrument on electronic awards and electronic notices of arbitration.

40. Participants discussed the desirability of digitalization in dispute resolution and the potential indispensability of paper. It was understood that the electronic issuance of arbitration awards was already possible under German arbitration law, and that the term "send" in the law had been amended to "transmit" to account for the electronic delivery of awards. The recently proposed amendments to the German arbitration law, which included revisions relating to electronic awards, were also discussed. Concerns were expressed about the proposed changes requiring, alongside an electronic signature, the indication of the arbitrators' names at the end of the award, which was not only unnecessary but could also become an obstacle in the international context.

41. The discussion underscored the need to address enforceability issues for electronic awards delivered across borders. Current practice requiring paper-based awards was time-consuming for formal delivery abroad, and warranted consideration of alternative methods.

42. The current practice at the DIS was also discussed. It was highlighted that, while the institution embraced electronic means in the midstream, the DIS rules continued to mandate the use of paper documentation at the beginning (notice of arbitration) and end (award) of the proceedings. It was stated that digital copies of awards were concurrently provided only as "courtesy copies", but that they did not carry any legal significance. The need to avoid confusion between courtesy copies and digital awards was nonetheless mentioned.

43. Participants underscored the need for a precisely defined regulatory framework concerning digitalization in dispute resolution, such as the form and content of electronic awards, the use of digital signatures, and methods for cross-border delivery to increase legal certainty.

E. New York

44. On 13 February 2024, a briefing session in New York titled "Stocktaking of Developments in Dispute Resolution in the Digital Economy" and co-organized by the secretariat of UNCITRAL, the American Society of International Law, the New York State Bar Association, and the New York International Arbitration Center, was held in person.

45. The briefing session was held for the second time in New York, which took the form of a breakfast side event of the seventy-ninth session of Working Group II (12–16 February 2024). The event provided an opportunity for the secretariat to update State delegates on the implementation of the stocktaking project in the lead-up to the fifty-seventh session of the Commission scheduled for 24 June–12 July 2024. The session also served as an opportunity for the secretariat and State delegates to engage in informal exchanges on the way forward.

46. The discussions commenced by a brief presentation from the secretariat outlining the activities conducted after the Commission session in 2023 and focusing on the three identified topics, which were: (i) electronic arbitral awards, (ii) electronic notices of arbitration and their delivery; and (iii) platform-based dispute resolution. The secretariat informed delegates of the suggestions for possible legislative work regarding the recognition and enforcement of electronic awards and electronic notices of arbitration and their delivery, which were based on the "World Tour" discussions. In the ensuing discussion, there was general support as to the topics identified. There was also support for prioritizing the topics of electronic awards and electronic notices of arbitration, as there was a clear need to provide for legal certainty on those topics,

and legislative work on those topics would have a practical impact on the arbitration community.

47. There was a view that the use of AI in arbitration and mediation should be explored to address legal challenges by putting in place necessary safeguards concerning its applications, including concerns regarding unconscious biases. Reference was made to generative AI as a tool which the legal profession could leverage to increase work efficiency. However, some questioned the usefulness and suitability of UNCITRAL undertaking work on the topic of the use of AI in international arbitration. Noting that the adaptation in practice to the rapidly evolving technology was still at an early phase, it was mentioned that legislative work in this area would likely be premature. It was nonetheless proposed that continued monitoring and opportunities to learn about evolving technologies were needed to enable an informed decision-making when the Commission considered this topic in the future.

F. Tokyo

48. On 13 March 2024, the 2024 Tokyo Forum on Dispute Resolution themed "Enhancing credibility, certainty and enforceability of international dispute resolution" and co-organized by the secretariat of UNCITRAL, the International Centre for Settlement of Investment Disputes (ICSID), and the Ministry of Justice of Japan was held in person and online. One session of the forum was dedicated to the DRDE stocktaking project, with a focus on the topics of electronic arbitral awards, electronic notices of arbitration, and platform-based dispute resolution.

1. Electronic arbitral awards

Outline of the issues

49. Regarding electronic awards, it was said that an electronic arbitral award could be defined as an original award in a digital file signed digitally, without any paper involved, which contrasted with digital courtesy copies of arbitral awards typically in PDF. It was said that nowadays most arbitral awards were made on paper, with arbitrators collaborating remotely to finalize them, and passing around the paper award to sign in wet ink. This reliance on paper-based awards presented challenges, such as unexpected disruptions due to pandemics and inconveniences and inefficiencies associated with arbitrators signing such paper-based awards.

50. It was stated that only a minority of jurisdictions had arbitration laws that expressly allowed an arbitral tribunal to make an award digitally. For example, in the Netherlands, the Dutch Code of Civil Procedure expressly empowered the arbitral tribunal to make the award in electronic form as a digital file, and to sign it digitally with a qualified electronic signature, which was not defined in the Dutch arbitration law but defined in the European Union regulation on electronic identification and trust services for electronic transactions in the internal market (known as the eIDAS regulation). It was mentioned, nonetheless, that some jurisdictions had general laws on digital signatures which might therefore allow rendering awards digitally in those jurisdictions.

51. While the possibility of rendering awards digitally was acknowledged, it was stated that the prevalence of paper-based awards in practice was attributed to the inability to rely on electronic awards for various procedural purposes. This included serving the award on the counterparty, seeking to set aside the award, commencing enforcement proceedings, using it for filing at public registries, or relying on its estoppel effects in court proceedings. In many legal systems, these procedures often required a paper original or an authenticated paper copy of the electronic award. Hence, it was in the interest of the parties to receive a paper-based award from the outset.

52. Regarding the application of article IV(1) of the New York Convention, it was mentioned that the reference to "duly authenticated original award or a duly certified copy thereof" alluded to the reliance on paper-based awards in the cross-border enforcement of arbitral awards. Accordingly, Contracting States were allowed to request a duly certified paper copy of the digital original because their infrastructure and their law did not allow the competent authority to accept a digital file. This was said to be a traditional way of applying the New York Convention. Another possible interpretation was that the New York Convention, meant to be arbitration friendly, compelled Contracting States to accept a digital original. However, this interpretation was deemed unconvincing as Contracting States would be in breach of the New York Convention whenever their authorities rejected awards in digital files and requested paper ones, which was the prevailing practice.

Legislative options

53. It was proposed that UNCITRAL could facilitate the transition towards digital arbitral awards by working at the levels of both domestic and international law.

54. At the domestic law level, it was mentioned that the MAL could be revised. It was suggested that: article 2 include a definition on electronic awards; article 31 provide how the "in writing" and signature requirements could be met digitally; and article 34 provide that the award creditor could supply an electronic award.

55. At the international law level, it was mentioned that there were three options: (i) to revise the New York Convention to provide for the obligation of Contracting States to accept electronic awards: (ii) to make a recommendation on the interpretation of article IV of the Convention, clarifying that the Convention does not prevent Contracting States from accepting electronic awards; or (iii) to develop a protocol complementing the New York Convention so that Contracting States could take on the additional obligation to accept electronic awards. It was suggested that revising the New York Convention was not practically feasible, but that the other two options were viable. It was said that the choice between the two options would be a policy choice to make between a recommendation on interpretation which would reiterate the more favourable treatment provided in article VII(1) of the New York Convention, or create a new international obligation to accept electronic awards in enforcement procedures. As for developing a protocol, it was stated that it could provide for: its supplementary nature in relation to the New York Convention; a definition of electronic awards; the obligation of parties to the protocol to accept electronic awards notwithstanding article IV of the Convention; and, potentially, reservations with regards certain authorities, such as land registries, that might require time to accept digital documents.

Discussions on the legislative options

56. In the ensuing discussion, the suggested work proposals were discussed. There was a view that supported the amendment of the MAL, noting the "friendly bridging" effect to assist in the interpretation of the New York Convention. Conversely, concerns were expressed regarding the generally slow pace for States to amend their domestic laws to be compliant with model laws and the time it would take for the 124 jurisdictions that were compliant with the MAL to update their laws to accept electronic awards.

57. Regarding the suggestion to complement the New York Convention with a protocol, different views were expressed. A concern was raised about the consequence of creating a two-tiered system where different rules would be applied in different jurisdictions, while another view was that a pro-enforcement divide among Contracting States was envisaged in article VII of the New York Convention and that a protocol providing more favourable treatment for electronic awards would simply be a reflection of that pro-enforcement policy. It was also opined that amending the New York Convention might risk preventing its provisions from being interpreted broadly to include electronic awards. In response, it was said that the existence of a protocol could not affect the interpretation of the New York Convention under article 31 of the

Vienna Convention on the Law of Treaties (VCLT). Another concern raised was that, depending on how the protocol was drafted, States that had made a reciprocity reservation under article I(3) of the New York Convention might decline the enforcement of electronic awards made in a State that was not a party to the protocol on the ground of lack of reciprocity. In response, it was said that the protocol should not be equated with an amendment to the New York Convention and that the concern was not substantiated. In support of developing a protocol, it was stressed that a protocol would have a good signalling effect, and developing it might not be as complicated as it seemed.

58. As for the suggestion to make a recommendation on interpretation, it was mentioned that the root cause of the divide regarding the interpretation of article II(2) of the New York Convention owed much to the discrepancies in the different language versions of the Convention. However, in the case of electronic awards, there were no such discrepancies.

59. Additionally, other proposals were mentioned, such as updating the UARs and the UNCITRAL Notes on Organizing Arbitral Proceedings.

60. Experience and updates on electronic awards were shared. Reference was made to the recently proposed amendments to the German Arbitration Act, which included provisions to create a seamless court enforcement procedure for electronic awards. It was discussed that the recent practice of the International Chamber of Commerce (ICC) was that it would first seek from the parties whether they consent to an electronically signed award, and upon its assessment and the parties' consent, the arbitrator(s) would electronically sign the award, and send it to the parties. It was estimated that ICC had about 40 to 50 per cent of its arbitral awards issued electronically. Nonetheless, according to the experience in practice that was shared, even in major jurisdictions such as France, courts would request the party to submit a paper-based equivalent when seeking to enforce an electronic award.

61. In conclusion, while there were diverging views on the different legislative options, there was consensus on the significance and relevance of this topic as UNCITRAL's work. It was widely felt that there was a need to understand different legislative options in detail and thoroughly evaluate their advantages and disadvantages.

2. Electronic notices of arbitration

62. In illustrating approaches taken by courts on the service of notices of arbitration by electronic means, several court judgements from Hong Kong and the United Kingdom were noted. Issues encountered when serving arbitration notices electronically included delivering them to the wrong email address, which happened, for instance, when the company was within an intricate group of multinational corporations or when a generic company email address was made available in addition to those of specific employees. Additionally, examples on how courts addressed electronic means of service in litigation proceedings were shared, such as approving electronic service via QR code posters at public areas, posting judgment orders on government websites, the use of social media platforms and online data rooms, and dropping NFTs into the digital wallet of the recipient.

63. During the discussion, there was mention of the Cairo Regional Centre for International Commercial Arbitration (CRCICA) Arbitration Rules 2024, which included a provision stipulating that a notice was deemed to be received by a party if it was delivered to the email address which the addressee held out to the public at the time of communication. It was mentioned that this provision was introduced, only as a last resort, to address situations of failed delivery of notices through other means.

64. Regarding the role of UNCITRAL, it was proposed that work should be done on electronic notices by revising the UARs, or to provide model clauses that parties could use when agreeing to a specified email address. It was cautioned, however, that allowing notices of arbitration to be sent generally to an email address held out to the

public might be too risky. It was also pointed out that provisions in arbitration laws in some jurisdictions, such as under the English Arbitration Act, were sufficiently flexible to encompass technological evolution, hence, reforms in such area were unnecessary, or moreover harmful, as it might risk necessitating law amendments on a regular basis.

3. Platform-based dispute resolution

65. At the outset, a presentation capturing the gist of a report by iGLIP in April 2024 was made (see, paras. 78–82). The presentation referred to the different categories of platform-based dispute resolution and highlighted that ensuring their legitimacy was crucial.

66. Dispute resolution platforms embedded in larger e-commerce platforms were further explored by participants, particularly focusing on e-commerce platforms in China that had established online jury proceedings, allowing netizens to be involved in the dispute resolution process. Concerns were raised about the significant challenges in such platforms, including governance issues affecting fairness and impartiality, which could in turn impact the recognition and enforcement of the decision beyond the platform. Also, the role of the internal policies of the platform and their interplay between the applicable law to the substantive decision was raised. The issue of conflict of interest of the platform operator, who was in fact the operator of the electronic commerce business platform, was said to be a potential issue. Lastly, caution was raised on incorporating AI and automation to the platforms until there was consensus on the legitimate use of AI in decision-making processes.

67. On the way forward, it was said that UNCITRAL could take a leading role in developing a framework for platform-based dispute resolution, building on the Technical Notes and work carried out by other organisations such as APEC, ISO and ICODR.

G. Paris

68. On 19 March 2024, the second edition of "UNCITRAL's Dispute Resolution in the Digital Economy Initiative" during the Paris Arbitration Week, co-organized by the secretariat of UNCITRAL and Sciences Po Law School, was held in person. The topics of electronic awards and the use of AI in arbitration were discussed.

Electronic awards

69. The discussion began with a presentation on electronic awards, which essentially covered the same points as previously described (see paras. 49–55 above).

70. Discussions unfolded with an observation on the transition toward using digital signatures for awards, which was generally seen as a positive development by practitioners due to its convenience. Certain arbitral institutions had allowed the issuance of electronic awards, provided the parties agreed. It was pointed out that the main obstacle was not in the making of an award but rather the risk that it might not be enforceable later on. An example was cited from a Swedish Court of Appeal case, where the Court considered whether an award initially signed by a scanned signature pasted on the PDF file met the requirements of an award. The Court held that an arbitral award had to be signed in wet ink and that the award in PDF did not meet the requirements but decided that the error was rectified when a signed paper version of the arbitral award was subsequently provided and sent out to the parties.

71. The suggestion to develop a protocol to the New York Convention brought up issues previously discussed (see paras. 56–58 above). Participants discussed the historical context of UNCITRAL's amendments to the MAL in 2006, particularly on the issues of "agreement in writing" and interim measures. The debate centred on whether introducing a protocol would influence how the New York Convention was interpreted. There was a view that the necessity for a protocol implied that the

Convention did not inherently encompass electronic awards. It was suggested that adopting a protocol might restrict the adaptable interpretation of the Convention, potentially barring its future application to electronic awards. Conversely, it was emphasized that, in accordance with the VCLT, a protocol would not influence the interpretation of the New York Convention unless the States concerned were all parties to the protocol. Nevertheless, it was argued that relying solely on this provision was overly legalistic and technical, and that there remained a risk of creating an impression of a narrow interpretation because of the protocol. To address that concern, it was proposed that the protocol could explicitly clarify that its existence should not affect the interpretation of the Convention, although legally it was unnecessary. It was underscored that a protocol would have a positive signalling effect.

Use of AI in arbitration

72. The presentation started with an overview including the state of play on the use of AI, in particular generative AI, in the legal context. The importance for legal practitioners to understand AI, in order to be able to tackle the challenges on the use of AI and leverage AI in dispute resolution was underscored.

73. The presentation proceeded to a demonstration of an AI software developed to assist arbitration practitioners, which showed how generative AI was used to summarize information on an arbitration case, and how a chatbot assisted in obtaining information and developing a strategy in arbitration proceedings. It was reported that the software could not replace the professional experience of senior lawyers at this stage, but that it could provide basic law information akin to an entry-level lawyer.

74. It was foreseen that the use of AI would bring impact to the legal practice, including improvement in service innovation responding to the increase of client expectations, development of new business models and data governance policies. Regulatory challenges were also envisaged, necessitating a balance between global standards, in leveraging AI in the dispute resolution industry. While using AI was deemed low risk for tasks such as summarizing and translating documents, or an acceptable level of risk for activities such as drafting legal research memos and reviewing documents, using AI for activities such as evidence assessment or drafting awards was considered to entail serious risks. In this light, the ethical use of AI, such as transparency, explainability, accountability and human-centric design was underscored. To address ethical concerns, regulations, guidance and other mechanisms were proposed, including algorithmic audits, and algorithmic impact assessment.

IV. Summary of the iGLIP expert meeting and report

A. iGLIP expert meeting

75. On 8 November 2023, the third expert meeting of iGLIP[17] was hosted by the Department of Justice of Hong Kong. It was recalled that, at its previous sessions, the Commission requested the secretariat of UNCITRAL to seek collaboration between the DRDE project and iGLIP.[18] The secretariat and contributors to the DRDE project took part in this meeting, in the format of a round-table discussion, to take stock of the recent developments on platform-based dispute resolution in different jurisdictions. At the outset, presentations on the latest developments in different jurisdictions were made.

76. In the discussion, the Technical Notes were analysed to be setting forth the key principles of fairness, transparency, due process and accountability and it was acknowledged that the Notes were still a relevant basis for online dispute resolution.

[17] For further information on iGLIP, see A/CN.9/WG.II/WP.223, and A/CN.9/1064/Add.4, paras. 17–36.

[18] *Official Records of the General Assembly, Seventy-eighth Session, Supplement No. 17* (A/78/17), para. 213.

Further, it was mentioned that online platforms embodying digital technologies (including AI) were being increasingly used for the resolution of a wide range of disputes, not only in the ADR context but also in court proceedings. It was therefore necessary to examine how the platforms and the technologies they embraced were being utilized to facilitate the resolution of disputes and how they impacted the above-mentioned key principles. Considering that the scope of disputes being resolved through platforms was quite broad, it might be necessary to take a more comprehensive approach, taking an in-depth analysis of the various actors involved and the breadth of services provided through the platforms.

77. In conclusion, iGLIP suggested that it would conduct a study and provide inputs for the DRDE project, with the support of the Asian Academy of International Law (AAIL).

B. iGLIP report

78. Accordingly, the secretariat received from iGLIP in April 2024 a report prepared with the support of AAIL and based on preliminary research.

79. To present the findings of the iGLIP report, where the phrase "online dispute resolution" (ODR) is used, this note uses the term "platform-based dispute resolution" instead to distinguish it from the term ODR in the Technical Notes, which primarily refers to dispute resolution on e-commerce platforms. In contrast, the iGLIP report encompasses a wider range of dispute resolution mechanisms facilitated by various types of platforms, in light of the integration of platforms into dispute resolution generally and the new types of platform-based dispute resolution that have emerged.

80. The report identified three categories of dispute resolution platforms: (i) platforms dedicated to providing ADR services completely online (type 1); (ii) consumer grievance mechanisms embedded in a larger platform for online transactions as part of its "one-stop" service (type 2); and (iii) platforms used to provide conventional arbitration and mediation services, which facilitate the resolution of disputes by providing a system for the exchange of electronic records and communications between parties (type 3). The report showcased the diverse landscape of platform-based dispute resolution by illustrating the different use cases in China. The report investigated one type 1 platform, four type 2 platforms and one type 3 platform. While dispute resolution on type 1 and 3 platforms were basically in line with traditional arbitration and mediation, it was observed that the characteristics of dispute resolution on type 2 platforms were diverse. For instance, there was a platform which incorporated a jury system where members of the public provided advice or recommendations. Other platforms facilitated the enforcement of decisions based on their rules, or incentivized compliance with decisions through peer pressure.

81. The report noted that several bodies had identified standards for platform-based dispute resolution guiding the legitimacy and effectiveness of the platforms, of which the ICODR standards served as a common denominator. The standards identified were: accessibility, accountability, competence, confidentiality, equality, fairness and impartiality, legality, security, and transparency. The report observed that the standards provided general guidance with which the different types of platform-based dispute resolution complied. It was, nonetheless, suggested that the standards could be refined and harmonized to further their practical application in the platform-based dispute resolution context through the analysis of practical real-world examples. The report also suggested the need to further look into the nature of non-binding decisions on platforms that were, in reality, often complied with through incentives and the need to further monitor the integration of AI tools into the various platforms.

82. The report further suggested the need for the DRDE project to focus further work on the fundamental characteristics of ADR services, such as due process, integrity of the process, party autonomy and enforceability, and the specificities of platform-based dispute resolution as well as the need to refocus the approach from

purely electronic commerce platforms with embedded grievance or ODR mechanisms, to platforms providing ADR services more generally.