

Title	Digital Economy and the HCCH Conference on Commercial, Digital and Financial Law Across Borders (CODIFI Conference): Report
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Author	PB
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Objective	To report on the status of work relating to the Digital Economy project, and on the outcomes of the Digital Economy Tracks of the 2022 HCCH CODIFI Conference
Action to be Taken	For Decision <input checked="" type="checkbox"/> For Approval <input type="checkbox"/> For Discussion <input type="checkbox"/> For Action / Completion <input type="checkbox"/> For Information <input type="checkbox"/>
Annexes	Annex I – Report of the 2022 inaugural HCCH Conference on Commercial, Digital and Financial Law Across Borders (CODIFI Conference) Annex II – Recent IP-related Cases in the Digital Sphere
Related Documents	Prel. Doc. No 4 REV of January 2022

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Digital Economy and the HCCH Conference on Commercial, Digital and Financial Law Across Borders (CODIFI Conference): Report

I. Introduction

- 1 In fulfilment of Conclusion and Decision (C&D) No 33 and following the mandate of the Council on General Affairs and Policy (CGAP) in March 2022,¹ the inaugural HCCH Conference on Commercial, Digital and Financial Law Across Borders (CODIFI Conference) was successfully held online from 12 to 16 September 2022. This Preliminary Document (Prel. Doc.) reports on the background and relevant discussions from the CODIFI Conference concerning the digital economy thematic tracks. It also addresses possible topics and areas for future work on the private international law (PIL) implications of the digital economy, based on the outcomes of the CODIFI Conference. The report of the CODIFI Conference is provided as Annex I, *infra*.
- 2 The effective implementation and operation of the CODIFI Conference initiative were led by the International Commercial, Digital and Financial Law Division at the Permanent Bureau (PB). The Division has, from the end of 2021 through 2022, been concerned with the organisation, management, and post-activity analysis of the CODIFI Conference.
- 3 The CODIFI Conference sessions were organised along six thematic tracks. The CODIFI Conference included three tracks of discussions to address matters related to the digital economy, informed by the requests of Members which had responded to a survey distributed by the PB in late 2021.² The other three tracks focused on the background and relevant discussions from the CODIFI Conference on the *Convention of 5 July 2006 on the Law Applicable to Certain Rights in Respect of Securities held with an Intermediary* (Securities Convention), *Convention of 1 July 1985 on the Law Applicable to Trusts and on their Recognition* (Trusts Convention) and *2015 Principles on Choice of Law in International Commercial Contracts* (HCCH Principles), which are separately addressed in Prel. Doc. No 10A.³

II. Outcomes of the CODIFI Conference Digital Economy Tracks

- 4 The tracks of the CODIFI Conference related to the digital economy gathered experts to discuss key issues of PIL concerning digital platforms, applications of distributed ledger technology (DLT), and financial technology (fintech).
 - The Digital Economy “Frameworks” track focused on the PIL issues in the new decentralised economy that is based on technologies such as DLT;
 - The Digital Economy “Relationships” track considered the use of DLT and other technologies as building blocks for governance of enterprises, transactions, financial services, dispute resolution, operations management and sustainable development; and
 - The Digital Economy “Redefine” track broadly considered innovations in the fintech industry, including specific perspectives and approaches of national jurisdictions regarding digital commerce.

¹ C&D No 33 of CGAP 2022; see also C&D No 38 of CGAP 2021, available on the HCCH website at www.hcch.net under “Governance” then “Council on General Affairs and Policy” then “Archive (2000-2022)”.

² Focused Circular No 47(21) of 14 December 2021.

³ “2006 Securities Convention, 1985 Trusts Convention, 2015 Principles on Choice of Law in International Commercial Contracts: Update”, Prel. Doc. No 10A of January 2023 for the attention of CGAP 2023, available on the HCCH website at www.hcch.net under “Governance” then “Council on General Affairs and Policy”.

- 5 Experts speaking on these three tracks identified various PIL issues that may benefit from potential future work. These topics spanned issues of jurisdiction, applicable law, choice of forum, party autonomy, recognition and enforcement, and international cooperation mechanisms.
- 6 Across these tracks, there was broadly recognised consensus that the concept of *situs* would pose challenges for a PIL framework concerning digital assets, because it would be technically and legally difficult to identify a location where assets are located.⁴ In addition, the pseudonymity of users and the immaterial nature of digital assets increase the difficulty of identifying useful connecting factors.⁵
- 7 Experts agreed that, in relation to digital assets, a proxy needs to be found to determine their location since they do not possess a physical location.⁶ Emerging approaches to this problem have focused on examining explicit choices of law, such as Article 12 of the 2022 Uniform Commercial Code Amendments. This article provides a “waterfall” of alternatives for determining the governing law of a “controllable electronic record”.⁷ “The primary rules of this waterfall require for their applicability express provisions of a controllable electronic record, an attached or logically associated record, or the system in which a controllable electronic record is recorded”; as last resort, the law of the District of Columbia is applied.⁸ Similarly, the draft Principle 5 developed by the UNIDROIT Digital Assets Working Group adopts a waterfall of factors to discern the applicable law governing the proprietary issues in respect of a digital asset – the first consideration would be to apply the law of the State specified in the digital asset itself, and then the law of the State specified in the system or platform in which the digital asset is recorded. Absent these specifications, the forum is provided with freedom to choose the appropriate rules for a forum sitting in that State. Principle 5 provides options for the application of some aspect of the forum’s own domestic laws; of some or all of the Principles; or the law otherwise applicable under the private international law rules of the forum.⁹
- 8 Sessions on dispute resolution and remedies described various challenges that could arise depending on the asset and the system in question. For example, the valuation of an asset under dispute could depend on whether it is unique or fungible – this determination could condition whether or not an injunction may be granted.¹⁰ Given that courts may issue orders compelling the turnover of assets, difficulties that may arise include questions of whether it is possible to enforce a turnover order against automated smart contracts, or how to access digital assets if one of the parties has “lost” their private keys. Some experts noted the need to establish an effective and practical normative framework that provides a means of execution of virtual assets, in particular on the recognition and enforcement of these types of orders.¹¹

⁴ CODIFI Conference, A. Held, “Digital Economy Frameworks / PIL & DLT: What Challenges Lie Ahead?”, 15 September 2022; CODIFI Conference, S. Green, “Digital Economy Frameworks / How is Applicable Law Best Determined – By Asset, System or Transaction?”, 13 September 2022.

⁵ CODIFI Conference, A. Bonomi, “Opening of the Digital Economy “Frameworks” Track”, 12 September 2022; CODIFI, T. Rodriguez de Las Heras Ballell, “Digital Economy Redefine / Expanded Applications of DLT: Supply Chain”, 14 September 2022.

⁶ CODIFI Conference, H. Liu, “Digital Economy Relationships / Digital Assets Remedies”, 15 September 2022.

⁷ Official Comment to Article 12, available from https://higherlogicdownload.s3-external-1.amazonaws.com/UNIFORMLAWS/44748ee5-028d-7c0c-c397-1490734ec470_file.pdf?AWSAccessKeyId=AKIAVRD07IEREB57R7MT&Expires=1670591381&Signature=cydaE3FkpMLONQWylAhtSKMaJdc%3D

⁸ *Ibid.*

⁹ UNIDROIT Digital Assets and Private Law Working Group, Document 2 of the Seventh Session, “Master Copy of the Draft Principles and Comments”, December 2022.

¹⁰ CODIFI Conference, A. Hinkes, “Digital Economy Relationships / Digital Assets Remedies”, 15 September 2022.

¹¹ The nature of digital assets and their characterisation may also raise issues in relation to their use in secured transactions and in the context of insolvency proceedings. For examples of UNCITRAL frameworks that relate to these fields, see UNCITRAL Model Law on Cross-Border Insolvency; UNCITRAL Model Law on Recognition and Enforcement of Insolvency-Related Judgments; and UNCITRAL Model Law on Secured Transactions, available from <https://uncitral.un.org/en/texts/>.

- 9 In relation to Central Bank Digital Currencies (CBDC), experts considered the legal frameworks and developments that would need to be in place to reliably accommodate digital versions of fiat currency.¹² PIL matters that could arise include the recognition and enforcement of judgments in CBDC systems, jurisdiction in relation to intermediaries, and interoperability with existing financial systems. In addition, more development is needed in legal and regulatory frameworks concerning CBDC data protection and cyber security.¹³
- 10 Concerning Decentralised Autonomous Organisations (DAOs), experts focused on the difference between regulated DAOs incorporated under the law of a State and “maverick DAOs” lacking any such framework.¹⁴ Questions of PIL include (i) whether regulated DAOs can be recognised in other States; (ii) whether maverick DAOs have a legal existence in State jurisdictions; and (iii) what law could be applicable to a maverick DAO. Experts also discussed the need for clarity on DAO compliance with securities laws and whether distributions from a DAO cooperative would lead to tax consequences.¹⁵ Finally, discussions at the CODIFI Conference took note of linkages between the digital economy and intellectual property (IP) rights.¹⁶ The relevance of non-fungible tokens (NFTs) to IP rights is discussed in Section V.
- 11 The week-long online programme had a total broadcast time of more than 32 hours of content, now almost fully available online for on-demand viewing. The CODIFI Conference brought together 93 speakers from all regions of the world, and almost 700 people registered to attend. The gender representation of speakers was close to parity, with 48% identifying as female. Taking into account the approximate 10% of meeting participants whose locations could not be fixed, participants throughout the week saw representation from all major regions of the world. 30% of participants were from Europe, with another 30% from Asia and the Pacific. Nearly a quarter of participants joined from the Americas, with additional viewership from the Near and Middle East, and from Africa.

III. Initiatives relating to the Digital Economy

- 12 The PB has continued to closely coordinate, including through participation as an observer, with UNCITRAL and UNIDROIT in relation to these organisations’ current work in this area. Through expansion of the HCCH network achieved in the organisation of the CODIFI Conference, as well as attendance at other institutions’ activities pertaining to the digital economy, the PB also established ties with institutions and organisations such as the Legal Department of the International Monetary Fund (IMF), Swiss Finance + Technology Association, Ethereum Foundation, International Islamic Liquidity Management Corporation and various subcommittees of the International Bar Association (IBA). Based on the viewpoints gathered at the CODIFI Conference, research performed by the PB, and consultations with partner organisations, the PB has developed a number of joint initiatives for the consideration of CGAP. Each joint initiative is briefly summarised here, with reference to the Prel. Doc. fully describing the initiative and providing CGAP with Conclusions and Decisions for consideration.

¹² *Ibid.* Fiat currency or fiat money is defined as the money issued and backed by a government, valuable for its status of legal tender rather than its backing by another commodity. See I. Asmundson and C. Oner, IMF Back to Basics: What is Money? (2012).

¹³ CODIFI Conference, Heng Wang, “Digital Economy Redefine / Central Bank Digital Currencies (CBDCs) & Private International Law”, 13 September 2022.

¹⁴ CODIFI Conference, F. Guillaume and S. Riva, “Digital Economy Relationships / Decentralised Autonomous Organisations”, 15 September 2022.

¹⁵ *Ibid.*; CODIFI, M. Mannan, “Digital Economy Relationships / Decentralised Autonomous Organisations”, 15 September 2022.

¹⁶ CODIFI Conference, R. Sum, “Digital Economy Relationships / Blockchain-Based Dispute Settlement Mechanisms”, 14 September 2022.

- 13 The PB cooperates and coordinates closely with the UNCITRAL Secretariat in relation to the PIL issues that arise in relation to artificial intelligence (AI), online platforms, and automated contracting. Part of this cooperation takes place through the PB's participation as an Observer in UNCITRAL's Working Group IV on Electronic Commerce.¹⁷ In its 2020 progress report to the Commission, the UNCITRAL Secretariat identified online platforms as a topic of interest,¹⁸ and in 2021, the UNCITRAL Secretariat proposed that exploratory work continue "with a view to formulating concrete proposals for international harmonisation and legislative guidance".¹⁹ Resources have since then been focused on advancing work on this topic as well as in AI and automated contracting, as well as in data transactions. This work will likely provide the use cases for testing the solutions developed by UNCITRAL's Working Group IV. Given the inherent cross-border element of these topics, considerations of PIL are crucial.
- 14 The development and issuance of CBDCs, their cross-border circulation, and the use of intermediary businesses for operations such as custody, deposit, and lending, will likely lead to various PIL challenges. In this context, the PB has provided input to the Fintech Note authored by the Legal Department of the IMF on legal issues likely to arise in the development and operation of CBDCs, including matters of PIL.²⁰ CGAP may want to consider mandating that the PB commence exploratory work to study the development of CBDCs and the possible PIL framework that will be needed to support such initiatives. This project is proposed to consist of an initial exploratory phase focused on monitoring of new developments, such as the evolving legal frameworks of CBDC pilot projects and the potential structure and involvement of intermediary businesses. This proposed project is described in Prel. Doc. No 3B.²¹
- 15 The PB and the UNIDROIT Secretariat have discussed possible joint work on a project, in light of work already completed at UNIDROIT, to examine the desirability of coordinated guidance and the feasibility of a normative framework on the law applicable to cross-border holdings and transfers of digital assets and tokens, covering relevant private law aspects. This proposed joint work would take the name, "HCCH-UNIDROIT Project on Law Applicable to Cross-Border Holdings and Transfers of Digital Assets and Tokens" ("HCCH-UNIDROIT Digital Assets and Tokens Project"). This proposed project is described in Prel. Doc. No 3C.²²
- 16 At the CODIFI Conference, expert discussions highlighted a number of cross-border issues concerning insolvency and digital transactions and assets, such as third-party effects of insolvency of digital asset platforms, the characterisation of digital assets as property for the purposes of an insolvency proceeding, and the mechanics of injunctive relief involving electronic platforms. The PB's work on PIL issues relating to insolvency, including its cooperation with UNCITRAL, is described in Prel. Doc. No 4.²³

¹⁷ Background documents on the work of UNCITRAL's Working Group IV on Electronic Commerce can be found on the UNCITRAL website at https://uncitral.un.org/en/working_groups/4/electronic_commerce.

¹⁸ United Nations Doc. A/CN.9/1012, available at <https://documents-dds-ny.un.org/doc/UNDOC/GEN/V20/024/68/PDF/V2002468.pdf?OpenElement2002468.pdf>, at paras 33-35.

¹⁹ United Nations Doc. A/CN.9/1064/Add.3, available at <https://documents-dds-ny.un.org/doc/UNDOC/GEN/V21/030/60/PDF/V2103060.pdf>, at para. 25.

²⁰ M. Bechara, W. Bossu, A. Rasekh, C.Y. Tan, A. Yoshinaga, IMF Fintech Note, Private Law Aspects of Token-Based CBDC.

²¹ "Proposal for Exploratory Work: Private International Law Aspects of Central Bank Digital Currencies (CBDCs)", Prel. Doc. No 3B of January 2023 for the attention of CGAP 2023, available on the HCCH website (see path indicated in note 3).

²² "Proposal for Joint Work: HCCH-UNIDROIT Project on Law Applicable to Cross-Border Holdings and Transfers on Digital Assets and Tokens", Prel. Doc. No 3C of January 2023 for the attention of CGAP 2023, available on the HCCH website (see path indicated in note 3).

²³ "Private International Law and Insolvency: Update", Prel. Doc. No 4 of January 2023 for the attention of CGAP 2023, available on the HCCH website (see path indicated in note 3).

IV. PIL and IP

A. Introduction

- 17 The negotiations leading up to the adoption of the *Convention of 2 July 2019 on the Recognition and Enforcement of Foreign Judgments in Civil or Commercial Matters* (2019 Judgments Convention) reached a consensus decision that the Convention would not apply to IP. It was also agreed that further explanation of the treatment of IP-related judgments would be provided in the Explanatory Report to the Convention.²⁴ Given the extensive work done by the HCCH over the past years in the field of PIL and IP, some delegations, including those which had not been in favour of inclusion or partial inclusion of IP-related judgments within the scope of the 2019 Judgments Convention, expressed interest in leveraging such work to explore whether IP-related judgments could be addressed in the future.²⁵
- 18 Following C&D No 10 of CGAP 2022, CGAP mandated the PB, subject to available resources, to continue monitoring developments on the intersection of PIL and IP, including through cooperation between the PB and the International Bureau of World Intellectual Property Organization (WIPO).²⁶ The HCCH has also addressed the intersection of PIL and IP through several of its instruments and projects such as the *Convention of 30 June 2005 on Choice of Court Agreements* (2005 Choice of Court Convention) and the *Principles on Choice of Law in International Commercial Contracts* (2015 Principles on Choice of Law).

B. Updates

1. HCCH-WIPO Questionnaire and Summary of Responses Publication

- 19 At CGAP in 2022, the PB reported on the key findings of the 2021 Questionnaire that was jointly prepared by the HCCH and the International Bureau of WIPO. The parties have since finalised the editing and formatting of the Summary of Responses publication, which will be released in due course. The survey responses identified actual and practical PIL issues in IP disputes, providing a snapshot of the topics that arise in cross-border IP dealings, including issues concerning jurisdiction, determining and applying the applicable law, recognising or enforcing foreign IP-related judgments, and administrative and judicial cooperation. The PB is grateful to WIPO's International Bureau for its support and expertise, and extends its gratitude to respondents for their participation and time dedicated to the Questionnaire.

2. Impacts of the Digital Economy on IP Rights

- 20 Experts outlined at the CODIFI Conference how DLT systems and applications have given rise to a wide range of implications across the fields of property, tort, insolvency, succession, contract, and IP.²⁷ The advent of the digital economy and DLT systems and applications has motivated study of whether existing instruments and legislation are adequate for the new technological landscape. Experts at the CODIFI Conference thus proposed an approach that leverages pre-existing connecting factors, with adaptations being made to apply to situations involving DLT applications

²⁴ Paras 64-65 of the Explanatory Report. The Explanatory Report is available on the HCCH website at www.hcch.net under "Judgments".

²⁵ Working Proposal No 1 REV from the Chair of Commission II on General Affairs and Policy. Minutes of the Twenty-Second Session on Recognition and Enforcement of Foreign Judgments (18 June – 2 July 2019), Minutes No 7 of Commission I on Judgments, para. 82 (available on the Secure Portal of the HCCH website at www.hcch.net).

²⁶ C&D No 10 of CGAP 2022 (see path indicated in note 1).

²⁷ CODIFI Conference, F. Heindler, "PIL & DLT: What Challenges Lie Ahead?", 15 September 2022.

or crypto assets.²⁸ Existing rules may thus need to be updated through legislative action or by the judiciary, as necessary.

21 Following on the recommendations of the experts speaking at the CODIFI Conference, the PB has compiled a table of recent IP-related cases from the digital sphere, indicating an emerging proliferation of IP litigation over digital collectibles. This table can be found in Annex II, *infra*. These cases illustrate that there is confusion over the technical and legal underpinnings of NFTs and the properties and rights that may be linked to them.²⁹ Insofar as a uniform international perspective has yet to emerge in this regard, there is a need to monitor the PIL implications of domestic regulatory approaches and to study whether harmonisation would be desirable in this regard. PIL issues in relation to IP matters have, in particular, arisen in relation to big data, AI and NFTs.

a. Big Data

22 Big data has been defined as all digital data arising from digital activities,³⁰ with more than 180 zettabytes estimated to be created, captured, copied and consumed globally by 2025.³¹ Discerning ownership of source data thus arises as a related consequence, given that the emergence of processed big data as a valuable asset has forced challenging questions to be asked related to the interplay between confidentiality, privacy, and protection of IP rights.

23 In recognition of the reality that the landscape of big data is still taking shape, and given the absence of a harmonised set of rules and regulations to govern access to big data, the potential for infringement of IP rights has been cited as the main obstacle to data sharing.³² Amidst calls for the characterisation of data as property, the related question that requires further consideration is whether and how big data property rights fit into existing property law frameworks.³³ In addition, big data operations implicate cross-border data privacy, database rights, and antitrust law, presenting challenges of identifying the law that applies to disputes and the determination of the competent court that is seized of jurisdiction.

24 One suggestion proposes that big data is an independent object of IP within the framework of the existing IP protection systems, to better enable its protection.³⁴ In this regard, related PIL developments linked to discussions of what IP law protects in big data may need to be monitored, considering that the collection of big data may not qualify for patent or copyright protections if the data sets are presented in a factual manner.³⁵

b. AI

25 In March 2022, the European Union Intellectual Property Office (EUIPO) published a new study on “The Impact of Artificial Intelligence on the Infringement and Enforcement of Copyright and Designs”, analysing how AI technologies such as cloud services, robotics, 3D printing and blockchain applications might affect both the infringement and enforcement of copyright and

²⁸ CODIFI Conference, F. Heindler, “Digital Economy Frameworks / PIL & DLT: What Challenges Lie Ahead?”, 15 September 2022; CODIFI Conference, A. Bonomi, “Opening of the Digital Economy “Frameworks” Track”, 12 September 2022

²⁹ See Annex I for a table of recent IP-related Litigation Cases in the Digital Sphere.

³⁰ See S. MacFeely (2018), “Big Data and Official Statistics”, in *Big Data Governance and Perspectives in Knowledge Management*, S. Kruger Strydom and M. Strydom (eds), pp. 25-54.

³¹ One zettabyte is approximately one trillion Gigabytes. Statistics published by the Statista Research Department on 8 September 2022 at: <https://www.statista.com/statistics/871513/worldwide-data-created/>.

³² P. Andanda (2019), “Towards a Paradigm Shift in Governing Data Access and Related Intellectual Property Rights in Big Data and Health-Related Research”, *International Review of Intellectual Property and Competition Law* 50, p. 1054.

³³ *Ibid.*, p. 1063.

³⁴ See, e.g., M. Lu (2020), “Intellectual Property Protection of Big Data”, *Journal of Physics: Conference Series*, 1693, p. 3.

³⁵ P. Andanda (2019), *op. cit.* note 32, p. 1064.

designs.³⁶ One of the main findings of this study is that all emerging and disruptive AI technologies have the potential to be used as means to enhance IP protection, but may also be tools for IP infringement.³⁷

26 As an example, patent law assumes that inventors are human. In a departure from this position, however, patent applications naming AI systems as inventors³⁸ have been lodged in more than 100 countries.³⁹ Courts worldwide are now grappling with this development to the extent that groups in the United States of America, the United Kingdom and the EU are conducting public consultations on the crossroads between AI and IP.⁴⁰ To address whether existing patent laws are sufficiently robust to accommodate new AI technology, suggestions have been made to examine whether an international treaty is desirable to ensure that laws follow standardised principles and have equal applicability across jurisdictions.⁴¹

27 In monitoring the intersection of PIL and contemporary IP developments, the following specific issues may require particular focus: national and regional approaches to IP protection of AI; cross-border differences concerning ownership of AI-generated inventions; and whether normative work is feasible and desirable in order to unify PIL approaches in the field.

c. NFTs

28 NFTs are a class of digital asset or token that can be proved to be unique, meaning that it is not interchangeable (*i.e.*, “non-fungible”) with another digital asset token; this feature has been deployed to provide both digital and physical works with an NFT “certificate” of uniqueness and authenticity. In recent years, significant attention in the DLT space has focused on disputes arising from the minting, purchase, and theft of NFTs and NFT collections. For example, independent artists who post their work in publicly-viewable online galleries have reported that their artwork has been stolen and transformed into NFT collections without their consent and knowledge.⁴² These disputes indicate that challenges can arise based on the proprietary status of NFTs and the lack of clarity over copyright and trademark rights associated with the token, especially when the token is linked with a physical good.⁴³

29 At present, the proprietary nature of NFTs has been recognised in recent legal decisions rendered by the English and Singaporean courts⁴⁴ and it has been noted that digital assets could be the subject of proprietary rights.⁴⁵ Consequently, the questions of whether digital assets are capable of infringing upon, conferring, or being protected under IP rights has come to the fore. In light of

36 The EUIPO Study on the Impact of Artificial Intelligence on the Infringement and Enforcement of Copyright and Designs is available at: https://euipo.europa.eu/tunnel-web/secure/webdav/guest/document_library/observatory/documents/reports/2022_Impact_AI_on_the_Infringement_and_Enforcement_CR_Designs/2022_Impact_AI_on_the_Infringement_and_Enforcement_CR_Designs_FullR_en.pdf.

37 *Ibid.*, p. 64.

38 For example, see: Food Container and Devices and Methods for Attracting Enhanced Attention, Patent Cooperation Treaty International Application PCT/IB2019/057809 (Filed 17 September 2019). The inventor was named as ‘DABUS’, which invention was autonomously generated by an artificial intelligence. Additionally, artworks have been generated by artificial intelligence and sold in recent years by notable art auction houses such as Sotheby and Christies. See K. Browne (2022), “Who (or What) Is an AI Artist?”, *Leonardo*, Vol. 55(2).

39 A. George and T. Walsh (2022), “Artificial Intelligence is Breaking Patent Law”, *Nature*, Vol. 605 at p. 616.

40 *Ibid.*

41 *Ibid.*, at p. 617.

42 See, for example, <https://www.theguardian.com/global/2022/jan/29/huge-mess-of-theft-artists-sound-alarm-theft-nfts-proliferates> and <https://www.abc.net.au/news/science/2021-03-16/nfts-artists-report-their-work-is-being-stolen-and-sold/13249408>.

43 See Annex II for a table of recent IP-related Litigation Cases in the Digital Sphere.

44 *Ibid.*

45 UNIDROIT Workshop on Issues Related to Enforcement in Digital Assets (10 June 2022), Summary Conclusions, available at <https://www.unidroit.org/wp-content/uploads/2022/08/Enforcement-and-DA-Side-Event-Draft-Summary-Conclusions-Final.pdf>, accessed on 25 October 2022. See also UNIDROIT’s Draft Digital Assets Principles which include guidance on linked digital assets, transfers relating to digital assets, custody of digital assets, secured transactions where digital assets were the collateral, and control over digital assets.

these developments, there may be a need to monitor domestic regulatory approaches and study whether normative work is feasible and desirable in order to unify PIL approaches in the field.

V. Proposal for CGAP

30 The PB invites CGAP to note the issues described in this Prel. Doc. in relation to the digital economy and the outcomes of the CODIFI Conference relevant to the digital economy. Having in mind the limited resources at the PB and the work programme assigned to the International Commercial, Digital and Financial Law Division, the PB proposes the following Conclusions and Decisions for CGAP's consideration:

CGAP noted the outcomes of the 2022 HCCH Conference on Commercial, Digital and Financial Law Across Borders (CODIFI Conference), and invited the Members to identify to the PB the outcomes of the CODIFI Conference of greatest significance to their local context and highest desirability and feasibility for potential future normative work.

CGAP mandated the PB to:

- continue monitoring developments with respect to AI, digital platforms and automated contracting, in partnership with subject-matter experts and with UNCITRAL;
- continue monitoring developments with respect to the digital economy, with a view to identifying PIL issues for potential future work;
- continue developing, subject to available resources, substantive activities concerning topics falling under the purview of the International Commercial, Digital and Financial Law Division; and
- continue work with other organisations in the field, such as UNCITRAL and UNIDROIT.

CGAP welcomed the work carried out on the intersection of IP and PIL, including the cooperation between the PB and the International Bureau of WIPO. CGAP mandated the PB to continue monitoring developments on the intersection of IP and PIL, subject to available resources.

ANNEXES

Annex I – Report of the 2022 inaugural HCCH Conference on Commercial, Digital and Financial Law Across Borders (CODIFI Conference)

Introduction

1. CODIFI, the HCCH Conference on Commercial, Digital and Financial Law Across Borders, was organised by the Permanent Bureau following the mandate of the Council on General Affairs and Policy (CGAP) in 2022 (**Conclusions and Decisions Nos 14, 34 and 36**). CODIFI was held online from **12 to 16 September 2022**.
2. CODIFI sessions were organised along six thematic tracks. Three focused on existing HCCH instruments: the 1985 Trusts Convention, the 2006 Securities Convention, and the 2015 Principles on the Choice of Law in International Commercial Contracts. The other three tracks focused on the private international law issues surrounding the growing digital economy: Digital Economy “Frameworks” focused on the private international law issues in the new decentralised economy that is based on technologies such as Distributed Ledger Technology (DLT); Digital Economy “Relationships” considered the use of DLT and other technologies as building blocks for governance of enterprises, transactions, financial services, dispute resolution, operations management and sustainable development; and Digital Economy “Redefine” broadly considered innovations in the fintech industry, including specific perspectives and approaches of national jurisdictions regarding digital commerce.
3. The week-long online programme had a total broadcast time of more than 32 hours of content, now almost fully available online for on-demand viewing. The CODIFI Conference brought together 93 speakers from every continent in the world except for Antarctica, and almost 700 people registered to attend. The gender representation of speakers was close to parity, with 48% identifying as female. Taking into account the approximate 10% of meeting participants whose locations could not be fixed, participants throughout the week saw representation from all major regions of the world. 30% joined the Conference from Europe, with another 30% from Asia and the Pacific. Nearly a quarter of participants joined from the Americas, with additional viewership from the Near and Middle East, and from Africa.

Agenda: Overarching Sessions

Tripartite Discussion: HCCH, UNCITRAL, UNIDROIT

Christophe Bernasconi, Secretary General of HCCH

Anna Joubin-Bret, Secretary of the United Nations Commission on International Trade Law (UNCITRAL)

Ignacio Tirado, Secretary-General of the International Institute for the Unification of Private Law (UNIDROIT)

Interview with the General Counsel of Ethereum

Tju-Liang Chua, General Counsel, Ethereum Foundation

Gérardine Goh Escolar, Deputy Secretary General, HCCH

Summary of Overarching Sessions

4. The Tripartite Discussion between HCCH, UNICTRAL, and UNIDROIT was organised as the overarching session of CODIFI to underscore the commitment of the “sister organisations” to cooperatively explore this intersection of technology, economics, and law found in DLT. They reiterated the importance of cooperation and coordination between the three organisations, as well as the fundamental role of their respective Members in directing the efforts of the three organisations.
5. The speakers discussed how the digital economy is a topic where the work of all three organisations is converging; each has received requests from their Members to study and provide guidance on different aspects of the topic. This coordination is important but also challenging. The landscape of the digital economy and DLT continues to shift at surprising speed. This rapid pace of development has raised important questions among the organisations’ members, academia, and other observers concerning the effects on finance and trade; how society can be organised; and even the fundamental characteristics of money, value, and art.
6. UNCITRAL emphasised the importance of coordination between their organisation and the HCCH, in particular on the private international law aspects identified in five key topics: Artificial Intelligence and automation, Data transactions, Digital Assets, Online Platforms, and Distributed Ledger systems and technology.
7. UNIDROIT noted the need to update and adjust the existing legal instruments in light of new applications brought about by novel technology. UNIDROIT also spoke to the draft Principles being developed by their Working Group on Digital Assets and Private Law, which include Principle 5 relating to private international law. UNIDROIT noted that the input of the HCCH would continue to be welcome in the development of this Principle and that both organisations would continue to work together in moving these Principles forward.
8. The tripartite agreed that strong developments in legal frameworks can be driven under their respective mandates.
9. Tju-Liang Chua, the General Counsel of the Ethereum Foundation, presented his perspective on blockchain from the lens of a legal practitioner with a background in transactions and disputes. He tackled the concept of “code is law”, which he defined as the principle where parties agree to interact on an open blockchain system where the code is written by the parties and / or agreed to be used by the parties prior to engaging in that interaction. There is thus no conflict with the idea of code representing the intention of parties, and in such a situation this can function as the law that the parties want implemented. He noted that there are limitations to this behaviour, explaining how there is difficulty applying a traditional property regime to a digital asset, even while it exhibits many aspects of property.
10. He advocated for a deeper analysis of possible connecting factors, which could be the subject of formal work at the HCCH that would enhance the legal understanding of blockchain assets as they evolve. This is preferable to a static approach that lays out how blockchain assets should be classified, as the way forward should have flexibility to adopt to new and creative blockchain assets.

Agenda: Track on HCCH Trusts Convention

The Convention on the Law Applicable to Trusts and on their Recognition (HCCH Trusts Convention) entered into force on 1 January 1992 and is to date in force in 14 jurisdictions. The HCCH Trusts Convention resulted in a growth of interest in trusts in civil law jurisdictions, and its mechanism of recognition for both trusts and their analogous institutions creates a benefit for common law and civil law jurisdictions seeking cross-border recognition of trusts.

Trusts Opening

Opening of the HCCH Trusts Convention Track

Haykel Ben Mahfoudh, Director, Head of Mission - Higher Education Mission of Tunisia in North America (M.U.T.A.N.) (live)

The keynote speaker will take stock of the operation of the Convention and provide an overview of significant developments over the past years. The speaker will identify challenges to greater ratification of the Trusts Convention—as well as corresponding solutions that promote increased ratification of the Convention among jurisdictions of all legal traditions.

Attitudes Towards Trusts and Analogous Institutions

DeAnna Beckner, Founder, Beckner Estate Planning

Guillaume Grisel, Partner, Bonnard Lawson – International Law Firm

Maurizio Lupoi, Emeritus Professor, University of Genoa

The HCCH Trusts Convention applies to trusts and institutions analogous to trusts so long as the criteria established in Article 2 of the instrument are met. The inclusion of the notion of institutions analogous to trusts afforded the Convention wider scope of application. Although the Trusts Convention did not intend to introduce the trust concept into the domestic law of jurisdictions that did not already have it, the Convention did result in a growth of interest in trusts in civil law jurisdictions. National laws have been revised to include provisions substantially similar to the Convention, and new institutions with close relationship to trusts have been developed or refined (e.g., *fiducie* and *waqf*). This session will focus on trusts and analogous institutions in other jurisdictions.

Trends in Jurisprudence Interpreting the Trusts Convention

Adeline Chong, Associate Professor, Singapore Management University

Angélique Devaux, notaire, Chevreaux, Paris, France

Nearly 40 years have elapsed since the discussions leading to the adoption of the Trusts Convention took place. In that time, there have been developments that indicate that the Convention might play an important role in bridging the law applicable to trusts and the recognition of trusts in different legal systems and traditions. Discussions and questions regarding the similarities and differences between trusts and other analogous institutions continue, indicating a need to take stock of practical applications and trends regarding legislation of trusts and analogous institutions.

Trusts Closing

Filippo Nosedà, Partner, Mishcon de Reya LLP and Visiting Professor, King's College London (live)

The closing session will set out a vision for the future of the Convention, with particular focus on how the Convention has impacted non-Contracting Parties and how their interest in the Convention can be developed.

Summary of Trusts Track Outcomes

11. Experts addressed the history and challenges of the HCCH Trusts Convention from the perspectives of practitioners and academics. Examples were provided to illustrate applications of Article 2 of the Convention, clarifying the operation of trusts in certain situations such as merger.⁴ Experts affirmed that the HCCH Trusts Convention remains relevant, especially for jurisdictions that do not have a framework for the institution of trusts.²
12. To foster predictability and wider understanding of the Convention, specific challenges and technical questions were raised, which can potentially be addressed with new guidance on their interpretation. For example, in an attempt to mitigate ongoing scepticism of trusts in civil law jurisdictions, continuing work can be done to provide clarity on the nature of trusts.³ Recent case law developments may deviate from a traditional approach to trusts, which involve having legal title in the hands of a trustee and equitable ownership in the hands of the beneficiaries.⁴ Because of this situation, the experts agreed that the concept of equitable ownership could be clarified.⁵ They were also of the opinion that further work could be undertaken to examine and account for the use of trusts in digital finance.
13. Experts discussed the duties and rights of the trustee, noting that it may be helpful to define the role of the trustee and include a list of fiduciary duties that the trustee must be held to, and upon which they stand to be sued for in event of a breach of trust.⁶
14. Article 7 of the Trusts Convention identifies an applicable law that is “most closely connected” to the trust when no applicable law has been chosen. Scholarship and jurisprudence have disagreed in some instances about whether Article 7 should be used to identify a law under which the trust is valid.⁷
15. One expert provided insights on trusts within the Arab world, noting that certain jurisdictions have introduced the trusts concept via direct enactment of trusts laws, and others had used a hybrid approach with foundation structures as a mechanism to hold assets.⁸ Thus, they felt that there is potential to increase the Convention’s membership in this region.
16. Similarly, experts identified a growth of recent civil law initiatives in jurisdictions such as the People’s Republic of China, Hungary, Israel, Japan, Korea, Switzerland, and in various parts of Latin America.⁹ These jurisdictions have developed institutions analogous to trusts in the years following the conclusion of the Trusts Convention, and engagement would support a wider understanding of trusts and analogous institutions.¹⁰ Engagement with these jurisdictions may also widen participation in the HCCH Trusts Convention and associated materials.

¹ **DeAnna Beckner**, Attitudes Towards Trusts and Analogous Institutions, on 14 September 2022.

² **Guillaume Grisel**, Attitudes Towards Trusts and Analogous Institutions, on 14 September 2022.

³ **Haykel Ben Mahfoudh**, Opening of the HCCH Trusts Convention Track, on 12 September 2022.

⁴ **Filippo Nosedà**, Trusts Closing, on 16 September 2022.

⁵ *Ibid.*

⁶ **DeAnna Beckner**, Attitudes Towards Trusts and Analogous Institutions, on 14 September 2022.

⁷ **Adeline Chong**, Trends in Jurisprudence Interpreting the Trusts Convention, on 14 September 2022.

⁸ **Haykel Ben Mahfoudh**, Opening of the HCCH Trusts Convention Track, on 12 September 2022.

⁹ **Filippo Nosedà**, Trusts Closing, on 16 September 2022.

¹⁰ *Ibid.*

Agenda: Track on the HCCH Securities Convention

The Convention of 5 July 2006 on the Law Applicable to Certain Rights in Respect of Securities held with an Intermediary (HCCH Securities Convention) entered into force on 1 April 2017. The Convention currently has three Contracting Parties. Switzerland and Mauritius ratified the Convention in 2009, followed by the United States in 2016. The HCCH Securities Convention addresses the results of the transformation brought by the advent of intermediation to the market for securities, as certificates began to be stored with Centralised Securities Depositories and held through chains of intermediaries that debit and credit securities accounts on behalf of investors and other intermediaries.

Opening of HCCH Securities Convention Track

Angelina Kwan, Chief Executive Officer, Stratford Finance Limited (live)

Relying on their experience in the field of securities regulation, the speaker will help chart out a course for the HCCH Securities Convention to grow in relevance in the field of cross-border finance and to anticipate how the advent of distributed ledger technology may further affect application of the Convention.

Reasons to Join the HCCH Securities Convention

Stefania Bariatti, Full Professor of International Law, University of Milan

Michael Huber, Managing Director, Co-Head Equities – Global Markets Legal, Goldman Sachs

Iqbal Moollan, Chambers of Iqbal Moollan (Mauritius) and Radcliffe Chambers (UK)

Looking forward, the advent of distributed ledger applications in capital markets means that securities are now capable of being held, transferred, cleared and settled on a blockchain. This may have implications on the continuing relevance and future increased accessions of the HCCH Securities Convention. Speakers will discuss their jurisdiction's motivations for joining the Convention, their experience on how the Convention has enhanced cross-border certainty in the markets for intermediated securities, take stock of the operation of the Convention, and strategise on how further accessions to the Convention can be achieved.

Negotiable Instruments

Benjamin Geva, Professor of Law, Osgoode Hall Law School, York University

Sagi Peari, Lecturer, University of Western Australia

The contemporary conflict-of-laws rules within negotiable instruments law have originated from flawed premises about the nature of the subject. Furthermore, contemporary rules have left behind the modern development of conflict-of-laws doctrine. The legal scholarship must endeavour to comprehensively challenge the traditional orthodoxy and offer a complete re-examination of the conflict-of-laws rules concerning negotiable instruments.

The Securities Convention and Distributed Ledger Technology

Eva Micheler, Professor, London School of Economics

This session specifically focuses on the intersection of securities and the blockchain. The session will address relevant developments such as: (i) the scope of securities and its applicability to crypto-securities, (ii) the place and legal nature of crypto-assets used as security within civil and common-law states, (iii) the use of blockchain systems with respect to different approaches to direct and indirect investment and protection of legal and beneficial ownership, and (iv) the determination of the respective jurisdiction and applicable law governing various crypto-securities and their ownership.

Securities Closing

Sandra Rocks, Counsel, Cleary Gottlieb (live)

This session sets out a vision for the future of the Convention, with particular focus on how the Convention can impact non-Contracting Parties and how interest in the Convention can be developed.

Summary of Securities Track Outcomes

17. The second track of the CODIFI Conference focused on the HCCH Securities Convention. Experts recounted the history of the Convention’s negotiation and drafting, noting the significant practical need at the time to provide certainty on the applicable law to securities held by intermediaries.¹¹ While the *lex rei sitae* approach was favoured by a number of States, the drafters ultimately devised a compromise approach mixing the “place of the relevant intermediary” rule and a party autonomy focused test examining the account holder and intermediary relationship.¹²
18. Experts discussed the benefits of the Convention for both States and financial institutions. It was agreed that in providing a clear and harmonised answer on applicable law, the Convention provides greater certainty in bankruptcy or insolvency of a counterparty, and enables usage of diverse financial strategies and collateral arrangements.¹³ Compared to alternative solutions, the Convention’s approach provides greater certainty with respect to the position of creditors and other third parties.¹⁴ Such predictability could furthermore attract new foreign business from banks and investors.
19. A way forward for the Convention would be to require greater focus on the part of States to align market practice with the instrument in order to preserve these advantages.¹⁵ On the front of public information, it would be helpful to create informative products to explain how the Convention protects parties and how the instrument provides its benefits.
20. Experts also pointed to case studies in the harmonisation of cross-border trade platforms, noting examples such as the Hong Kong Stock Connect programme and ASEAN Trading Link. These platforms demonstrate that clear agreements on the applicable law and alignment of rules were crucial for success.¹⁶
21. Experts agreed that the Convention may have a role to play within the world of DLT, blockchain, and tokenisation, particularly if the peer-to-peer roots of blockchain were giving way to operation through intermediary-like businesses.¹⁷ Such an evaluation would, however, need to take into account the continuing difficulties of applying a *lex rei sitae* rule to DLT.
22. Experts discussed the possibility of revising conflict of laws rules applicable to negotiable instruments, particularly to ensure that the party autonomy principle could be applied and to take into account how digitalisation transforms core features of negotiable instruments, namely the place of signature and physical possession requirements.¹⁸
23. Finally, experts stated that the Convention may have an impact on cross-border implications of central bank digital currencies (CBDC), which have been in development over the last six years in multiple jurisdictions. The Convention, or an instrument with an analogous framework, may be relevant to solving applicable law and jurisdictional questions with the holding and exchange of CBDCs.¹⁹

¹¹ **Stefania Bariatti**, Reasons to Join the HCCH Securities Convention, on 13 September 2022.

¹² *Ibid.*

¹³ Reasons to Join the HCCH Securities Convention, on 13 September 2022.

¹⁴ **Stefania Bariatti**, Reasons to Join the HCCH Securities Convention, on 13 September 2022.

¹⁵ *Ibid.*

¹⁶ **Angelina Kwan**, Opening of HCCH Securities Convention Track, on 12 September 2022.

¹⁷ **Eva Micheler**, The Securities Convention and Distributed Ledger Technology, 15 September 2022.

¹⁸ **Benjamin Geva and Sagi Peari**, Negotiable Instruments, on 14 September 2022.

¹⁹ **Angelina Kwan**, Opening of HCCH Securities Convention Track, on 12 September 2022.

Agenda: Track on the HCCH Principles on Choice of Law in International Commercial Contracts

The HCCH Principles on Choice of Law in International Commercial Contracts are the first “soft-law” instrument of the HCCH, designed to promote party autonomy in international commercial contracts. Since their adoption on 19 March 2015, the HCCH Principles have served as a model for national, regional, supranational or international instruments, have been used to interpret, supplement and develop rules of private international law, and have been applied by courts and by arbitral tribunals, meeting the goals established in the Preamble of the HCCH Principles.

Opening of the HCCH Principles Track

Daniel Girsberger, Professor for Private, Business, Private International, Procedural and Comparative Law, University of Lucerne

Examining the HCCH Principles from a practical perspective, the keynote speaker will go over the origins of the instrument and present what the Principles are and what they are not. This session will also feature an interview discussing the works of the Working Group, the innovative elements in the Principles, and how they can be useful in arbitration. The keynote will outline what could be the future in expanding the legal framework on the choice of law in international contracts. This video is supported by Agatha Brandao de Oliveira.

Opening Message of AALCO

Kamalinne Pinitpuvadol, Secretary General of AALCO

Opening Message of HKIAC

Mariel Dimsey, Secretary-General of Hong Kong International Arbitration Centre

Implementation of the HCCH Principles on Choice of Law

Marcos Dotta, Director of International Law Affairs, Ministry of Foreign Affairs, Uruguay
Yael Weiner, Senior Director (International Law), Office of the Deputy Attorney General, Ministry of Justice, Israel

The HCCH Principles continue to be used as a model or inspiration for interpreting choice of law regimes at national level, including via case law, as well as for the modernisation of national laws, for example, in Paraguay and Uruguay. The HCCH Principles are now being considered by Mozambique in its ongoing reform of the law on international commercial contracts. From the viewpoint of policymakers, this discussion will explore how the HCCH Principles influence national and regional choice-of-law regimes.

The HCCH Principles in the Modernisation of National and Regional Laws

Yuko Nishitani, Professor, Graduate School of Law, Kyoto University (live)
Anél Stegmann, Manager, Legal Advice, Paratus Telecommunications (PTY) Ltd

Many initiatives have been undertaken at the regional level with a view to harmonising choice of law rules in international commercial contracts in their respective regions, such as the Asian Principles of Private International Law in Asia and the OAS Guide on the law applicable to international commercial contracts in the Americas. This session will examine recent usage, refinement and development of choice of law rules at the national and regional levels.

The Role of the HCCH Principles in International Commercial Dispute Resolution

Giuditta Cordero-Moss, Professor, University of Oslo
Richard Frimpong Oppong, Professor of Law, California Western School of Law
Lauro Gama, Adjunct Professor, Department of Law at the Pontifical Catholic University of Rio de Janeiro
Guojian Xu, Dean, School of International Law, Shanghai University of Political Science and Law / Senior Partner, SGLA Law Firm
Ning Zhao, Senior Legal Officer, HCCH

The Principles were born as a soft law instrument to be used by different stakeholders, including legislators, judges, scholars, and the arbitration community. This session explores the key influence of

the principles on these stakeholders all over the world and highlights future areas of work for the HCCH, particularly, the development of new instruments dealing with applicable law in the absence of choice by the parties and the protection of weaker parties.

The HCCH Principles and the Digital World (French Session)

Les Principes de la HCCH sur le choix de la loi applicable sont-ils adaptés au monde numérique ? /

Are the HCCH Principles on Choice of Law adapted to the digital world?

Marie-Élodie Ancel, Professor, Université Paris-Panthéon-Assas

Florence Guillaume, Professor, Université de Neuchâtel

Geneviève Saumier, Peter M. Laing Q.C. Professor of Law, McGill University

Compte tenu des enjeux économiques mondiaux, tout texte qui porte sur les contrats commerciaux internationaux devrait être adapté aux récentes évolutions du monde numérique : l'intermédiation du commerce électronique par des plateformes transnationales et le développement d'applications de la technologie du registre distribué (blockchain, smart contracts...). Les Principes de La Haye apportent-ils une réponse suffisamment adaptée à ces évolutions ?

Given the global economic stakes, any text dealing with international commercial contracts should be adapted to recent developments in the digital world: the intermediation of electronic commerce by transnational platforms and the spread of applications of distributed ledger technology (blockchain, smart contracts...). Do the HCCH Principles adequately address these developments?

Principles / Special Topics

The role of party autonomy in international commercial contracts

David Goddard, Judge, High Court and the Court of Appeal of New Zealand

Ning Zhao, Senior Legal Officer, HCCH

The interaction of the HCCH Principles on Choice of Law and of the CISG in promoting party autonomy

Luca Castellani, Legal Officer, UNCITRAL

These sessions focus on party autonomy within the current PIL framework. On one hand, Goddard and Ning discuss on the impact of the 2015 principles and other HCCH instruments in New Zealand, with Goddard being favourable to NZ's adhesion to said instruments. On the other hand, Castellani focuses on the positive effect of the 2015 principles, particularly, Article 3, for the use of UNCITRAL's CISG in international contracts.

Principles Closing

Symeon Symeonides, Alex L. Parks Distinguished Professor of Law, Dean Emeritus, Willamette University

Empirical evidence shown by the speaker demonstrate the importance of the Principles for various stakeholders ranging from academics to arbitrators, acknowledging the relevance of the work at the PB. Drawing from those insights, Symeonides proposes the creation of a new instrument by the HCCH on the applicable law in the absence of choice and the protection of weaker parties, while pondering on the adequacy of Article 3 of the current principles.

Summary of Principles Track Outcomes

24. The third track of the CODIFI Conference discussed the HCCH Principles on the Choice of Law in International Commercial Contracts. Experts addressed the implementation of the Principles, highlighting their application and incorporation in a variety of national contexts and their endorsement by arbitration associations.²⁰ They characterised the Principles as an international code of best practices for commercial contracts and encouraged their use and reference by legal stakeholders at all levels.²¹
25. Experts agreed that the overarching goal for the Principles is to promote party autonomy, as the parties' power to determine the law governing the contract enhances certainty and predictability. While not a "hard law" instrument of the HCCH, further promotion and work can lead to wider acceptance of the Principles, strengthening global legal harmonisation. Such an approach also reinforces party autonomy principles in instruments including the *United Nations Convention on Contracts for the International Sale of Goods*.²² Further work on the Principles could consider the scope of party autonomy and the reasonable limitations that can be placed on it.
26. Experts provided several recommendations concerning the way forward for the Principles. For example, they recommended examining whether the Principles could address contracts in the absence of an express choice of law by the parties.²³ Further, they believed that it would be helpful to clarify the line between commercial and non-commercial contracts and to provide choice-of-law guidance for non-contractual issues.²⁴ While some jurisdictions accept a choice of non-State law, most other jurisdictions accept choice of non-State law only in arbitration, not in litigation.²⁵ There is potential for the interpretation of the Principles to be broadened to accommodate a choice of non-State law, for example to better account for religious law.
27. Experts found that the Principles could be relevant to the growth of the digital economy. Clarity on choice of law would be crucial in the digital context, as the parties' choice would be an important consideration when circumstances could make it difficult to localise contracts in one State.²⁶ Experts considered the potential application of the Principles to novel issues such as smart contracts based on DLT systems and for transactions such as cross-border transfers of data, which remain largely subject to different national laws.²⁷

²⁰ **Symeon Symeonides**, Principles Closing, on 16 September 2022.

²¹ **Marcos Dotta**, Implementation of the HCCH Principles on Choice of Law, on 13 September 2022.

²² **Luca Castellani**, Principles/ Special Topics, on 15 September 2022.

²³ **David Goddard**, Principles/ Special Topics, on 15 September 2022.

²⁴ **Symeon Symeonides**, Principles Closing, on 16 September 2022.

²⁵ **Yuko Nishitani**, The Principles in the Modernisation of National and Regional Laws, on 14 September 2022.

²⁶ *Ibid.*

²⁷ **Florence Guillaume**, Principles and the Digital World (French Session), on 15 September 2022.

Agenda: Track on Digital Economy “Frameworks”

Distributed ledger technology (DLT) applications are decentralised and operate across traditional jurisdictional borders. Therefore, connecting factors that relate to traditional geographical locations may not be of relevance. Moreover, transactions within the DLT network may be immutable and automated to a high degree. While these characteristics may allow for greater resistance against certain forms of tampering, they also may disrupt existing legal frameworks and complicate the exercise of rights of asset holders in a DLT system. What private international law issues will arise from the use of DLT?

Opening of the Digital Economy “Frameworks” Track

Andrea Bonomi, Professor of Comparative Law and Private International Law, University of Lausanne

The keynote speaker will outline the primary challenges of private international law arising from the growth of DLT applications. The speaker will discuss how the HCCH can contribute to improving legal certainty around DLT through its normative work, developing legal frameworks that address matters of jurisdiction, applicable law, recognition and enforcement, and cooperation.

How is Applicable Law Best Determined – By Asset, System or Transaction?

Sarah Green, Law Commissioner for Commercial and Common Law, Law Commission of England and Wales

Kirsten Henckel, Assistant Professor, University of Groningen

Matthias Lehmann, Full Professor, University of Vienna

Kelvin Low, Professor, National University of Singapore

Loi applicable: détermination par actif, par système ou par transaction ?

Mehdi El Harrak, Lecturer in law, University of Lausanne

Anne-Grace Kleczewski, Legal Counsel / PhD Researcher, Bonnard Lawson International Law Firm / UC Louvain

Emeric Prevost, University Assistant, University of Vienna

David Sindres, Professor of Private Law, University of Angers (France)

Two sessions, in English and French, will discuss how the applicable law can or should be found with respect to a cross-border blockchain platform and the transactions and relationships that it enables. The sessions will focus on factors such as assets created or stored in these systems; agreements concluded or executed with these systems; and operational or management structures of these systems (i.e., decentralised autonomous organisations). The sessions will also break down varying design choices underlying specific blockchain technologies, particularly where this leads to illustrations of how applicable law may change depending on the nature of the DLT system in question.

Characterising Relationships Between Asset Holders and Exchanges

Louise Gullifer, Rouse Ball Professor of English Law, University of Cambridge

Matthias Haentjens, Professor, Leiden University

This session is a conversation between panellists that examines the nature of the relationship between DLT asset holders and exchanges. Issues include: whether the relationship can be characterised as proprietary, contractual, trust, or other, and what factors may affect this relationship, such as the nature of the assets held and mechanism of holding; the implications for private international law arising from particular characterisations; possible legal and regulatory frameworks governing crypto exchanges; and the enforcement of judgments against the asset holder or the exchange, and implications stemming from bankruptcy of holders and exchanges.

UNIDROIT Digital Assets Project

Hamza Hameed, Legal Consultant, UNIDROIT

Current work at UNCITRAL

Alexander Kunzelmann, Legal Officer, UNCITRAL

PIL & DLT: What Challenges Lie Ahead?

Florian Heindler, Assistant Professor, Sigmund Freud University

Amy Held, University Assistant, University of Vienna

Shaheez Lalani, Executive Director of the LL.M. Programme in International Business Law, University of Lausanne

Tobias Lutzi, Junior Professor, University of Augsburg

Burcu Yüksel Ripley, Senior Lecturer, University of Aberdeen

This discussion will consist of a moderated panel for comparative law experts to share their reflections on the private international law issues raised by DLT and its applications with a focus on crypto and other similarly omniterritorial assets. The panel will consider general policy issues and issues arising in property and in torts.

Digital Economy Frameworks Closing: Concurrent Design Facility

Gérardine Goh Escolar, Deputy Secretary General, HCCH

Silvan Andermatt, Director, Swiss Finance + Technology Association

Anurag Bana, Senior Legal Advisor, International Bar Association

José Angelo Estrella Faria, Principal Legal Officer and Head, Legislative Branch, International Trade Law Division, Office of Legal Affairs, UNCITRAL

Matthias Haentjens, Professor, Leiden University

Kelvin Low, Professor, National University of Singapore

Carla Reyes, Assistant Professor of Law, Southern Methodist University Dedman School of Law

Teresa Rodríguez de las Heras Ballell, Professor of Commercial Law, Universidad Carlos III de Madrid

Anna Veneziano, Deputy Secretary General, UNIDROIT

The participating experts will engage in a concurrent design exercise to create a rapid prototype of a private international law instrument concerning DLT. Experts will propose, critique, and refine a conceptual framework for the most desirable features that can be feasibly implemented and agreed upon at the international level. Experts are invited to consider the instrument's purpose in answering the core questions of private international law: jurisdiction applicable law, recognition and enforcement, and cooperation, keeping in mind that such an instrument should be technologically neutral.

Agenda: Track on Digital Economy “Relationships”

This track takes a deeper examination beyond fundamental applications of distributed ledger technology (DLT) as a register of transactions or medium for exchange of cryptocurrency and tokens. It seeks to address how users apply DLT and smart contracts as building blocks for new ventures, frameworks, and institutions “on-chain”, such as for governance of enterprises, financial services, dispute resolution, operations management, and sustainable development.

Opening of the Digital Economy “Relationships” Track

Jason Grant Allen, Co-founder/Partner, Stirling & Rose (live)

The keynote will focus on the trajectory of DLT and Web3 as tools for the organisation of society. It will reflect on private international law issues that have arisen in both small- and large-scale projects and it will attempt to anticipate how a foundation of greater legal certainty will create an environment for such projects to realise the promised benefits of DLT and Web3 for individual users—and for the wider global community.

National Perspectives on Adoption of DLT and Web3

Hubert de Vauplane, Associé, Avocat au Barreau de Paris (live)

Youkang Ko, Assistant Professor, Seoul National University

Natalie Smolenski, Head of Business Development, Hyland

In this session, national experts will describe the regulatory and legal developments in their home jurisdictions concerning DLT, fintech, and the digital economy as a whole.

Blockchain-Based Dispute Settlement Mechanisms

Pietro Ortolani, Full professor in digital conflict resolution, Radboud University

Ronald Sum, Partner, Baker McKenzie

Federico Ast, President, Cooperative Kleros

Jamilya Kamalova, Researcher, Kleros (live)

This session, combining dispute resolution experts and leaders of blockchain dispute settlement platforms, takes particular focus on how disputes arise—and can be resolved—when a blockchain is involved. The rise of trade, commerce, and organisational governance on the blockchain has necessitated new ways of thinking about resolution of disputes concerning smart contracts as well as assets wholly or partially located “on the chain”.

Computational Law and Smart Contracts

Alexis Chun, Industry Director, Centre for Computational Law, Singapore Management University (live)

This session will discuss applications and features of algorithmic law and smart contracts.

Digital Assets Remedies

Andrew Hinkes, Partner, K&L Gates, Adjunct Professor NYU Law and NYU Stern School of Business

Hin Liu, Lecturer of Private Law, University of Oxford

Carla Reyes, Assistant Professor of Law, Southern Methodist University Dedman School of Law

Decentralised Autonomous Organisations (DAOs)

Karen Teoh, Strategic Initiatives, Kommunity Ventures (live)

Florence Guillaume, Professor, Université de Neuchâtel

Sven Riva, Ph.D. Candidate and Research Assistant, University of Neuchâtel

Morshed Mannan, Max Weber Postdoctoral Fellow, European University Institute (live)

James Wigginton, Senior Associate, Orrick, Herrington & Sutcliffe LLP (live)

In this session, experts will discuss operational and legal issues arising from decentralised autonomous organisations. Issues that this session will address include: the formation and structure of a DAO using smart contracts; the law that can be applied to characterise a DAO as a business entity, and the implications for the management of DAO assets and voting rights; and private international law

challenges arising from DAOs, such as locating the applicable law and recognizing the legal personality of DAOs. It will also cover how new legal instruments, such as model laws, can be used to enable unregistered DAOs to interact with legal systems.

Digital Economy Relationships Closing: Human-Centred Finance and Trade for Sustainable Development

Craig Atkinson, Director, Lexmerca International Trade

Laurence Thébault, Global Manager of Legal Regulatory, BNP Paribas

This closing session of the track builds upon prior sessions concerning the digital economy and its potential to widen access to money, capital markets, and participation in governance. Experts will assess how the digital economy can be leveraged to mainstream sustainability principles within business operations, financial institutions and trade practices—thus furthering the principles of the Sustainable Development Goals.

Agenda: Track on Digital Economy “Redefine”

This track broadly examines innovations in the fintech industry, including specific perspectives and approaches of national jurisdictions regarding digital commerce. It aspires to identify new private international law challenges brought on by the fintech industry and to identify concrete ways that the HCCH can develop normative rules to increase legal certainty and international cooperation to facilitate the growth of digitised commerce and finance.

Central Bank Digital Currencies (CBDCs) & Private International Law

Heng Wang, Professor & Co-Director, Herbert Smith Freehills China International Business and Economic Law (CIBEL) Centre, UNSW Law & Justice, UNSW Sydney

In this session, the speaker will discuss CBDCs focusing on specific private international law implications concerning jurisdiction, applicable law, and cross-border recognition and enforcement of judgments. Speakers will also discuss general principles of CBDCs, compare the applications and use cases of CBDCs with cryptocurrencies and other DLT-mediated assets, and to describe national trends, policies or sandbox projects relating to CBDCs.

Expanded Applications of DLT: Metaverses, Supply Chain, and Fintech

Juliette Asso, Counsel, LALIVE

Laura Azaria, Counsel, LALIVE

Teresa Rodriguez De Las Heras Ballell, Professor of Commercial Law, Universidad Carlos III de Madrid (live)

Tetsuo Morishita, Vice President for Global Academic Affairs, Professor at Sophia University (live)

In this session, experts will discuss the expansions and innovations of Web3, distributed ledger technology, and fintech that represent promising use cases of new technology in the commercial and financial industries—particularly those implicating private international law questions of jurisdiction, applicable law, and cross-border recognition and enforcement of judgments. Specific applications that will be discussed include: applications driven by data and machine learning; the internet of things; regulatory technology services; tokenisation of physical goods for authentication purposes or supply chain management; financial services; and augmented reality and metaverses.

Digital Economy of the Asia-Pacific and MENA Regions

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The session is meant to shed light on digital economy practices in the Asia-Pacific and MENA regions while taking into account existing and anticipated regulations and Islamic finance principles. The objective is to explore how robust regulation may provide advantages and solutions in relation to cross-border challenges that may arise for national economies interested in distributed ledger technology and fintech applications.

Data Embassies: Jurisdiction and Applicable Law

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The recent legislative, political and business developments around the globe associated with the collection, use and processing of data and its privacy requirements strongly indicate that privacy rights have a level of mobility and permanence that is no longer impacted by jurisdictional boundaries. Along with these trends the concept of Data Embassies was established and introduced as part of bilateral agreements for hosting of data and information in foreign state servers while preserving sovereign extensions in the same way as a physical embassy. These developments lead to many questions with respect to the applicable law and establishment of jurisdiction over the data stored and the connection to the location of the data centres and the extension of sovereignty.

Summary of Digital Economy Track Outcomes

28. Three tracks of the CODIFI Conference focused on the digital economy. Experts speaking on these three tracks identified various private international law issues that may benefit from potential future work. These topics spanned issues of jurisdiction, applicable law, choice of forum, party autonomy, recognition and enforcement, and international cooperation mechanisms.
29. There was broadly recognised consensus that the concept of *situs* would pose challenges for a private international law framework concerning digital assets, because it would be technically and legally difficult to identify a location where assets are located. The pseudonymity of users, the immaterial nature of digital assets, and the uncertainty of the location of network nodes increase the difficulty of identifying useful connecting factors. Possible future work concerning core questions of private international law, as well as other specialised areas that would benefit from further research, are provided below.

Jurisdiction and Applicable Law

30. Experts agreed that, in relation to conflict of laws principles for digital assets, a proxy needs to be found to determine their location since they do not possess a physical location. The solution will have to be “good enough” to encompass the majority of cases, while trying to meet people’s reasonable expectations in terms of jurisdiction and applicable law.²⁸ The framework for digital assets may be built on generally acceptable conflict of laws principles and not a hard set of rules.²⁹
31. One proposed party autonomy-focused approach is to have the applicable law chosen by the parties.³⁰ One example, reflecting the draft principles of the UNIDROIT Digital Assets Working Group, is to adopt a “waterfall” of four factors to discern the applicable law—the first consideration would be to apply the law that is applicable to the custodian of the crypto asset, since most crypto assets are held by a crypto exchange or wallet.³¹ Other possible options may be tied to the system on which the asset was created.³² In the absence of explicit choice of law, another alternative approach may rely on the law of the place of characteristic performance.³³
32. When possible, it would be preferable to use existing frameworks (for example, existing insolvency law) rather than developing new connecting factors exclusively for an existing field’s intersection with DLT.³⁴

Dispute Resolution, Recognition and Enforcement

33. Sessions on dispute resolution and remedies described various challenges that could arise depending on the asset and the system in question. For example, the valuation of an asset under dispute could depend on whether it is unique or fungible—this determination could condition whether or not an injunction may be granted.³⁵ Digital assets disputes can be settled through arbitration, including online arbitration. The Hong Kong International Arbitration Centre has observed an increase in cryptocurrency related arbitrations in the last two years, including both

²⁸ **Hin Liu**, Digital Economy Relationships/ Digital Assets Remedies, on 15 September 2022.

²⁹ **Louise Gullifer**, Digital Economy Frameworks/ Characterising Relationships Between Asset Holders and Exchanges, on 13 September 2022.

³⁰ **Emeric Prevost**, Digital Economy Frameworks/ *Loi applicable: détermination par actif, par système ou par transaction?*, on 13 September 2022.

³¹ **Matthias Lehmann**, Digital Economy Frameworks/ How is Applicable Law Best Determined – By Asset, System or Transaction?, on 13 September 2022.

³² **Louise Gullifer**, Digital Economy Frameworks/ Characterising Relationships Between Asset Holders and Exchanges, on 13 September 2022.

³³ **Kelvin Low**, Digital Economy Frameworks/ How is Applicable Law Best Determined – By Asset, System or Transaction?, on 13 September 2022.

³⁴ **Florian Heindler**, Digital Economy Frameworks/ PIL & DLT: What Challenges Lie Ahead?, on 15 September 2022.

³⁵ **Andrew Hinkes**, Digital Economy Relationships/ Digital Assets Remedies, on 15 September 2022.

matters that are entirely concerning cryptocurrency and those in which the collateral is cryptocurrency.³⁶

34. Traditional connecting factors such as place of business or place of habitual residence require parties to be identified, which is not necessarily possible. For example, there may be difficulties in deciding where to initiate recognition and enforcement proceedings of a transaction carried out in a metaverse.³⁷ In relation to disputes, allowing the claimant to bring proceedings before the courts of their habitual residence may be a potential solution.³⁸
35. Given that courts may issue orders compelling the turnover of assets, difficulties that arise may include questions of whether it is possible to enforce a turnover order “against smart contracts”, or how to access digital assets if one of the parties has “lost” their private keys. It remains to be answered whether parties will be excluded from complying with court orders along these lines and whether they may be held in contempt.³⁹
36. There is a need to establish an effective and practical means of execution of virtual assets, with the possibility of a convention on recognition and enforcement of these types of orders.⁴⁰
37. Experts agreed that there exists a gap in cross-border dispute-resolution law, specifically, the absence of a non-institutional set of rules, like UNCITRAL's for commercial arbitration, that will enable any interested party and arbitrator to use in a way that may be partially self-enforced on the blockchain and partially enforceable off-chain.⁴¹

Central Bank Digital Currencies

38. In relation to CBDC, experts considered the legal frameworks and developments that would need to be in place to reliably accommodate digital versions of fiat currency. Trials are already underway in jurisdictions like the People’s Republic of China and the Bahamas, and it is anticipated that they could be used in the future for cross-border payments, e-commerce, machine-to-machine transactions and smart contracts. A private international law framework should be forward looking, with work started on it now rather than waiting until CBDCs have been put into actual practice. Private international law matters that could arise include the recognition and enforcement of judgments in CBDC systems, jurisdiction in relation to intermediaries, and interoperability with existing financial systems.⁴² In addition, more development is needed in legal and regulatory frameworks concerning CBDC data protection and cyber security.⁴³

Non-fungible tokens

39. Non-fungible tokens (NFTs) largely pose the same applicable law challenges as digital assets.⁴⁴ In addition, depending on the implementation of the NFT, it may constitute a receipt of ownership for a linked real-world asset or a fraction of that asset, such as a portion of a digital painting. There are thus special risks associated with NFT trading including poorly formed or non-existent contracts,

³⁶ **Ronald Sum**, Digital Economy Relationships/ Blockchain-Based Dispute Settlement Mechanisms, on 14 September 2022.

³⁷ **Juliette Asso**, Digital Economy Redefine/ Expanded Applications of DLT: Metaverses, on 14 September 2022.

³⁸ **Laura Azaria**, Digital Economy Redefine/ Expanded Applications of DLT: Supply Chain, on 14 September 2022.

³⁹ **Andrew Hinkes**, Digital Economy Relationships/ Digital Assets Remedies, on 15 September 2022.

⁴⁰ **Youkang Ko**, Digital Economy Relationships/ National Perspectives on Adoption of DLT and Web3, on 13 September 2022.

⁴¹ **Pietro Orotolani**, Digital Economy Relationships/ Blockchain-Based Dispute Settlement Mechanisms, on 14 September 2022.

⁴² **Heng Wang**, Digital Economy Redefine / Central Bank Digital Currencies (CBDCs) & Private International Law, on 13 September 2022.

⁴³ **Heba Abdel Monem Hamza**, Digital Economy Redefine/ Data Embassies: Jurisdiction and Applicable Law, on 15 September 2022.

⁴⁴ **Emeric Prevost**, Digital Economy Frameworks / *Loi applicable: détermination par actif, par système ou par transaction?* (French Session), on 13 September 2022.

unclear rights of ownership, and trademark and copyright risks.⁴⁵ Notably, to overcome matters of enforcement relating to blockchain-based assets, a restraining order has been served via NFT.⁴⁶ The characterization of NFTs—whether as property or not—could be studied in relation to potential private international law issues.⁴⁷

Metaverses

40. A metaverse is a decentralised, dematerialised, virtual world in which anonymous avatars are transacting.⁴⁸ In relation to developments in the use of metaverses, one expert noted that off-chain enforcement raises important private international law questions, including pseudonymity concerns and where recognition and enforcement proceedings of a transaction carried out in a metaverse should be initiated.⁴⁹ This expert thought that guidelines and rules that allow for some cross-border certainty and harmonisation between States would be helpful.⁵⁰
41. Another expert noted that determining the applicable law is increasingly important, and perhaps should be regulated by an international treaty.⁵¹ Potential issues in this regard concern due process, incapacity, or the award being contrary to public policy.⁵² This expert noted that the creation of specific solutions relating to jurisdiction, applicable law, and enforcement of metaverse-related disputes need to be based on the specific contours of the metaverse. According to this expert, the use of a metaverse to carry out a transaction is sufficient to make the transaction international, making each transaction subject to the relevant conflict of laws applicable.⁵³

Decentralised Autonomous Organisations

42. Turning to Decentralised Autonomous Organisations (DAOs), experts focused on the difference between regulated DAOs incorporated under the law of a State and “maverick DAOs” lacking any such framework. Questions of private international law concern (i) whether regulated DAOs can be recognised in other States; (ii) whether maverick DAOs have a legal existence in State jurisdictions; and (iii) what law could be applicable to a maverick DAO. Experts also discussed the need for clarity on DAO compliance with securities laws and whether distributions from a DAO cooperative would lead to tax consequences.⁵⁴
43. A prospective DAO Convention could address the law applicable to DAOs and could include the automatic recognition of DAOs that have been validly incorporated, constituted or organised.⁵⁵ This recognition of a DAO must feature recognition of its legal personality and the limited liability of its members, so that DAOs can be utilised as legal vehicles for businesses.⁵⁶ Methods to determine the possible applicable law may rely on the code of the DAO or resort to rules of law that are generally accepted on an international, supranational or regional level.⁵⁷

⁴⁵ **Ronald Sum**, Digital Economy Relationships/ Blockchain-Based Dispute Settlement Mechanisms, on 14 September 2022.

⁴⁶ **Andrew Hinkes**, Digital Economy Relationships/ Digital Assets Remedies, on 15 September 2022.

⁴⁷ **Hin Liu**, Digital Economy Relationships/ Digital Assets Remedies, on 15 September 2022.

⁴⁸ **Juliette Asso**, Digital Economy Redefine/ Expanded Applications of DLT: Metaverses, on 14 September 2022.

⁴⁹ **Laura Azaria**, Digital Economy Redefine/ Expanded Applications of DLT: Metaverses, on 14 September 2022.

⁵⁰ *Ibid.*

⁵¹ **Juliette Asso**, Digital Economy Redefine/ Expanded Applications of DLT: Metaverses, on 14 September 2022.

⁵² **Juliette Asso and Laura Azaria**, Digital Economy Redefine/ Expanded Applications of DLT: Metaverses, on 14 September 2022.

⁵³ *Ibid.*

⁵⁴ **James Wigginton**, Digital Economy Relationships/ Decentralised Autonomous Organisations (DAOs), on 15 September 2022.

⁵⁵ **Florence Guillaume**, Digital Economy Relationships/ Decentralised Autonomous Organisations (DAOs), on 15 September 2022.

⁵⁶ **Sven Riva**, Digital Economy Relationships/ Decentralised Autonomous Organisations (DAOs), on 15 September 2022.

⁵⁷ **Florence Guillaume**, Digital Economy Relationships/ Decentralised Autonomous Organisations (DAOs), on 15 September 2022.

44. One prospective tool in clarifying the law of DAOs is the COALA DAO Model Law, which draws from sources including the OAS Model Act for the Simplified Stock Corporation, the HCCH Trusts Convention, and the UNCITRAL Model Law for Electronic Commerce (1996). The COALA DAO Model Law sets out definitions, formation requirements and limited liability requirements, among other features.⁵⁸

Human-Centred Finance and Trade for Sustainable Development

45. In the realm of digital trade, the complexity of cross-border transactions was recognised to pose challenges in the discernment of applicable rules amidst different domestic legal systems.⁵⁹ Concurrently, because emerging technologies have altered the way in which regulatory authorities, businesses and consumers resolve disputes, the issues of computational law and digitalisation were discussed in the context of advancing the “standardisability” of computable legislation, regulations and contracts to break the silos between diverse actors and commercial systems, including “hard” and “soft-law” instruments.⁶⁰ In this regard, the HCCH 2015 Principles were noted to complement the development of computational law for trade.
46. Concerning the transition towards a more sustainable economy, regulatory instruments were recognised as an important tool to protect consumers and ensure legal certainty. Experts recommended extensive cross-border cooperation to achieve regulatory harmonisation and support the adoption of common minimum standards.⁶¹ Whilst it was noted that Environmental, Social and Governance (ESG) data is non-financial in nature, ESG data was assessed to still be relevant in the examination of the economic sustainability of an activity or project.⁶² Overall, Artificial Intelligence technology was proposed to be a useful tool in the improvement of efficiency and exhaustivity of ESG assessments and risk management, with digital tools observed to support greater financial inclusion by enabling modern financial services to be more widely accessed and utilised.⁶³

Additional Topics and Applications

47. Tort law was discussed in various contexts, particularly as an alternative characterisation to disputes that may not necessarily be characterised as contractual or proprietary. Experts noted that it could be difficult to apply *lex loci damni* with respect to torts on a DLT system, but possible alternatives could rely on the law of the location of the tortfeasor or the victim.⁶⁴ Private international rules on tort could be a useful protocol or annex to an HCCH Convention.⁶⁵
48. Global value and supply chains were identified as fields where DLT has potentially transformative and disruptive uses. DLT could enable transition from linear supply chain models to circular global chains where parties are simultaneously and concurrently interacting with each other, potentially in real-time and with some processes being completely automated. This could create a shift away from complex bundles of contracts composed of bilateral relations. This reconfiguration of supply chains would call into attention the matter of applicable law, the role of contracts, and the impact of automation on allocation of liability.⁶⁶

⁵⁸ **Morshed Mannan**, Digital Economy Relationships/ Decentralised Autonomous Organisations (DAOs), on 15 September 2022.

⁵⁹ **Craig Atkinson**, Digital Economy Relationships Closing: Human-Centred Finance and Trade for Sustainable Development, on 16 September 2022.

⁶⁰ *Ibid.*

⁶¹ **Laurence Thébault**, Digital Economy Relationships Closing: Human-Centred Finance and Trade for Sustainable Development, on 16 September 2022.

⁶² *Ibid.*

⁶³ *Ibid.*

⁶⁴ **Tobias Lutzi**, Digital Economy Frameworks/ PIL & DLT: What Challenges Lie Ahead?, on 15 September 2022.

⁶⁵ *Ibid.*

⁶⁶ **Teresa Rodríguez De Las Heras Ballell**, Digital Economy Redefine/ Expanded Applications of DLT: Supply Chain, on 14 September 2022.

49. Data embassies are institutions holding data that remain under one State's jurisdiction while being hosted in another State's territory. An expert described the national agreements that were executed to develop the legal framework for a data embassy. In such an arrangement, determining the jurisdiction and applicable law would likely be agreed between the parties on a bilateral basis rather than by international agreements.⁶⁷
50. Experts discussed challenges and opportunities related to the digital economy in the Asia Pacific and Arab regions, and noted that the expansion of the fintech industry has been a benefit in terms of job creation, empowerment of women, and providing regulatory sandbox opportunities to test innovations. The speakers agreed that, with some limitations, digital economy and fintech are compatible with Islamic financial laws and Sharia law, driving financial and commercial operations in multiple countries including Bahrain, Saudi Arabia, Malaysia, Indonesia, United Arab Emirates, Qatar, and Kuwait. Legal coordination is needed for cross-border activities such as: determining the allocation of responsibilities for cross-border transactions of CBDCs, determining the governing law when an Islamic digital bank provides financing in another jurisdiction, determining the residential country of a DLT system, and determining which Sharia interpretation should be adopted when Sharia or Islamic jurisdictional issues arise during dispute settlement or arbitration.⁶⁸

⁶⁷ **Laura Kask**, Digital Economy Redefine/ Data Embassies: Jurisdiction and Applicable Law, on 15 September 2022.

⁶⁸ **Heba Abdel Monem Hamza, Umar Oseni**, Digital Economy Redefine/ Digital Economy of the Asia-Pacific and MENA Regions, on 15 September 2022.

Annex II – Recent IP-related Cases in the Digital Sphere

S/No.	Date	
1.	November 2021	Miramax filed a federal lawsuit against Quentin Tarantino for copyright and trademark infringement over the latter's minting of Pulp Fiction NFTs, alleging a likelihood of consumer confusion. ¹ This dispute primarily concerns whether or not the NFT, linked to footage of the film, fell within the restricted mediums for redistribution specified within agreements between Tarantino and Miramax. The suit has since been settled. ²
2.	January 2022	Spice DAO group announced that it had purchased for €2.66 million the "story bible", a physical book for a Dune movie that was never released. ³ A member of the DAO tweeted its intention to "tokenize" the book and mint NFTs before burning the physical copy. ⁴ This episode gained notoriety in film, literature, legal, and cryptocurrency circles as the DAO had apparently mistakenly believed its purchase of the book conferred rights to exploit the underlying intellectual property of the Dune franchise. ⁵
3.	January 2022	Hermès International and Hermès of Paris, Inc. commenced legal proceedings in the US against Mason Rothschild for trademark infringement over a dispute concerning 100 "MetaBirkin" NFTs, a series of pixel-art images depicting a Hermès Birkin bag covered with fur. ⁶ Hermès' main contention was that Rothschild elected to brand and sell his MetaBirkin NFTs in the metaverse, because a Hermès Birkin handbag is a highly valuable asset in the physical world. ⁷ Rothschild has responded that "these images, and the NFTs that authenticate them, are not handbags" but rather artistic critique of the company's use of leather in handbags. ⁸
4.	February 2022	Nike filed a trademark infringement and dilution lawsuit against StockX for selling its "Vault" NFTs using Nike marks without authorisation. ⁹
5.	March 2022	In the United Kingdom, the March 2022 case of <i>Lavinia Deborah Osbourne and (1) Persons Unknown (2) Ozone Networks</i> recognised that "there is at least a realistically arguable case that such tokens are to be treated as legal property over which a proprietary freezing injunction can be ordered". ¹⁰

¹ Miramax LLC vs. Quentin Tarantino; Visiona Romantica, Inc and others, United States District Court Central District of California, Case 2:21-cv-089979, Complaint filed on 16 November 2021, para. 42.

² <https://www.coindesk.com/business/2022/09/09/quentin-tarantino-reaches-settlement-with-miramax-in-pulp-fiction-nft-lawsuit/>

³ <https://www.thegamer.com/dune-spice-dao-nft-copyright-book-movie/>

⁴ <https://www.wired.com/story/nft-cryptocurrency-art-regulation-law/>

⁵ <https://www.wired.com/story/nft-cryptocurrency-art-regulation-law/>

⁶ <https://www.highsnobiety.com/p/hermes-metabirkin-nft/>

⁷ Hermès International and Hermès of Paris, Inc. against Mason Rothschild, United States District Court Southern District of New York, Case 1:22-cv-00384, Complaint filed on 14 January 2022, para. 3.

⁸ <https://www.highsnobiety.com/p/hermes-metabirkin-nft/>

⁹ Nike, Inc v. StockX LLC, United States District Court for the Southern District of New York, Case 1:22-cv-00983, Complaint filed on 3 February 2022, paras. 1 – 4.

¹⁰ *Lavinia Deborah Osbourne and (1) Persons Unknown (2) Ozone Networks* [2022] EWHC 1021 (Comm).

6.	October 2022	In its judgment of <i>Janesh s/o Rajkumar and Unknown Person</i> released on 21 October 2022, the Singapore High Court held that NFTs satisfy the definition of a property right, and noted the growing judicial support for deploying property concepts to protect digital assets. ¹¹
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¹¹ *Janesh s/o Rajkumar and Unknown Person* (“Chefpierre”) [2022] SGHC 264, Grounds of Decision at paras. 59 and 69.