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Digital Assets and Private Law Working Group

First session (remote)
Rome, 17 – 19 November 2020

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SUMMARY REPORT

OF THE FIRST SESSION

(Videoconference, 17 – 19 November 2020)

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1. The first session of the Digital Assets and Private Law Working Group (hereafter the "Working Group" or "WG") took place via videoconference between 17 and 19 November 2020. The Working Group session was attended by 30 participants, comprising of (i) 12 Working Group Members, (ii) 12 observers from international, regional, and intergovernmental organisations, industry, government, and academia and (iii) 6 members of the UNIDROIT Secretariat (the List of Participants is available at Annex II).

Item 1: Opening of the session and welcome by the UNIDROIT Secretary-General

2. *Mr Ignacio Tirado (UNIDROIT)* opened the session and welcomed all the participants. He noted that the UNIDROIT Governing Council decided at its 98th session in May 2019 to include a project in the area of Artificial Intelligence, Smart Contracts and Distributed Ledger Technology (DLT) in the Work Programme of the Institute for the 2020-2022 triennium. He recalled that the project had begun as a joint undertaking with UNCITRAL with a pair of workshops on this topic co-organised in May 2019 and March 2020. Following the approval of the Governing Council at its 99th session in May 2020 to proceed with further refinement of the project's scope, a significant amount of preliminary work to do so was undertaken, including a series of five meetings of an Exploratory Working Group held over the summer of 2020 – the members of which joined the subsequently formed Working Group – and an Exploratory Workshop held in September 2020 on issues related to Digital Assets and Private Law. Thereafter, at its 99th session in September 2020, the Governing Council agreed that the project would focus on Digital Assets and Private Law (hereafter the "project"), authorising the establishment of a Working Group to proceed with the preparation of a guidance document at high priority. He further noted that the Governing Council had recommended that a Steering Committee be established – to be comprised of a large number of stakeholders, including experts designated by the Member States – in order to allow for wider participation, increased transparency, and to provide feedback to the WG as its work progressed. Additionally, in light of the highly technical nature of the subject matter, the WG would be asked to identify external specialists who could be called upon to provide input and share their expertise from time to time. He further emphasised that UNCITRAL was an important participant in the WG and would work closely with UNIDROIT towards the preparation of a taxonomy of legal concepts and terms in the area of Digital Assets and Private Law.

3. *Mr Ignacio Tirado (UNIDROIT) declared the session open*.

Item 2: Tour de table – Presentation of participants and observers

4. *The participants recognised the importance of preparing a guidance document in the area of Digital Assets and Private Law and briefly introduced themselves, highlighting their specific expertise and interest in undertaking this work.*

Item 3: Adoption of the agenda of the meeting and organisation of the session

5. *The WG adopted the draft Agenda as proposed (UNIDROIT 2020 – Study LXXXII – W.G.1 – Doc. 1, available at Annex I).*

Item 4: Election of the Chair of the Working Group

6. *Mr Ignacio Tirado (UNIDROIT) recalled that in accordance with UNIDROIT practice, groups of experts shall, as far as possible, be presided over by members of the Governing Council (cf. UNIDROIT Statute, Article 13(2)).*

7. *Mr Marek Dubovec* proposed to nominate Mr Hideki Kanda, Member of the UNIDROIT Governing Council, as Chair of the Working Group, highlighting his experience with multiple substantive areas

relevant to the project (particularly in the area of capital markets), his previous chairmanship of the Exploratory Working Group which had played an important role in refining the scope of the project, and his familiarity with the work and procedures of UNIDROIT as well as UNCITRAL.

8. *Mr Philipp Paech* seconded the nomination of Mr Kanda, citing his wealth of experience, including as the Chair of the drafting committee for the UNIDROIT Convention on Substantive Rules for Intermediated Securities (hereafter the "the Geneva Securities Convention" or "GSC").

9. *Mr Hideki Kanda was unanimously elected as the Chair of the Working Group (hereafter the "Chair")*.

Item 5: Consideration of matters identified in Issues Paper (Study LXXXII – W.G.1 – Doc. 2)

(a) Scope of the proposed Guidance Document (II; A – B – C)

The subject matter of the project (II. C.)

10. The *Chair* noted the next item on the agenda was the consideration of the substantive matters identified in the *UNIDROIT 2020 – Study LXXXII – W.G.1 – Doc. 2* (hereafter the "Issues Paper"). He opened the floor for discussion regarding the project's prospective scope and drew the WG's attention to the list of questions at para. 46 of the Issues Paper on how digital assets ought to be defined and which kinds of digital assets the project ought to encompass. He noted that the scope could be revisited and refined as the WG progressed in its analysis of the specific legal issues.

11. *Ms Mimi Zou* sought clarification regarding the demarcation between private law and regulation in terms of the project's scope, pointing to the often-intertwined nature of the two. *Mr Ignacio Tirado (UNIDROIT)* clarified that UNIDROIT did not have a mandate to create a regulatory document and that the project would primarily address private law issues which could nevertheless entail certain regulatory aspects. *Mr Luc Thévenoz* noted that regulatory law was produced by specific regulatory agencies and tended to develop much faster, whereas private law developed at a slower pace because it was a product of parliamentary action. Further, certain points dealt with as part of regulatory law were in fact points of private law. Accordingly, he encouraged the WG to take a broad approach and go beyond labels such as "private law" or "regulatory law" to look instead at the merits.

12. *Mr Jason Grant Allen* noted the difficulty in identifying the subject matter before having first carried out the proper analytical work; this explained the careful approach in the Issues Paper to avoid pre-empting any definitions or classifications. He also noted the existence of other on-going projects both within UNIDROIT and at other organisations which could have an impact on the project's work on taxonomy. Yet another challenge stemmed from the presence of terminologies belonging to vastly different disciplines (e.g., technical vs. legal). He remarked that the section on scope was primarily concerned with the question of which digital assets the project ought to examine, how that sub-set of digital assets ought to be circumscribed, and how to find a definition of digital assets which would be interoperable with other relevant definitions. The question regarding transferability at para. 46 was aimed at narrowing the scope of the project. Seeking to draw a parallel with other instruments produced by UNIDROIT which dealt with transferable assets and assets used in commerce, he noted that the concept of transferability generally connoted a "thing" being transferred, whereas in the context of digital assets, depending on the technical system being used, there was perhaps no discrete "thing" being transferred. Other questions could be raised, such as whether certain systems underlying given digital assets had the ability to transfer legal rights.

13. *Ms Carla Reyes* confirmed that the meaning of transferability ought to *"encompass "transfers" that contemplate[d] the disappearance, destruction, cancellation, or elimination of a digital asset and the resulting and corresponding derivative acquisition of other digital assets".* Citing the functioning

of Bitcoin, she emphasised that a function of how a technical system underlying a digital asset worked should not be grounds for eliminating a given digital asset from the scope of the project.

14. *Mr Marek Dubovec* viewed the project as being concerned primarily with two areas of law: property law and commercial law. The first section of the Issues Paper pertained to property law and to other questions such as how to characterise the legal relationship between a digital asset and a real-world asset, and what were the criteria which would determine whether a given asset was amenable to being an object of property law. The questions listed at para. 46 primarily concerned commercial law, considering issues such as those surrounding custody or secured transactions. The ultimate goal being for States to adopt the principles and put them to good use, he suggested approaching the scope questions in slightly different terms when considering property law and commercial law. Consequently, the content of the principles and the commentary themselves could address different things depending on the topic. For instance, on whether the principles ought to "*reflect other criteria to carefully exclude certain digital assets from the scope*", the commentary could be very robust in certain areas to enable a State to make its own decision regarding whether a given asset ought to be amenable to being an object of property law. A tailored approach would allow the project to be more prescriptive with regard to commercial law, while providing extensive commentary without being too prescriptive in the area of property law given that each State had very different property law systems.

15. *Mr Philipp Paech* encouraged the WG to adopt a broad approach (i.e., a descriptive, neutral one) rather than tie the discussion of scope to a term like "transferable" as a criterion which had multiple understandings in different jurisdictions as well as multiple definitions in different areas of law (e.g., regulatory, commercial law, etc.).

16. *Mr Charles Mooney Jr.* noted that the Issues Paper tried to identify a number of questions to narrow down the scope. For instance, whether the concept of control – as a factual rather than a legal matter – could play a role analogous to the concept of possession (para. 44) in the transfer of property. It could be useful to first come up with a common set of criteria for the kinds of digital assets the project would seek to deal with, before entering into deeper discussions surrounding concepts such as transferability.

17. *Ms Elisabeth Noble (EBA)* noted that the Financial Stability Board's (FSB) definition of the term "crypto-asset" was silent regarding the notion of transfer or tradability.[1] In work done by the Financial Action Task Force (FATF) and the Basel Committee, she noted that their definitions of, respectively, "virtual asset" and "crypto-asset" did include the notion of transfer and FATF's definition also referred to tradeability as a separate concept to transfer. Given the lack of international consistency on this point, she suggested avoiding the use of specific terms such as transferability and tradability to delineate the scope of the term to refer to "[digital [asset/token]", at least at an early stage, and to reconsider the need for more specific terms as the work continued to evolve.

18. *Mr Steven Weise (ALI)* agreed it would be best, at an early stage, to avoid the use of specific terms such as 'transferable' to define scope. In the American Law Institute's joint project with the European Law Institute (ELI) on Principles for a Data Economy, he noted they had sought to avoid

[1] Regarding a potential initial 'neutral' definition of 'digital asset', Ms Noble drew the Working Group's attention to the definitions of "crypto-asset" (*a type of private asset that depends primarily on cryptography and distributed ledger or similar technology as part of their perceived or inherent value*) and "digital token" (*any digital representation of an interest, which may be of value, a right to receive a benefit or perform specified functions or may not have a specified purpose or use*) used by the Financial Stability Board which could be considered as points of inspiration to inform a tentative working definition for the purposes of our work, for example: "a digital representation of value or rights, which may be [held/stored] [and traded [TBD]] using [[distributed ledger] or [similar technology]]". She further noted that by virtue of the process of identifying example use cases/contexts from the market and the practical challenges arising as a result of legal uncertainty, one could then further frame the definition as necessary in light of the specific areas/issues of private law to be addressed in the guidance (albeit that may not be necessary as the use cases/contexts may well sufficiently frame the context for the guidance, for example as identified in section D of the Issues Paper).

property law questions in favour of a functional approach. He suggested the project could begin by addressing the more specific questions starting on page 12 of the Issues Paper and could continuously revisit the scope questions as the project progressed. It might be easier to start with commercial law before moving on to property law as the latter – tied to transferability and tradability issues – tended to vary amongst States more than commercial law concepts.

19. *Mr Jason Grant Allen* queried whether the WG wished to exclude from scope certain categories of digital data at the outset (e.g., browser history), noting this project did not concern digital data generally, but digital assets, in particular those with a commercial and financial focus, which explained the reference to the concept of transferability identified by the Exploratory Working Group. He agreed with Mr Weise's point as to the iterative nature of scope setting. He agreed with Mr Dubovec's comments and acknowledged the complexity of comparative property law, while nevertheless emphasising the importance of addressing those questions.

20. *Mr Luc Thévenoz* noted the importance of clearly defining a digital asset and articulating the relevant criteria, whether transferability, control, or exclusivity (i.e., the double spend problem). For instance, personal browser history consisted of digital data which had commercial value but clearly fell outside the project's scope. He understood a digital asset as an asset represented in digital form over which certain persons had a form of exclusive control, with the law becoming relevant when such digital assets were capable of being transferred from one person to another, or hacked, or stolen. Rather than seeking to exclude issues at the outset of the project, he suggested taking a broader approach while bearing in mind the various concepts mentioned in the Issues Paper.

21. *Mr Philipp Paech* concurred with Mr Thévenoz's comments and encouraged the WG to consider the project's larger objective. He pointed to practical issues (e.g., how such assets would be distributed in case of an insolvency) and encouraged a functional approach focused on the outcome the project wished to reach, rather than on specific terms or labels such as transferability, or property questions.

22. *Ms Nina-Luisa Siedler* underscored the importance of clearly distinguishing between two cases: (1) a digital asset representative of a real-world asset which existed independently of that digital asset (sometimes called a digital twin or a digital representation) – noting this could only work if the link with the real-world asset was recognised by the law (i.e., having proper legislation in place which recognised, for example, rules on good-faith acquisition, and allowed the parties to rely on legal rules regarding ownership); and (2) a digital asset which did not represent another asset. In addition to the important question of control over an asset, she emphasised the crucial role played by registries in establishing a safe connection between a given asset and its digital representation.

23. *Mr Klaus Löber (ECB)* concurred with Mr Paech's invitation for the WG to first consider the desired final outcome of the project. He noted that the Issues Paper cited a number of terms, such as control or transferability, which presupposed certain definitions. He invoked a number of key questions, such as whether the project's scope ought to include claims, and whether the definition of digital (as in digital asset) ought to include all electronic accounts. A clear description was needed of what the project wished to examine and he endorsed the proposal that the WG start with a broader approach and thereafter narrow down the scope. On the regulatory front, he noted that the approach being taken was to look at very practical applications of technology in various forms (e.g., proprietary systems, open source blockchains, combinations of blockchain with traditional accounts, traditional systems using digital tokens) before examining the legal underpinnings. He concluded by noting that these practical aspects ought to be addressed and clarified in terms of scope setting before proceeding with an analysis of the underlying legal concepts.

24. *Mr Charles Mooney Jr.* noted that people were continuing to use these digital assets; they were being stolen, were the object of insolvency proceedings, or the object of litigation, and private

law was not able to address these issues in a way that provided satisfactory solutions, hence the need for this project to reflect on these questions.

25. *Mr Jeffrey Wool* encouraged the WG to be ambitious and devise the principles and solutions to the issues referred to by Mr Mooney, and suggested taking a functional approach. He referred to the brief survey "*regarding the variety of approached regarding the 'property status' of electronic data typically found across national jurisdictions in order to identify common problems*" mentioned at para. 46 of the Issues Paper and suggested, as a starting point, undertaking a more granular and detailed survey than suggested (i.e., looking at the role of control, the role of transferability in connection with property status, the role of registration, etc.) in order to establish a solid factual background against which to further examine the relevant concepts at play. He predicted that such a survey would find large gaps in the treatment of the issues being considered in the various legal systems around the world, which would be a strong advocate for a functional approach.

26. *Mr Marek Dubovec* noted there were two techniques for establishing scope for an international instrument: the first was to focus on the asset and its transfer (i.e., United Nations Convention on the Assignment of Receivables in International Trade (New York, 2001) which defined a receivable and assignment thus excluding which rights to payment were not receivables and which transfers were not assignments); the second approach was by providing additional criteria to further limit the scope of the instrument (i.e., UNIDROIT Convention on International Factoring which specified certain activities the parties must do in order for an assignment of a receivable to a factor to be covered by the Convention). He remarked this project appeared to lean more towards the second approach, as the Issues Paper referred to digital assets in the context of commercial transactions, which excluded certain digital data such as images or browser history which were not customarily the object of commercial transactions. Regarding transferability, rather than seeking a specific definition of that term, he noted it was more of a practical question to assist in setting scope (i.e., if a given digital asset could not be transferred, then it could not, for example, be the object of a secured transaction). The commercial activity already limited the scope in terms of the types of digital assets under consideration.

27. *Mr Philipp Paech* favoured an approach based upon a given problem the WG wished to solve. Invoking the principle of contractual freedom – the parties may do as they wished with digital assets – he observed that the need for legal certainty only became important when there was a concrete problem such as a legal dispute or an insolvency proceeding. He cautioned against taking an abstract approach to the definition of a digital asset, noting that the question of whether a given digital asset was property or not was not important in the eyes of the parties who enjoyed the contractual freedom to determine what was acceptable for them. He referred to the work on the Geneva Securities Convention, noting that it began with a series of questions such as whether the investor in an asset could be recognised as having an economic interest in said asset in case of an insolvency, and he encouraged a similar approach for this project.

28. The *Chair* agreed with Mr Weise that scope setting could be an iterative process as specific issues were examined. He noted that the focus was on those categories of digital data which: (i) had an economic value, (ii) were the object of exclusive control, and – where that caused legal issues (iii) were transferable. Transferability or tradability were functional notions; in the case of securities, the assets did not necessarily have to move from one party to another; the term 'transfer' referred to disposition and acquisition which was linked with debit book entry and credit book entry in relation to a given security account; this was called extinguishment and acquisition instead of transfer in the legal sense, although many civil law systems referred to the transferability of investment securities. While transferability – from which stemmed numerous issues requiring legal certainty – did not have to be the base of the discussion, it should be looked at as a concept. He agreed with Mr Paech that it was important to consider the project's desired outcome, which was ultimately to reduce legal uncertainty in the area of private law. Regarding so-called native digital assets (e.g., Bitcoin or Ethereum), while academic economists continued to debate why certain forms of digital data had

value and others did not, in the real world, people continued to trade these digital assets and litigate over them, creating a clear need for legal certainty. He queried whether the data contained in certain registries such as land registries was also part of the project's scope, noting there were specific legal rules already dealing with these kinds of book entries, including the Cape Town Convention on International Interests in Mobile Equipment (hereafter the "Cape Town Convention"). In the case of intermediated securities, the book entries were data, which could be digital – being the debit and credit entries to the security account maintained by the intermediary – but as there were specific legal rules in this regard, these kinds of data were outside of the project's scope.

29. *Ms Mimi Zou* affirmed it would be helpful to conduct a survey regarding the variety of approaches regarding the "property status" of electronic data comprising of digital assets typically found across national jurisdictions in order to identify common problems (para. 46, Issues Paper), noting the Steering Committee could help disseminate the survey to a wide variety of stakeholders.

30. *Mr Jeffrey Wool* supported Ms Zou's comments, noting that a brief survey, including the applicability of transferability and tradability, would be an important starting point before moving beyond national legal systems and definitions. Noting the project's mandate to reduce legal uncertainty and enhance predictability for transactions in digital assets, he predicted that a global survey would reveal the presence of large gaps and inconsistencies in the private law treatment of digital assets and point to the need for a functional and problem-solving approach useful for both common law and civil law jurisdictions which would cover transnational transactions. *Ms Mimi Zou* agreed there was value in conducting a well-designed survey as it would allow for engagement of experts and stakeholders beyond the WG and the Steering Committee from the outset.

31. *Mr Philipp Paech* noted that legal uncertainty regarding the private law treatment of digital assets was undisputed. While recognising that such a survey could provide some inspiration in terms of potential solutions, he noted the inherent difficulty of conducting comparative legal research, particularly in the area of property law. *Mr Steven Weise (ALI)* agreed with Mr Paech, noting that such a survey would require considerable efforts. He encouraged the WG to adopt a functional and commercial approach which would be compatible with a broad range of property law systems.

32. *Mr Luc Thévenoz* raised the question of technology neutrality in relation to scope setting, noting the description of digital assets by the FSB referred to "distributed ledger technology or similar technology" and underlined the importance of determining what distinguished these new technologies from traditional technologies. The *Chair* agreed the question of technology neutrality required careful consideration (i.e., scope needed to be broader than just cryptoassets).

33. *Mr Jason Grant Allen* remarked that the WG could adopt different approaches: the first possibility was to bypass the complexities of national law and decide that digital assets ought to be treated as functionally similar; the second was to create principles which would lead to substantive harmonisation across States in the treatment of digital assets. Private law should provide a series of rules with a cascade of legal consequences. He remarked that thinking about the differences in legal systems – for instance, civil law systems were generally sceptical towards intangible objects being considered as property – could be helpful towards drafting the principles.

34. *Mr Philipp Paech* agreed with Mr Allen's comment and suggested an additional third possible approach: (1) decide that all digital assets should be treated the same way across all jurisdictions; (2) guide States on how to incorporate digital assets into their existing legal systems; (3) articulate the practical problems involving digital assets as well as the desired outcomes which should be the same across all legal systems. He encouraged leaving it to each State to determine how their legal system would achieve the desired outcome rather than dealing with the legal nature of digital assets in each and every legal system, noting this approach represented the highest level of functionality and had the advantage of not requiring that States modify their property law or insolvency law. *Ms Carla Reyes* and *Mr Luc Thévenoz* both supported the approach proposed by Mr Paech.

35. The *Chair* agreed with Mr Paech, noting this problem was also present in the area of harmonisation efforts with regard to intermediated securities; while some States might wish to modify their domestic law or doctrines to meet certain outcomes, others may choose to do so by other means. *Ms Mimi Zou* agreed that the outcome-based approach was sensible and pragmatic, and queried what was meant by outcomes. *Mr Philipp Paech* gave the example of an insolvency where the central bankers were concerned with questions such as whether certain assets were on the balance sheet. Regarding the third approach outlined by Mr Paech, *Ms Nina-Luisa Siedler* noted that in addition to describing the problems and the desired outcomes, providing guidance on a path towards the desired outcomes would also have great value, and she urged the project to keep the option open from the outset. *Mr Philipp Paech* agreed and noted that a problem-solving approach would not preclude the project from providing further guidance on how the desired outcomes could be achieved in practice.

36. *Mr Jeffrey Wool* agreed with Mr Paech's suggestion as useful in seeking to reduce risk and enhance predictability of transactions in digital assets. He also concurred with Ms Siedler's point and suggested that a way to bridge the two approaches could be for the highest-level principles to be problem oriented and for the commentary accompanying the principles to address the path to get from problem to desired outcome.

37. *Mr Charles Mooney Jr.* remarked that it would likely be overly ambitious for the guidance document to determine for States what the best way to reform their system would be, as every State's legal system was unique. He cautioned against focusing too much on harmonisation of the results as opposed to guidance in the areas which needed to be considered. *Mr Philipp Paech* agreed and noted that the right approach was the one which provided the needed clarity and legal certainty, without necessarily prescribing a given path for harmonisation.

(b) Issues to be covered in the proposed Guidance Document (II; D)

Acquisition, disposition, and competing claims (II. D. 2)

38. The *Chair* turned to section II. D. 2 of the Issues Paper dealing with "Acquisition, disposition, and competing claims", referring to the questions found at para. 58.

39. *Mr Jason Grant Allen* noted that the term 'negotiability' presupposed there was physical possession (with the exception of language in the UCC), for instance of a tangible paper instrument which could be handed over. What was needed was a functional equivalent of negotiability, and to determine what was needed from negotiability.

40. *Ms Elisabeth Noble (EBA)* referred to the question of what was required for finality of a transfer of a digital token, noting there was a plethora of different approaches within the European Union, with no efforts so far to harmonise.[2] She noted it would be very helpful to articulate what were the attributes required to demonstrate finality. Referring to Mr Paech's prior point regarding the project's overall approach, she noted that without needing to prescribe given conditions, it was important for States to have a clear idea of what kinds of conditions would be useful. She further noted that referring to invalidity and reversal could also have important added value.

41. *Mr Marek Dubovec* noted that until it was known what kinds of digital assets would be covered, it would be difficult to determine what was meant by negotiability. He noted the UNCITRAL Model Law on Electronic Transferable Records (hereafter the "MLETR") simply recognised that an asset may be negotiable. It served to recognise what was already happening in the marketplace. This project was to ascertain whether certain assets – which have not previously been so – should be considered as transferable. The central question concerned innocent acquisition, (noting that

[2] With the exception of EU law relating to financial collateral, settlement finality and payments where a 'digital token' fell within the scope of the applicable definitions.

protection for innocent acquirers could also come by way of novation), linked with issues like invalidity and reversal of transfers. He pointed to the Legislative Guide on Intermediated Securities as being a potentially helpful model in this regard.

42. *Mr Philipp Paech* agreed with Ms Noble's comments, noting the importance of the term finality, which was not a legal term, but was key in terms of ensuring certain desired outcomes. He drew a parallel to cryptoassets, in which finality was determined by referring to the relevant rules of that system (i.e., DLT, blockchain).

43. *Mr Jeffrey Wool* noted that many of the solutions may ultimately depend on contractual issues linked to the system itself, with choice of law questions coming to the fore. He further noted that the link between the contractual setup and the property aspect also needed to be examined.

44. *Mr Steven Weise (ALI)* noted the apparent consensus regarding the need for identifying desired outcomes rather than specific desired paths to reach those outcomes. The project should embrace recent technological developments and not be bound by traditional rules which required the handing over of a tangible document, without saying in great detail exactly how the finality or negotiability rule needed to be ensured. He further noted the importance of providing general principles to provide finality and predictability to the market participants.

45. *Mr Klaus Löber (ECB)* noted that several new digital assets involved transfer arrangements, which raised a number of questions similar to those seen with regard to intermediated securities, including issues surrounding finality and innocent acquisition. These were not technology neutral and involved some regulatory issues which were probably beyond the project's scope.

46. The *Chair* welcomed comments regarding the contractual aspects, noting these were sometimes obscured behind computer programming. Regarding the question of negotiability and good faith acquisition, he considered that two sets of legal rules ought to be considered: one providing for innocent acquisition; and the other stemming from sets of legal rules such as MLETR where innocent acquisition was not provided for. He further queried what the participants thought about the notion of "control" found at Art. 11, MLETR.

47. *Ms Nina-Luisa Siedler* noted that the use of the term "exclusive control" could be too limiting as there were increasing use cases of shared control (for instance, multi signature arrangements, or where one party controlled the front end and another controlled the keys, but the keys were worthless without the front end). *Ms Louise Gullifer* noted that the word "control" was perhaps not self-evident or should be clarified. The concept of possession has a long history, and in many jurisdictions, possession may be a difficult concept to clearly define. *Mr Steven Weise (ALI)* noted that the concept of "control" was clear enough in a broad sense that it did not need to be defined specifically before the WG could proceed with its work. The *Chair* agreed with Mr Weise's point.

The legal nature of a proprietary connection between digital assets and another asset (II. D. 3)

48. The *Chair* turned to section II. D. 3 of the Issues Paper dealing with "[t]he legal nature of a proprietary connection between digital assts and another asset" and drew the WG's attention to the questions found at para. 60.

49. *Ms Mimi Zou* referred to the question regarding the accuracy of using terms such as 'token' and 'coin' for the principles and urged caution in using technical terminology (which could have a different legal meaning) in a manner so as to preserve accuracy. *Ms Elisabeth Noble (EBA)* encouraged keeping the terms as neutral and un-emotive as possible (i.e., not coins). She noted that in the international sphere, 'assets' was the term more often used, but 'tokens' were perhaps the more neutral term. *Mr Klaus Löber (ECB)* agreed with Ms Noble's comments encouraging the

group to avoid emotive terms such as 'coins' (as they could be misleading) and instead use neutral, descriptive terms. Regarding the term 'token', he noted that it was neutral and usually referred to a container, but it could be redefined if needed. Regarding the question of linkage between a digital asset and another non-digital asset, he queried which kind of regime was preferable: the two assets being analysed separately or as one single asset.

50. *Mr Jeffrey Wool* referred to the question regarding the link between a digital asset and "other assets" outlined in para. 64 of the Issues Paper, noting it was a good illustration of the larger discussion as to whether the project should only seek to identify problems and desired outcomes, or additionally provide indications as to the best ways of resolving the practical problems. He queried whether there was a consensus amongst the WG that rights in the digital asset ought to affect the rights in the linked or underlying 'real-world' asset (referring to para. 62), and, if so, how that desired outcome could be reached. He further made a stylistic point regarding the highly technical language in footnote 11, noting that a more common-sense description might be needed.

51. *Mr Charles Mooney Jr.* noted that much work was required on the issue of "digital twins", where the goal of a system might be to effect the transfer of a digital asset together with the transfer of another accompanying asset; in this regard, he queried whether all aspects of the rights in the digital asset transferred or mirrored exactly the status of the rights in the other asset. The key question to provide guidance on was: with regard to a law governing proprietary rights in a digital asset, what should that law say about the other assets which were 'linked' or 'tethered' to that digital asset. While the project's advice on digital assets could go beyond advice on a law on digital assets and seek to give advice on how to achieve the desired outcomes, he noted that it could not realistically provide advice on every other related area of law (e.g., law of intangibles, rights to payment, etc.), so that even if comprehensive advice could not be provided for this reason, important guidance could be given regarding the relationship between the digital asset and other assets.

52. *Ms Louise Gullifer* agreed that while the WG could not write a treatise on all points of law involved, where a digital asset was linked to an asset outside of the blockchain, there was a need to take account of the link with that outside (or off-chain) asset. She noted there were two methods for seeking to explain or understand the link between the digital asset and the other asset: (1) via a similar analysis as a negotiable instrument or document of title link (i.e., viewing the technical system underlying the digital asset as akin to a negotiable instrument or document of title), and (2) via legislation which would recognise the technical system in question as a registry for transferring assets like shares, commodities, etc., in which case the question shifted to focus on another issue, being how much specific legislation would be required to make that register root of title, or, in the absence of such legislation, to what extent the technical system was recognised as a private register and to what extent it could be considered as best evidence of root of title so that parties could rely on it despite the fact it was not a legislative root of title.

53. *Ms Mimi Zou* remarked that the questions surrounding the issue of "digital twins" (or tokenisation) were crucial and that international guidance would be very helpful, especially considering the increasing economic importance of these technologies and the potential for intense competition between countries seeking to attract investment and economic activity through the use of these types of assets.

54. *Mr Marek Dubovec* noted the complexity of the examination of property rights, in particular in the context of earlier discussions regarding what the project could realistically achieve. Pointing to a number of useful examples given in paras. 59 and 62 of the Issues Paper, he noted the need for more granularity in the examination of property rights implications. He gave two examples of the notion of reification of rights in a document: the first concerned goods deposited into a warehouse; while the transfer of the warehouse receipt entailed the transfer of the goods themselves, the goods continued to be an asset in the warehouse (e.g., the goods could be seized, or one could take a secured interest in the goods, etc.), separately from the related warehouse receipt. The second

example was that of a promissory note, or right to payment, whereby the promissory note suspended the obligation to pay (independent from the promissory note), so the promissory note was the asset itself. Depending on the applicable scenario, a different kind of analysis may need to be applied. For instance, depending on whether the token in question was held directly or by a third-party custodian who held the assets on behalf of whoever was deemed to be in control of the token, there were different packages of rights and obligations involved. When transferring a warehouse receipt or a document of title, the transferee required three things: (1) ownership of the document, (2) ownership of the goods, and (3) obligation of the warehouse to deliver the goods to whoever controlled the token. He finally remarked that the term "link" between assets was too broad; citing the example of intellectual property linked with a given asset, he noted that the transfer of the asset in question did not automatically entail the transfer of the related intellectual property. He suggested the use of terminology other than linkage. The *Chair* explained that the term link referred to the value of the digital asset or digital data which was dependent on the value of another asset, and was intended as a functional notion rather than a legal one.

55. *Mr Philipp Paech* noted the discussion surrounding link was paradigmatic of the distributive nature of property law and insolvency law, which were ultimately concerned with the question of determining who was the rightful owner of a given asset. Accordingly, clear and hard choices were required as to who would "win" in a given situation. As the WG would be called upon to make prescriptive choices (e.g., decide that the real-world asset should "win" over the digital twin, or vice versa), he urged that care be taken to ensure consistency and coherence in the logic behind the various decisions being made as to where the assets should end up.

56. *Mr Luc Thévenoz* queried whether defining the link as deriving value from another asset (citing the example of a financial derivative which was a contract whose value derived from another asset) was not too vague. Regarding the notion of digital twins, he noted the importance of differentiating the substance from the container, citing three situations: (1) containers which were empty but had value because people wanted to buy or hold them (e.g., Bitcoin); (2) objects like bonds or shares (securities or negotiable instruments) which used to be paper and which were now a token or a record in the DLT, and which he viewed not as two separate assets, but rather as a record (registered in the DLT) of claims against the issuer, of personal rights; (3) tokens with links to off-chain assets such as real estate (which traditionally could not be linked under Swiss law), in which case there were perhaps two assets, such as the case of a warehouse receipt which did not represent ownership of the goods but represented a claim against the warehouse master; when the claim was transferred it was a transfer of possession but not of ownership. He underscored the importance of not confusing a record in itself with an asset, as it may simply be a record or a means of transferring an asset (whether tangible or intangible). The *Chair* agreed with Mr Thévenoz's conclusion, while noting it was important for the project to be broad in setting its scope, especially at the outset.

57. *Ms Louise Gullifer* noted that the second classification given by Mr Thévenoz exemplified the difficulty of the question facing the WG as to how to characterise the record on the blockchain. Citing the example of securities or negotiable instruments in paper form, she noted that the common law would conceptualise them as two things (tangible vs intangible). She noted that some jurisdictions continued to think of digital twins as one asset representing another asset.

58. *Mr Charles Mooney Jr.* noted that a drafting committee was working on the provisions of the Uniform Commercial Code (hereafter "UCC") dealing with a digital asset carrying with it a right to payment which was not evidenced by an instrument, and that this could possibly be shared with the WG before its next meeting. The *Chair* thanked Mr Mooney for sharing that information.

59. The *Chair* observed there were differences of opinion between civil law and common law systems as to the project's methodology and intended aims. He sought further input regarding the

question as to whether a brief survey regarding the treatment of digital assts in various jurisdictions ought to be undertaken.[3]

60. *Mr Ignacio Tirado (UNIDROIT)* remarked that while there were many existing documents which described the technology in detail, the instrument to be produced by the WG ought to conduct an abstract conceptual analysis as to the nature of digital assets and how they could be transferred or pledged or subject to security rights based on their nature (which was more akin to a civil law type approach). He emphasised that the instrument needed to be useful and relevant for both civil and common law traditions, requiring an analysis relevant to both. Regarding the taxonomy, he noted that the Secretariat would be happy to assist with conducting a stock-taking exercise of what already existed out there and encouraged the WG to go beyond a mere classification of digital assets and conduct an analysis to come up with conceptual definitions of different types of digital assets.

61. *Mr Alexander Kunzelmann (UNCITRAL)* noted that UNCITRAL had conducted a preliminary survey of how data was treated as an object of property in a document that the UNCITRAL Secretariat had submitted to its Commission earlier that year.[4]

62. *Ms Louise Gullifer* cautioned that definitions for regulatory purposes may not be helpful or relevant for a private law focused project. She noted it could be helpful to examine the different national legislations (and translations thereof) regarding the treatment of digital assets from a property law perspective. *Ms Mimi Zou* agreed. *Mr Reghard Brits* noted that the members and observers participating in the WG constituted a good starting point in terms of conducting a survey of how digital assets were treated in different countries.

63. *Mr Steven Weise (ALI)* suggested that before undertaking the survey, a sub-group could draft a list of specific questions or characteristics. He noted it could be very useful but must be well targeted in order to produce helpful results as there was a lot of ambiguity in this area (being at the intersection between contract law and property law).

64. *Mr Marek Dubovec* noted that surveys had been used successfully in previous UNIDROIT projects, citing the example of the MAC Protocol, and pointed to the existence of UNIDROIT's network of correspondents which provided a wealth of expertise to draw upon.

65. *Mr Philipp Paech* noted that conducting a well-calibrated survey was a very arduous task. Rather than an abstract survey at the outset of the project, he encouraged the WG to first commence its work and then conduct targeted surveys of specific aspects as required. *Ms Mimi Zou* agreed that a targeted survey was the right approach.

66. *Ms Gérardine Goh Escolar (HCCH)* noted that the HCCH had initiated a preliminary study of national/domestic initiatives concerning the digital economy with private international law implications; it was expected to be ready ahead of their Council on General Affairs and Policy (March 2021).

67. *Mr Bob Trojan (NatLaw)* drew the WG's attention to the Global Blockchain Business Council's (GBBC) recently released Global Standards Mapping Initiative which was a massive survey including many sources and a list of which countries were regulating digital assets.

68. *Ms Carla Reyes* noted there was a mobile app available from the law firm Perkins Coie called CoinLaw that surveyed the landscape of laws in jurisdictions all over the world. She also noted that

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[3] Questions could include what the requirements for effectiveness against third parties were with regard to a transfer of Bitcoin or Ethereum from one person to another in a given jurisdiction, or what remedies would be available if a custodian holding digital assets became insolvent.

[4] UNCITRAL, "Legal issues related to the digital economy – data transactions", Fifty-third session, New York, 6-17 July 2020, paras. 22-32, available at: https://undocs.org/A/CN.9/1012/Add.2.

Stanford Law School's CodeX RegTrax was in the process of developing a comprehensive survey of laws related to digital assets, although it remained at an early stage.

69. *The Chair summarised the discussion noting that the WG had agreed to commence work in order to identify any specific issues for targeted surveys (if needed). In the meantime, the Secretariat could begin collecting the results from existing relevant surveys in this area (e.g., UNCITRAL, etc.)*.

The provision of digital asset custody services (II. D. 5)

70. The *Chair* turned to section II. D. 5 of the Issues Paper relating to "The provision of digital asset custody services" and drew the WG's attention to the questions found at para. 68.

71. Referring to the following question: *"What relationships among an owner, the relevant digital asset, and another person amount to "custody" for purposes of establishing a legal relationship of a particular type?"*, *Mr Philipp Paech* sought clarification as to the purpose of the question (e.g., whether to determine ownership, establish liability, standard of care, or other).

72. *Mr Charles Mooney Jr.* noted two possible answers: 1) for regulatory purposes, in order for a State to identify which person(s) it wished to regulate as purporting to hold property on behalf of other persons; and/or 2) for insolvency purposes. The relevant question to ask in the context of insolvency was: where a digital asset was held by a party not the owner and that holding party became insolvency, whether the owner could deal with the asset on their own, or whether they needed to request permission at the insolvency proceeding to do so; if so, the holding party should be considered to be a custodian and there should be rules to protect the interests of the owner in case of the custodian's insolvency.

73. *Ms Mimi Zou* noted the presence of contractual issues as well, especially in US case law, and queried whether the contractual language involved in custody should be considered by the WG.

74. The *Chair* explained that there was usually a contract for custody between the client and the custodian; in placing a tangible asset for deposit with the custodian, if said custodian became insolvent or took the tangible asset away, there could be relief and remedies available to the client through contract law. If that tangible asset remained in the hands of the custodian, the client had a claim to that tangible asset. He referred to the case in Japan of a custodian holding Bitcoin for a client when a hard fork occurred (leading to the creation of a new asset from an old one) – in this case, the Japanese court did not recognise a proprietary claim for the new asset, while noting that there was a contractual claim.

75. *Ms Louise Gullifer* noted the need for the project to identify which kinds of custodians of digital assets were being discussed (e.g., from a simple software wallet provider to a custodian which placed the digital assets on its own books). Secondly, she queried which kind of principles the WG wished to articulate with regard to how the custodian ought to behave and what duties it owed, noting that one possibility was to establish a set of minimum standards, similar to the Geneva Securities Convention, in which it was said there would be a contract but there were minimum standards which the contract needed to respect.

76. *Mr Marek Dubovec* noted that the area of custody brought together regulatory, commercial, and contract law. He noted that the Issues Paper was focused on the question of defining custody and that further elaboration was required to address a number of other important legal issues. For instance, regarding regulatory law, he noted that IOSCO (International Organization of Securities Commissions)[5] had done work identifying various risks relating to cryptoasset trading platforms.

[5] See, for example, IOSCO, *Issues, Risks and Regulatory Considerations Relating to Crypto-Asset Trading Platforms*, Final Report, February 2020, available at: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD649.pdf.

Some of those risks overlapped with the project's scope, such as safeguarding of digital assets, some were purely regulatory like disclosures and capital requirements, which were outside of scope, and some concerned contractual law, prompting the question as to whether the project should provide practical guidance to parties on how to structure their arrangements. On this last point, he queried whether the project should come up with default rules where they were found to be inadequate or inexistent, or whether it should be left to the parties to decide how to structure their arrangements. Regarding the commercial law component, he queried whether the project should seek to write new rules where existing rules were inadequate or inexistent. He recalled that during the Exploratory Workshop, it was explained that in practice, clients were depositing their digital assets with securities intermediaries, as a result of which a specific regime would apply, meaning there was a body of law which could be made applicable, depending on the circumstances and the digital assets in question. He also agreed with Ms Gullifer that more elaboration was required as to who the custodian was as this was a question which crosscut with a number of other points, including discussions on security interests. He noted that security interests generally excluded financial transactions; the use of movable assets in financial transactions was not covered by the UNCITRAL Model Law on Secured Transactions (hereafter "MLST") and there were custodians which provided custody with respect to futures and options. Finally, he queried what was subject to custody, as these custodians also handled cash (i.e., clients deposited cash with the custodian for the purpose of purchasing digital assets), and whether this aspect should be part of the scope.

77. *Mr Luc Thévenoz* followed up on Ms Gullifer's point, noting that custody was a very broad word which could cover a variety of situations, all the way up to one where a custodian took the assets on its own books, with the custodian having a liability towards the client (the depositor). Referring to the first question on page 17 ("*What relationships among an owner, the relevant digital asset, and another person amount to "custody" for purposes of establishing a legal relationship of a particular type?"*), he remarked that the question needed to be opened up more to identify different formats for custody and the various attendant legal consequences. He considered that one very relevant test (although not the only one) for seeking to ascertain whether a relationship amounted to custody was whether the asset appeared on the balance sheet of the custodian. While not necessarily the focus of the project, he further noted that for regulatory purposes, the risk weighting of assets on balance sheet vs. off-balance sheet was different. He concluded by noting there were many different situations which could amount to custody rather than one single typical custody relationship which the WG should consider.

78. *Mr Philipp Paech* noted two separate discussions: the first concerned the distribution of the assets in case of the insolvency of a custodian, and the second regarded the determination of minimum standards for the custodian. Regarding the first, he noted that in most jurisdictions, absent a specific legal rule, the fallback position was that the assets ended up back on the balance sheet of the custodian. Whereas in England, exceptionally, his understanding of the fallback position was that, by way of contract, the assets in question were removed from the custodian's estate by way of a trust – however, few other jurisdictions followed this approach. Finally, he pointed to other jurisdictions, typically civil law, which had adopted special rules to decree that the asset still belonged to the client and not the custodian's estate. This meant there were many different approaches and models to be found around the world, and that with regard to digital assets, there were also many approaches and models. The question was which approach the WG wished to take, whether: (1) to harmonise (although this seemed to be out of reach); (2) to show how it was currently done around the world; or (3) to show how it could potentially be done.

79. The *Chair* noted that in the US and Japan, in cases of the insolvency of a custodian, parties went to court and litigated these questions which would suggest that the issue was far from settled.

80. *Mr Reghard Brits* echoed Mr Paech's comments and noted that in South Africa, while in practice digital assets were kept in custody, there was a lack of clarity as to whether this was acceptable from a legal perspective. He considered the key question to be whether someone could

be considered as the owner of a given digital asset. He noted that under South African law, it was very rare for an intangible object to be amenable to being deposited with a custodian while retaining ownership (one notable exception being receivables). He therefore considered the main question to concern one's right to the asset, and whether one could maintain a right of ownership over an intangible asset while that asset was under the custody, or under the control, or in the possession, of another party.

81. *Mr Ignacio Tirado (UNIDROIT)* noted that in insolvency the existence of a proprietary right was normally assessed by ascertaining whether the creditor had a proprietary right and could separate the asset or at least claim exclusive rights to the proceeds of the liquidation of the asset; otherwise, it was deemed to be a contractual right. However, the classic proprietary law analysis did not apply in the case of financial assets and financial contracts. As mentioned by Mr Brits, for civil law jurisdictions, whenever assets of a single genus were commingled, ownership was lost and only a claim to receive the same remained. Because of the above-mentioned non-application in the case of financial assets, there was an exception stated by the law which provided a proprietary right or a trust (or equivalent), in order to allow for extraction of the value from the custodian or the intermediary. The classic proprietary law analysis for insolvency did not work in the context of digital assets because it was based on an exception linked to the need for legal certainty, protection of market transactions, and similar considerations. In light of the foregoing, he queried whether all digital assets were to be considered as being in a similar exceptional situation as securities, or whether there were differences, in which case those differences needed to be highlighted.

82. *Mr Charles Mooney Jr.* replied to Mr Tirado's query by remarking that the ultimate details of legal doctrine could vary with some digital assets as compared to the realm of intermediated securities. He referred to the Legislative Guide on Intermediated Securities which set out various models of intermediated holding. Unless the WG were to attempt to seek harmonisation in this area (which was deemed not to be possible in the case of securities), he considered that the project ought to focus, functionally, on situations where the expectations of an investor were that a custodian would protect the assets belonging to the investor (as a general desirable outcome), and then the WG would aim to work through those areas of law which it considered that States needed to address, providing advice and guidance in that direction. He pointed to the Legislative Guide on Intermediated Securities as a good starting point in terms of the methodology as far as providing sound guidance for those areas of law which States needed to address.

83. *Mr Jason Grant Allen* referred to previous harmonisation projects concerning intermediated securities and queried whether some of the principles and the instruments developed might not be applicable to the current project, whether the differences were too great, and if so, whether those differences were due to new forms of DLT-based digital assets, new business models, and/or because certain strategic choices were made in terms of how to frame those previous projects.

84. The *Chair* noted that the majority of cross-border transactions in investment securities (shares, bonds, etc.) took place through intermediaries. He noted that in practice, the holding pattern for these intermediated securities varied from jurisdiction to jurisdiction (e.g., USA vs. China) but the purpose of the transactions was similar (e.g., sale, pledge, etc.) and the investment securities themselves were well defined and understood (e.g., shares of a corporation, corporate bonds, etc.). With regard to custody or pledge, the legal rules were not the same among jurisdictions, thus producing legal uncertainty. The differences in substantive law among jurisdictions meant that choosing applicable law was therefore very important. He further noted that the conflict of law rules (i.e., private international law) were not harmonised (the relevant Hague Securities Convention was not yet widely ratified). The result was that a massive volume of transactions continued to occur worldwide on a daily basis in the presence of legal uncertainty. An attempt was made to introduce harmonisation through the Geneva Securities Convention which provided a minimum amount of harmonised legal rules to help reduce legal uncertainty faced by lawyers, judges, and practitioners. This was followed by the Legislative Guide on Intermediated Securities which included a number of

important points helpful for States to consider when seeking to modify existing legislation or set up new legislation. Regarding the differences between the assets themselves, he noted that the most apparent one was that intermediated securities (such as shares and bonds) were well known and well understood, whereas digital assets were much less well understood. While Bitcoin and Ethereum were relatively known quantities, many other kinds of digital assets were not. This raised the question as to which rules should be applied. If digital assets were found to be similar to intermediated securities, similar rules could be proposed. However, if certain digital assets were found to be very different, then a different approach would need to be adopted.

85. *Mr Charles Mooney Jr.* noted that intermediated securities were approached with the relatively safe assumption that most intermediaries were subject to traditional financial regulation (both of the markets and the market participants), which offered a fairly coherent framework. The products were known and the intermediaries were familiar to regulators. Such certainty was lacking with regard to digital assets. In terms of emphasis, the national regulators in Europe appeared to be most interested in those digital assets which were similar to and seemed to be analogous to intermediated securities, whereas the approach in the USA tended to make the tacit assumption that digital assets might be very different from intermediated securities, for custodian purposes.

86. *Mr Luc Thévenoz* agreed with Mr Mooney and the Chair that the starting points between intermediated securities and digital assets were very different due to the differences in the assets themselves and in the custodians (i.e., intermediaries). Recalling his experience working on the harmonisation projects in the area of intermediated securities, when distinguishing between the different systems, he highlighted the importance of path dependency (i.e., how things developed over time both commercially and legally). Since important investments had been made in the operational structure as well as the legal one, there was naturally more invested in a given way of doing things. This made it more difficult to find points of convergence and identify a way forward since interested stakeholders' thinking was structured by more than a century of legal thinking in the private law realm. This was also accompanied by heavy investment in certain circuits, which all helped to explain why certain countries felt that any changes would threaten their industries. With digital assets, the starting point (at least from the point of public perception) appeared to be Bitcoin and "pure" cryptocurrencies (in which the asset itself was a mere container) which were very different from other assets. He noted that custody of gold and custody of Bitcoin were comparable in the sense that gold had no intrinsic value except that people wanted to buy, sell, and hold it; gold did not, per se, create income (although gold was tangible, and Bitcoin was intangible). He noted that in Switzerland, there was an important tendency towards tokenisation of traditional securities (e.g., physical, uncertificated, or intermediated). Picking up on Mr Mooney's point concerning approaches to regulation, he noted the relative ease for regulators to introduce new measures in comparison with the private law analysis. For instance, in Switzerland, banks and other intermediaries were taking custody of digital assets, and the concern was that those digital assets remained off balance sheet and were set aside and segregated for the clients in cases of insolvency; there was discussion about creating a special licence or a special regulatory regime. Whereas for private law, as there were important distinctions between various branches of law (e.g., property law, personal claims, etc.), in particular in the civil law tradition as compared to common law, what counted were the contents and the containers. This meant that private law needed to start from first principles, as opposed to the regulatory work which could simply take cognisance of the actual existence of immaterial assets which were tokenised. On a positive note, he remarked that (i) digital assets were a recent creation, and, as such, private law thinking on this topic had not yet been fossilised as was the case for intermediated securities, and (ii), from the perspective of operational arrangements, the private law thinking around intermediated securities developed primarily in a domestic framework, whereas digital assets were transnational by their very nature. Given this project was starting earlier in the historical development of these assets, it was less beholden to path dependency. However, the conundrum of how to define digital assets posed an important challenge for private law thinking.

87. *Mr Steven Weise (ALI)* referred to Mr Brits' comment concerning custodial issues, noting that the first issue was to ascertain the nature (outside of the custodial relationship) of ownership or rights in those assets, to subsequently turn to consideration of what were the effects of a custodial relationship on those rights. The answer to the second question depended greatly on the answer to the first. Referring to Mr Tirado's comment on bankruptcy, he noted that in the USA, bankruptcy law determined property law issues by referring to non-bankruptcy law, returning to the first question regarding the nature of the rights in the digital asset. Rather than needing to reach any conclusions regarding the treatment of digital assets under property law in a given legal system, the project could instead consider asking what were the desirable attributes of these relationships and focus on what parties could do with those digital assets and what were their rights.

88. *Mr Marek Dubovec* referred to the query raised by Mr Tirado and noted that one of the major functions of the principles was to provide protection to customers of intermediaries. There was already a set of rules designed for similar assets (i.e., intermediated securities), raising the question as to whether those rules could be adapted to digital assets in general, which would require knowing what those digital assets were (i.e., the discussions on the scope of the project). A further question was to determine how custody worked for digital assets. In this regard, he pointed to the questions found at para. 68 of the Issues Paper (e.g., *"How would multi-signature arrangements be treated?"*) which were aimed at determining precisely that. Answering those questions would help in determining what sort of protections would be adequate or necessary for customers of intermediaries. In the absence of these rules, some general laws would apply. He referred to an Italian bankruptcy case where an intermediary went bankrupt and the clients sought to retrieve their digital assets which were commingled.[6] In the absence of a specific legal regime, the court had to apply the Italian Civil Code which provided for regular and irregular deposit which would apply depending on the nature of the underlying property. The principles to be developed by this project regarding the question as to what was a digital asset, what was custody, and whether it was considered to be a regular or irregular deposit would provide much-needed guidance and contribute to legal certainty. This was but one example of the kinds of questions which the project could usefully address.

89. *Ms Louise Gullifer* noted there were at least two kinds of custody: (1) the custodian took the asset onto its balance sheet; or (2) the custodian was a software providing wallet service, etc. The question remained as to where the line ought to be drawn in determining who was acting as a custodian and who was not.

90. *Ms Carla Reyes* noted that in the American context, there was no standard contract for custodians because they built their services based on which regulatory category they wished to fit in. Some digital asset custodians offered differently structured services in the USA than in other countries for that very reason. While the underlying protocols for digital assets were global, the services offered by custodians could vary quite significantly across jurisdictions (although the software was often centralised), even for the same providers (e.g., Coinbase). She further noted that there was a wide variety of strategies used in offering custodial services of digital assets: some vendors like Xapo operated like banks, holding the assets for the client pursuant to express contracts; others like BitGo provided custody though a multi-sig wallet (software); others were trust companies like Northern Trust which provided services for regulated financial products and had simply packaged their services for digital assets. The US State of Wyoming had authorised banks to voluntarily provide custodial services for digital assets consistent with the SEC's qualified custodian requirements. In summary, there was a very large variety of custodian services offered, and the operational model often depended upon the regulatory category the provider wished to comply with and was also linked to the provider's marketing strategy (i.e., using SEC compliance as a selling point). She did not

[6] For further details regarding the BitGrail case (Decision no. 18/2019, 21 January 2019), see: https://talkingtech.cliffordchance.com/en/industries/fintech/italian-court-rules-that-cryptocurrency-is--property--and-a--mea.html.

observe a large amount of standardisation, neither in terms of operational models, nor in terms of the contracts used, which was due to the service providers finding ways to comply with the regulation in any category possible (oftentimes, the most lenient ones). *Ms Elisabeth Noble (EBA)* fully agreed with Ms Reyes' remarks, noting that the same analysis applied in the EU. *Ms Mimi Zou* also found them very helpful.

91. *Mr Philipp Paech* queried how best to systematise the discussion on custodians, which was ultimately a functional description (i.e., safekeeping of an asset in the non-legal sense). The WG would need to examine the different ways in which this was done, in order to grapple with the problems connected with the insolvency of a custodian. He doubted whether Bitcoin should be the emblematic example used in the analysis undertaken in the project as there were many other kinds of digital assets. Regarding Bitcoin and its use, he noted that much of what was occurring in the markets involved custodians; referring to the insolvency case of *MtGox* in Japan, in which people (i.e., clients) had thought they owned the Bitcoin, but in reality, someone else (the custodian) had control of the Bitcoin, and the clients only had a contractual claim against the custodian. He encouraged the WG to consider what ought to be the outcomes of the proposals regarding how the distribution in case of insolvency ought to be handled.

92. *Mr Ignacio Tirado (UNIDROIT)* queried whether – in light of the different kinds of intermediaries and different models involved in digital assets – the WG considered that it needed to identify which characteristics were needed to define a custodian for the purposes of a standard insolvency treatment of assets in the possession of custodians; and for those who did not meet those criteria, what would be done in case of insolvency. He noted it was clear who was a custodian in the case of securities, but this point remained unclear in the case of digital assets.

93. *Mr Charles Mooney Jr.* picked up on Mr Paech's comments and suggested that the starting point could be to identify an example which the WG unanimously agreed amounted to the kind of custody where the rights of the investor, customer, or client should be protected, and then consider those principles the WG would like States to consider in that scenario, and then relax those criteria to ask whether certain models should be excluded (for example, the provider of a piece of wallet software).

94. *Ms Mimi Zou* supported a practical, forward-looking, and solution-orientated approach to the problem of the insolvency of a custodian. She thanked Ms Reyes for explaining the different types of custodian services available, the variety of which complicated the WG's task. She agreed with Mr Mooney that the end goal was the protection of consumers and investors, while noting that this presented the potential challenge of veering towards the sphere of regulation where regulators were active and which potentially fell outside of the WG's scope.

95. *Mr Steven Weise (ALI)* referred to his earlier comment regarding sequencing and the need to first determine what ownership meant in the digital asset context. He suggested that the WG first agree on some of the fundamental questions surrounding digital assets, such as the property question and come up with a definition of transfer (i.e., whether or not there was a transfer from one person to another) before turning to the discussion of custodianship and arriving at a definition of a custodian and what were the effects of transferring to a custodian.

96. *Mr Luc Thévenoz* noted that the term "custody" was very broad and it was unlikely that agreement could be reached regarding what it meant with regard to digital assets. He queried whether an outcome-oriented approach would not be best, so that rather than starting with custody as a notion, it would be useful to begin with the desired result and determine under which conditions the digital assets must be segregated or set aside in case of bankruptcy.

97. *Mr Jason Grant Allen* queried whether such a functional approach (i.e., the project would develop principles around desired outcomes, such as determining that investors should have rights

in digital assets which were enforceable even against parties with whom they did not have a contractual relationship, and saying they were ring fenced upon the insolvency of a custodian who had some measure of control of the assets) did not risk skirting around legal concepts without engaging with them directly. Recognising that the project could take a number of different approaches, he recommended conducting a conceptual analysis in recognising that the law's received categories and concepts (e.g., *erga omnes* property rights) were the way these digital assets would be implemented in national law, rather than trying to stipulate substantive legal treatment for this novel category of digital assets.

98. The *Chair* referred to the comment regarding the distinction between regulation and private law, noting that regulation determined practice. On the other hand, in the case of the insolvency of a custodian, the insolvency law questions depended on the private law entitlements (i.e., available rights and remedies) outside bankruptcy, which meant that the private law questions needed to be examined and resolved. Regarding the custody arrangements for digital assets, he noted there was a greater variety than in the sphere of intermediated securities, which meant that each type of custodial arrangement needed to be examined, in order to determine what kind of protections were needed for investors. In Japan, investors were aware that the relationship was a contractual one instead of a proprietary one, whereas in other jurisdictions, investors, in practice, as well as for regulatory purposes, owned the digital assets which were in the control of the custodian. As previously discussed, in the case of the custodian who was holding the private key, the client did not hold the private key, meaning that the custodian alone could control or transfer said digital asset, and it was important to determine what happened in case of the custodian's insolvency.

99. *Ms Carla Reyes* suggested a simple case in which a client completely gave up the ability to control/transfer a digital asset, with the custodian solely having that right. The custodian may or may not be contractually obligated not to do anything without the client's instructions.

100. *Mr Philipp Paech* raised a number of queries stemming from the relationship between the different participants in the blockchain system (e.g., Bitcoin or Ethereum): what happened when assets were created; what was the right of access to the economic value of these assets amongst the participants; how were these assets transferred, and what would happen should one of the participants become insolvent. In the context of the custodian discussion, he noted that the WG may wish to also consider the role of nodes in the distributed network system, and the rights and interests of those who connect to those nodes from outside the system.

101. *Ms Carla Reyes* strongly urged against considering the nodes which ran the protocol as an object of study unless those nodes were also offering custodial services. For instance, Coinbase ran a node which was part of the base protocol, but they also offered custodial services to consumers, which was different from what regular nodes did. She noted that in the case of Bitcoin, there were the miners, there were full nodes, and there were the SPV nodes (simplified payment verification nodes) who were direct users which interacted with the network without running full nodes nor acting as miners. The SPVs, when acting on their own behalf, were not to be considered as custodians. However, there were some market actors (e.g., Coinbase or Xapo) who offered custodial services while also running their own nodes as part of the various networks. She highlighted the importance of separating the various layers in the tech stack and protecting freedom of participation at the protocol level. *Mr Thévenoz* and *Ms Zou* both noted their strong agreement with Ms Reyes.

102. *Mr Alexander Kunzelmann (UNCITRAL)* emphasised the importance of adopting a technology neutral approach. Referring to Mr Paech's comments regarding nodes, he noted that they raised many interesting legal questions in terms of governance of Bitcoin and DLT more broadly and could be useful to consider in terms of the conceptualisation of digital assets, but that the project should look beyond examining the specific features of any one particular technology. *Ms Gérardine Goh Escolar (HCCH)* agreed with Mr Kunzelmann, noting that the HCCH had faced the same issues and made the same decision regarding technology neutrality.

103. The *Chair* highlighted the difference between direct and indirect participants within the context of the Bitcoin network, as well as between custodians and owners or clients. He noted that both questions ought to be addressed. He sought a clarification regarding the position in common law countries concerning the following fact pattern: a person had 10 Bitcoin on a smart phone hot wallet managed and provided by a custodian, and the custodian also had an additional 100 Bitcoin in a cold wallet (i.e., not connected to the internet); if the person's 10 Bitcoin were to disappear for any reason, he queried whether the person had a proprietary claim against the custodian to obtain 10 Bitcoin from the 100 Bitcoin maintained in the cold wallet

104. *Ms Louise Gullifer* noted there were three possibilities: (1) no right to claim against the custodian; (2) a contractual right (i.e., a personal claim); and (3) a claim in trust (only if there was a link between the 10 lost Bitcoin and the 100 Bitcoin). It would ultimately depend upon why the 10 Bitcoin were lost (i.e., was it due to a fault with the software, etc.) The *Chair* queried whether Ms Gullifer thought the private law rules ought to be harmonised on this point. *Ms Louise Gullifer* did not think it possible to achieve harmonisation similar to what was done for intermediated securities. She agreed that the WG ought to set out functionally what they thought ought to happen in terms of outcomes and then give guidance to States to arrive at those desired outcomes. Further, due to a lack of contractual standardisation and a lack of uniformity in the market in terms of the variety of how these structures could be set up, she expressed doubt as to whether something similar to the Geneva Securities Convention could be done with regard to the duties of custodians (i.e., standards of care); but she considered that the project could focus on the duties of custodians in relation to insolvency (segregation of assets, etc.)

105. *Mr Luc Thévenoz* replied to the Chair's query by noting that as long as the custodian remained solvent, whether the client had a proprietary or a trust claim was irrelevant. The problems arose when the custodian became insolvent. He was in favour of the principles providing guidance on the insolvency rule rather than on the types of claims. Regarding the final outcome, he noted that the various legal systems were competing, using their own culture to deal with these assets, and the project should not attempt to try to change national laws (i.e., English law might proceed with trusts whereas Swiss law would not), but to focus instead on the outcomes in those given situations.

106. The *Chair* noted that even outside of the case of insolvency, a shortfall could occur (i.e., if 10 Bitcoins were stolen and disappeared). He queried whether – from a legal perspective – there were differences between hot and cold wallets.

107. *Ms Elisabeth Noble (EBA)* highlighted some of the provisions included in the European Commission's legislative proposal for markets in cryptoassets (which covered those crypto-assets not considered to be 'financial instruments' within the scope of MiFID).[7] She noted there were very specific requirements attached to any person who wished to offer custody services for digital assets (e.g., ensuring a segregation of holdings between those belonging to clients and those belonging to the service provider; very strict requirements regarding registers and terms and conditions, including rules and procedures in relation to security and fraud, cyberattack, loss, theft). The EU was attempting to regulate these elements with regard to a very broad set of services relating to crypto-assets. She also noted the additional requirement to clearly specify the governing law which also went to the insolvency treatment, taking account of those core elements around segregation of assets, etc. The EU attempt to harmonise appeared to be well received within the industry, in particular, because it was challenging for customers to navigate the regulatory scheme and understand the status of their crypto-assets and their rights and protections in various jurisdictions. She noted there was no attempt to regulate the insolvency aspect within the EU.

108. The *Chair* queried whether the EU's proposed regulation distinguished between hot and cold wallets. *Ms Elisabeth Noble (EBA)* replied in the negative, noting there was no requirement to have

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7 Markets in Financial Instruments Directive (2004/39/EC).

a cold wallet. However, there were requirements regarding the integrity of the register, such as having sufficient backup systems in order to mitigate against the risk of corruption. This approach was in line with current approaches in some EU Member States where it was mostly left to industry to determine how best to meet compliance obligations. *Mr Ignacio Tirado (UNIDROIT)* noted that the EU's proposal appeared to be a classic regulatory product, whereas the project's focus was on private law transactions and issues.

109. *Ms Carla Reyes* noted that using a hot or cold wallet made a difference for the clients but did not make a difference for the custodians; regardless of how the Bitcoins were lost, the risks were present. She pointed out that she was running three different kinds of wallets on her phone: (1) an SPV wallet (BRD) which interacted directly with the Bitcoin network; (2) a custodial wallet (Coinbase); and (3) a non-custodial wallet via third-party software provider (blockchain.com). She noted that all three were hot wallets, including the one which interacted with the network directly. Additionally, she was also running an e-commodity wallet on her phone by a provider that took the position that the token was a document of title.

110. The *Chair* noted two cases in Japan: the first, *MtGox*, concerned the insolvency of a custodian. The second regarded coins kept in a hot wallet which disappeared (for unknown reasons). Japan subsequently enacted regulation which required the custodian to keep the client's Bitcoins in a cold wallet; if they wished to keep them in a hot wallet, they were required to keep the same amount in a cold wallet.

Taking of security over digital assets (II. D. 6)

111. The *Chair* turned to a discussion on secured transactions and the corresponding section in the Issues Paper, pointing to the list of questions at para. 72. He queried whether loans of money using Bitcoin or cryptocurrencies as collateral were practiced in different parts of the world.

112. *Ms Elisabeth Noble (EBA)* noted that there were a limited number of cases of crypto-assets being used as collateral in the EU financial services sector (in general, crypto-asset-related activities remained relatively low). She noted some cases where private keys had been transferred or held in a trust. From a regulatory perspective, she noted that there were certain expectations as to the acceptability of such assets as collateral, which in-turn informed how the overall financial transactions were treated from a prudential regulatory perspective.[8] In particular, in considering potential prudential treatment, financial institutions and supervisors take into account a range of factors, many of which were mentioned in the Issues Paper (e.g., assurances on recoverability of assets in case of insolvency, enforceability of rights and obligations, clarity of governing law). She remarked that the market's interest in crypto-asset activities and the acceptance of crypto-assets as collateral was being limited due to the general uncertainty surrounding the aforementioned questions.

113. *Ms Carla Reyes* confirmed there were indeed entire platforms dedicated to secured lending around cryptoassets (e.g., SALT Lending). A separate platform was felt to be needed due to the uncertainty surrounding how digital assets were treated (e.g., which category they fell under). Typically, custody of the digital assets was taken via multi signature arrangements (e.g., secured lender, SALT, and the debtor all participating in the wallet).

114. *Mr Marek Dubovec* noted that one of the panellists at the Exploratory Workshop on Digital Assets and Private Law explained the different kinds of financing structures which existed in the market. This presentation had confirmed that lending on the basis of cryptoassets as collateral was occurring in the market. He noted a recent court case, Quoine in Singapore, in which a margin loan

[8] Referred to the Basel Committee on Banking Supervision's work on a prudential framework for banks' exposures to crypto-assets where such assets were not covered by the current framework (e.g., as a result of qualifying as a conventional financial instrument).

was made to enable the purchase of digital assets that resulted in some insolvency issues.[9] He also noted that the International Standards and Derivatives Association (ISDA) had published reports on collateralised transactions on DLT.

115. *Mr Charles Mooney Jr.* noted that as the other questions at para. 72 were explored, it would likely be necessary to address some specific rules for digital assets; for example, the method of control for a digital asset may differ from other methods analogous to control for other types of collateral. These questions could best be examined when considering the specific topics of methods of perfection and priority rules, which would clarify to what extent special categories of collateral were needed.

116. *Mr Philipp Paech* noted this was a relevant area for the project to consider. Picking up on Ms Noble's earlier comments, he noted that a portion of digital assets and cryptoassets was already considered to be covered by normal securities regulation in the EU. When, in the future, shares and bonds would be issued and moved around as cryptoassets, then there likely would be a collateral regime for them. Regarding specificity, the WG needed to consider what it was looking to do; if seeking to create a totally unified regime, then a rule was needed; if not, then all these questions would be subject to an applicable law which was a State's law, which typically would have rules on how to take collateral, etc. The task could be to note the different methods which would be acceptable as long as they complied with certain requirements, for instance, control requirement, etc. He suggested that the WG could work towards developing a list of criteria which would all be acceptable, and the rest would be determined by applicable law.

117. *Mr Steven Weise (ALI)* remarked that Ms Reyes summarised well the American context. He noted that many were proceeding with perfection and priority questions as though these areas of law were already established, when in fact they were not. For example, under existing US law, having the private key or using a multi signature arrangement was ideal for access but did nothing for perfection or priority rules. The legal structure was not yet in place, and this work could be highly valuable for the financial markets. The *Chair* queried whether the legal notion of control under US law applied to private key or multi-signature arrangements. *Mr Steven Weise (ALI)* confirmed that while there was a notion of control for security entitlements and having the private key was analogous to control in those circumstances, the UCC did not recognise control as a method of perfection applying to digital assets that did not fit into one of the other categories which led to market participants assuming (or, indeed, hoping) there was an analogy, but it was only a concept, not a rule. Work was proceeding on proposed amendments to the UCC, which would likely specify that control would be a method of perfection for a security interest in digital assets, and the use of private keys would undoubtedly be a component of that. *Ms Carla Reyes* noted that in the USA, parties often filed UCC-1 financing statements in addition to taking the private key because they were not sure that taking the key counted as control.

118. *Ms Louise Gullifer* noted it was important to consider this question with a view to future-proofing the principles; even if these were not occurring today, in the future, digital assets could end up being used as collateral for lending. She noted that in England, a bank would take a fixed or floating charge over the digital assets owned by a company seeking a loan. She urged the WG to avoid using control in different contexts with different definitions and cautioned against taking the general concept of control (akin to possession) and automatically assuming that was what was required for perfection under a given regime (e.g., UCC). She agreed with Mr Paech that the appropriate approach was to determine what the requirements would be and draw up a list of requirements (not assuming one size fits all across different legal systems).

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[9] https://www.coindesk.com/singapores-court-of-appeals-rules-quoine-exchange-in-breach-of-contract-in-landmark-crypto-case.

119. *Mr Steven Weise (ALI)* referred to the question concerning special rules applying to the enforcement of security interests in digital assets at para. 72, v., and explained there were many exceptions to the rules under the UCC which were generally tied to commercial reasonableness of the actions of the secured creditor, with numerous exceptions where the collateral encumbered assets were traded on a recognised market with some notice provisions relaxed. He noted the WG may wish to consider whether certain digital assets like Bitcoin which were traded on a recognised market could allow for relaxation for some of the commercial reasonableness rules in terms of enforcement.

120. *Mr Marek Dubovec* noted that the UNCITRAL MLST could be a starting point to simplify thinking, rather than undertaking a comparative study of various legal systems. He pointed to the question at para. 72 ii (b) regarding how a holder created a security interest where the digital asset was held by a custodian, including where the digital assets were held in a fungible bulk, which also related to property law, which, in many States, precluded the creation of a security interest in something less than a full asset, so as to respect the unity of ownership. This principle was overridden in the UNCITRAL MLST which enabled the creation of a security right in part of the asset. A good starting point could be taking the UNCITRAL Model Law and then making adjustments where a different approach was required.

121. The *Chair* queried whether digital assets would fall under the UCC Art. 8 or Art. 9. *Mr Marek Dubovec* noted it would depend on how the digital assets were held. Generally, they would be a general intangible as there was no specific category for digital assets (a similar analysis would apply under the UNCITRAL MLST). There was a specific category for deposit accounts which led to asset-based solutions (i.e., how to perfect and what kind of priority could be obtained) flowing from initial separation of deposit accounts from the larger class of intangibles. This was not done for digital assets, so the general rules applied. The term control was not used in the UNCITRAL MLST, it simply described the steps needed to achieve perfection. He noted there was not much difference between UCC Art. 8 and Art. 9 on the one hand, and the Geneva Convention and UNCITRAL MLST and the Legislative Guide on the other hand, making for a single package of rules available to help shape the WG's thinking. *Ms Louise Gullifer* confirmed that was also what was happening in the UK because there was uncertainty about the meaning of 'control' in relation to financial collateral.

122. *Mr Philipp Paech* noted that the UNCITRAL MLST could serve as a source of inspiration and be studied, along with the Geneva Convention, but cautioned against using it as a basis because the discussion involved financial assets which were always complex, and because the digital assets were not yet well understood. *Mr Marek Dubovec* explained that the idea was not to formulate principles to provide guidance to States regarding the amendment of a given article in the UNCITRAL MLST to achieve a certain result, but rather to outline the consequences if a given domestic law did not have any rules specific to security rights in digital assets. He emphasised that it was not possible to undertake a comparative law type of exercise such as the UNCITRAL Legislative Guide on Secured Transactions which amounted to over five hundred pages.

123. *Mr Ignacio Tirado (UNIDROIT)* referred to Mr Paech's comment and queried the reasons why the UNCITRAL MLST might not be appropriate as a starting point for the WG's deliberations. *Mr Philipp Paech* confirmed it could serve as a source of inspiration and he was simply cautioning against it serving as a starting point. He noted the Geneva Convention appeared to be closer to the material concerned by the project. *Mr Ignacio Tirado (UNIDROIT)* referred to the non-intermediated securities provisions and noted that the UNCITRAL MLST could provide useful guidance in this regard.

124. *Ms Louise Gullifer* noted that the UNCITRAL MLST was a useful point of reference which could provide a checklist of issues to consider. She pointed out that a number of very active jurisdictions in the field of digital assets did not have secured transactions systems based on the MLST, and therefore cautioned against putting forth a set of principles which was compatible only with that kind of system. For example, the United Kingdom had no concept of control as far as perfection was

concerned, given that they relied upon a registration system and that things were pledged with the taking of possession. She reiterated the need to formulate principles which encompassed other systems beyond those based on the MLST.

125. *Mr Charles Mooney Jr.* echoed Mr Weise's earlier comments regarding the sequencing of issues for the WG to consider, noting that the question of the innocent acquisition of digital assets and transfers of digital assets would be useful precursors to considering more refined issues of perfection and priority in secured transactions. It may be found there was no need to distinguish between the acquirer obtaining outright legal title and only a limited interest such as a security interest or other. In the Geneva Convention, it was found that in some cases they were able to simplify because it did not matter what the nature of the interest transferred was, they could adjust the rules.

126. *Mr Steven Weise (ALI)* noted that registering the security interests/security rights could be a valuable suggestion.

Remedies and Enforcement (II. D. 8)

127. The *Chair* turned to a discussion on remedies and enforcement and the corresponding section in the Issues Paper, pointing to the list of questions at para. 79.

128. *Mr Philipp Paech* explained that it was very difficult to enforce a right or interest in the absence of a localised, supervised, point of attachment between a given State and the Bitcoin system (not referring to custodians but to the assets). The *Chair* referred to the example of a party holding gold in a vault, with a key, which then became insolvent. He queried how this could be enforced if the key were not handed over; or how to attach the asset in the vault.

129. *Mr Jason Grant Allen* noted there was another UNIDROIT project working on enforcement with which there should be coordination. He urged the group to separate remedies (e.g., proprietary or otherwise) from enforcement. He advised that the project arrive at principles which envisaged remedies that would apply as broadly as appropriate to digital assets which used different kinds of technical systems; some of which were more or less amenable to conventional enforcement. He referred to Mr Paech's comment regarding the need for a given State to have a connection point in order to be able to carry out enforcement. He noted that the main question concerned what private law remedies were available. The difficulties of enforcement were often overestimated and that practices would emerge in the coming years as the market developed.

130. *Ms Carla Reyes* addressed the notion that enforcement was impossible in a decentralised system due to the fact that collateral could not be taken; she noted that parties took control of the private key or used multisig arrangements – despite a lack of absolute certainty as to whether that amounted to control or not – because they could and because that was the collateral in the event of default. She added that there were a variety of ways which were functionally equivalent to enforcement mechanisms applicable to tangible goods in the electronic world, which simply required some thoughtful coding. For instance, the transaction could be set up (e.g., via a smart contract or a multisig arrangement) so as to ensure easy access to enforce rights in the event of default. She noted it was also possible to flag digital assets (including Bitcoin) with colour coins which were little pieces of data showing that a given digital asset was encumbered, thus making the collateral identifiable. In the case of non-fungible tokens, it was easier to identify and enforce against collateral.

131. *Mr Philipp Paech* noted that enforcement of property rights referred not only to collateral or secured transactions situations but could also be a situation in which a piece of property was lost and found by another party, or a theft situation, and the owner wanted to have it back. He noted this could be extremely difficult due to the technical setup which did not make provision for the unwinding of the transaction.

Law applicable to issues relating to digital assets (II. D. 9)

132. The *Chair* turned to a discussion on the law applicable to issues relating to digital assets and the corresponding section in the Issues Paper, pointing to the list of questions at para. 87. He queried whether the existing rules that determined the law applicable to transfers and other transactions with digital assets were adequate, and whether they met industry expectations.

133. *Mr Philipp Paech* noted that in the absence of a territorial connection point or regulatory reach, enforcement in this domain appeared to be very challenging and a limited choice of applicable law was likely the best approach.

134. *Ms Gérardine Goh Escolar (HCCH)* noted that the HCCH had received a mandate from their Council to work on digital assets, which was initially on DLT, but due to technology neutrality, it was broadened to the digital economy. HCCH was conducting a survey of state, national and domestic laws, categorised as one of the following: digital asset enthusiastic, ambivalent, or hesitant. They had looked at the law applicable to transfers and other transactions of digital assets, and their survey had confirmed that existing rules did not meet industry expectations which were very divergent from regulatory expectations. HCCH's mandate in this area was to look at the possibility of a new normative project which would look at applicable law, jurisdiction, recognition and enforcement, choice of law, and choice of forum. It would also examine smart contracts and DAOs (decentralised autonomous organisations). The survey also looked at connecting factors. She noted that the HCCH wanted to ensure it was responding to industry needs and requirements. HCCH was not looking at substantive law questions, but rather the differences between intermediaries and non-intermediaries; at tradability and tokenisation; focusing on proprietary effects and how that might impact upon party autonomy, choice of law, and choice of forum. She added that the HCCH was also considering the possibility of incorporating applicable law, such as incorporating choice of law in DLT protocols. Given the uncertainty as to which State would have jurisdiction to solve disputes, they were looking at connecting factors in relation to digital assets created and transferred both for centralised and decentralised systems. She added that the HCCH was also examining existing regulation and its impact on private international law. She referred to the study from the Global Blockchain Business Council which pointed to the fragmentation of approaches. She explained that HCCH sought to build bridges rather than affect substantive law, so their project was looking to ascertain whether the approaches were fragmented or not, whether it would be acceptable to States to accept another State's framework. She also mentioned the GSMI Report (Global Standard Mapping Initiative). In terms of further research, the HCCH was looking at jurisprudence and case law (in particular the Quoine case), other existing private international law rules such as the Hague and Geneva Securities Conventions, and the legal nature of digital assets and digital transactions, specifically DLT but also cryptoasset securities, proprietary interests, movable and immovable property, and documentary intangibles. She noted that the Permanent Bureau of the HCCH would bring this proposal to their Council in March 2021, where a final decision on mandate would be received. In any case, the HCCH would seek to focus on a framework convention on applicable law, jurisdiction, and were mindful for there to be no overlap between the three sisters' organisations' work in this area. She noted that feedback from industry (e.g., Ethereum Foundation) had indicated that an approach similar to the Hague Securities Convention which used "PRIMA" (Place of the Relevant Intermediary) would not be welcome.

135. The *Chair* thanked the HCCH for their update and noted that at the UNIDROIT Governing Council's session in September 2020, the importance of close coordination with the HCCH with regard to private international law was emphasised.

136. *Mr Philipp Paech* raised two questions relating to private international law: (1) which State law was applicable; (2) being inherently global, a bigger problem for digital assets was ensuring that the States recognised a common solution regarding to whom the assets belonged in case of insolvency; however, this appeared to be a question primarily concerning the work of HCCH.

137. Mr Steven Weise (ALI) noted the importance of addressing the questions on sequencing. He referred to the fourth question at para. 87 ("*Would the creation and adoption of a harmonised choice-of-law rule for third-party effects relating to digital assets, perhaps with the cooperation and participation of the Hague Conference, be a worthwhile goal?*"), noting that the answer to that question would depend upon what attributes of property (or property-like attributes) digital assets were found to have. He noted that freedom of contract as between parties to the contract was very broad in the USA and in other jurisdictions, but that freedom had its limits with regard to property, especially relating to questions such as whether they were rights, or quasi-property rights; and how that affected the ability of parties to affect the applicable law.

138. *Mr Marek Dubovec* noted the Hague Securities Convention ("HSC") was another example of an international instrument which could serve as an inspiration or a basis for the project. The ultimate goal was not to amend specific provisions of the HSC or the UNCITRAL MLST, but rather to develop a higher-level product. He noted that Art. 2(1) of the HSC was important, but it limited the types of issues that were covered by the rule to certain types of proprietary issues, which may not encompass all of the issues to be considered in this project, and it did not cover contractual issues; it therefore could not serve as a basis for formulating rules, but it could serve as an inspiration to think about some of the issues outside of scope.

Issues relating to the contract involving digital assets (II. D. 1)

139. The *Chair* turned to a discussion on the issues relating to contracts involving digital assets and the corresponding section in the Issues Paper, drawing attention to the list of questions at para. 48. He noted that contractual issues could be identified in a number of other areas of the project, for example, in the examination of proprietary aspects of digital assets. Accordingly, he recommended the project deal with them wherever appropriate rather than define contractual issues narrowly.

140. *Mr Steven Weise (ALI)* noted the importance of coordination between the various projects (e.g., ALI, UNCITRAL, HCCH, UNIDROIT, etc.) and encouraged seeking as much coherence and consistency as possible so those parties using digital assets in any kind of transaction could derive the greatest possible benefit from having a fairly comprehensive set of rules.

141. *Mr Luc Thévenoz* supported the Chair's proposal to deal with contractual rules and issues where necessary (even if these were not at the core of the project). He noted that in some jurisdictions, these could be trust law issues rather than contract law (i.e., duties of a trustee rather than contractual duties of a custodian) and recommended the WG focus on the relevance of the question to be solved rather than the characterisation. The *Chair* noted that in Japan, trusts were considered to be a contractual relationship rather than property related, resulting in many difficult legal questions.

142. *Ms Louise Gullifer* noted the importance of clearly defining what was meant by contractual issues: did it refer to "pure" contractual questions such as ascertaining whether a given contract was enforceable, or was it concerned with the content of contracts (for instance, determining the minimum content of a custodian contract). She recommended the project focus on the latter, looking at what was expected to be found in a contract of transfer to effect a transfer, or to effect a property interest. In this regard, she noted there was a thin line between regulation of the content of contracts (e.g., consumer protection, minimum standards) as opposed to what the project was concerned with.

143. *Mr Charles Mooney Jr.* noted that the terms of a contract could determine whether one concluded there was a custody relationship or not. If the putative custodian only promised to deliver the asset, but the substance of the contract stated that it had agreed to hold its clients' assets, that could determine how the structure of the relationship was viewed.

144. The *Chair* described a hypothetical situation where a party held Bitcoins in a hot wallet on one's phone, in which there was no custodial contract and everything was managed by computer programme. He pointed to the question at para. 48 ("*Should legal issues relating to smart contracts and artificial intelligence be considered?")* and queried whether it was outside of the project's scope.

145. *Ms Carla Reyes* noted that the question concerning smart contracts and the use of artificial intelligence was perhaps misplaced under the section on contractual issues, insofar as smart contracts were the subject of many of the WG's discussions, but not necessarily in the context of contractual issues. Regarding the hypothetical question, she noted that most wallets for smart phones would be subject to a contract between the wallet provider and end user (due to having been obtained through an app store and being subject to relevant End User Licence Agreements).

146. *Mr Luc Thévenoz* queried whether participating on blockchain by connecting to a DLT for the purpose of acquiring a token could be considered to be entering into a contract, in a similar manner to the rule of the clearing and settlement system in intermediated securities. While there were no standard terms to be agreed to, he queried whether there was a contract at the fundamental, underlying layer – not between the client and the custodian – but as to the mere existence of and the rules governing the DLT system. As an example, he noted that on the question of determining when a transfer was final, Swiss law looked to the agreement underlying the DLT system itself. *Ms Louise Gullifer* queried with whom that contract would be. *Mr Luc Thévenoz* replied that it appeared to be a multilateral, implied contract, the terms of which were determined by the code.

147. *Mr Philipp Paech* noted there were internal rules (technical, software), and, as Mr Thévenoz noted, by joining, there was an implicit recognition that the software's rules would apply. He agreed with Ms Gullifer's point that it was questionable as to whether they affected bilateral relations. He noted more discussion was needed regarding these technical rules to ensure that they were connected with the applicable law (for instance, how collateral was taken).

148. *Ms Carla Reyes* emphasised there was no contract between the participants in any given underlying protocol unless they all agreed to create one. For instance, all users had to agree to the MIT license, and if they wanted additional terms they could add them, but the parties chose not to. She explained that the blockchain was a protocol in the same way that the system underlying the internet was, and that if one were to accept there was an implied contract between blockchain participants in a given ecosystem, the same would have to be said about every internet user. She distinguished between the analysis at the protocol level as opposed to other layers of the tech stack such as the smart contract level, or the service provider level.

149. *Mr Philipp Paech* agreed with Ms Reyes' points. He noted that in some jurisdictions, courts could find an implied contract in order to explain what was occurring from a legal perspective, pointing to the example of a court seeking to determine ownership of certain assets by looking to the rules (e.g., the software) by which the parties had transferred those assets between themselves.

150. *Ms Carla Reyes* referred to two cases in the USA in which courts had concluded there was no implied contract. Considering the question of whether a party was entitled to cryptocurrency created following a hard fork, the court found no basis for the existence of an implied contract allowing for access to that cryptocurrency if access to the original data had been given up. As such, there was nothing a party could assert against the custodian service provider based on an implied access via the rules. The underlying rules of the system in question stated that the party should have access to that cryptocurrency, but if the party had entered into a separate contract with a custodian, there was no competing contractual provision and the contract with the custodian was the only one to consider. She further noted that the courts did not find an implied contract in the context of the internet. The rules of the system would matter, for example, when it came to the concept of control. In the UCC group discussing digital assets, there were frequent discussions on how to make the definition of control technology neutral so that it would account for whichever rules the system used

to allow a person to have control over the asset. However, this did not depend upon any kind of implied contract, nor did it depend upon external actors as part of the network like nodes which have not agreed to any contract. It also depended upon which system was being discussed. For instance, for permissioned blockchains, there was an explicit contract which everyone had agreed to when they entered into it, whereas for public blockchains (i.e., permissionless) like Dash which operated under a trust agreement, the nodes themselves were implementing and executing part of their role under the agreement. In summary, while some systems had opted to operate under explicit contract, public blockchains did not, and it therefore varied from system to system.

151. *Mr Philipp Paech* agreed with Ms Reyes' comments regarding public blockchains. He explained that the use of the term "contract" in this instance referred to a common understanding amongst the users of such a system that the outcomes would be determined by the software. He invoked the larger question as to whether code was law, which was a highly disputed, unresolved question, and noted that the relationship between the code and the law merited further consideration.

152. *Ms Carla Reyes* queried whether there were common understandings at all, at least regarding some of the rules for particular systems. For example, if Bitcoin users were to be surveyed as to when they thought that a given transaction was final, some would reply that was two blocks after their transaction, others would wait ten blocks, and there would be significant disagreement as to when the transaction was final.

Format of the Guidance Document – Legal taxonomy (I. B)

153. The *Chair* turned to a discussion on legal taxonomy, recalling that one of the project's objectives was to develop a legal taxonomy relating to digital assets in coordination with UNCITRAL. He invited the Secretariat to make a brief presentation.

154. The *Secretariat* presented a preliminary research document consisting of an Excel spreadsheet which gathered over 1200 definitions relating to digital assets which were collected from numerous sources including intergovernmental organisations, international standard setting bodies, national sources, and industry.

155. *Ms Carla Reyes* noted that a good resource to consider for additional terms was the Blockchain Terminology Project. She also pointed to the glossary at the end of the linked documents for the UN IGF DC on Blockchain Tech, noting that it was created some time ago but was the result of interdisciplinary discussions.

156. *Mr Philipp Paech* sought clarification regarding the work brief for UNIDROIT and UNCITRAL regarding a legal taxonomy. *Mr Ignacio Tirado (UNIDROIT)* noted that a mandate was received from the Governing Council to develop a taxonomy of legal concepts within the area of digital assets, and that this work would be carried out in coordination with UNCITRAL.

157. *Mr Marek Dubovec* raised several queries relating to taxonomy: (1) whether the terms should be related only to the principles rather than a broader general taxonomy; he favoured including terms related to the principles as this would help to narrow the scope; (2) whether the principles themselves would include terms (e.g., what is a digital asset, what is control, etc.), noting there could be some degree of overlap between the principles and the legal taxonomy; (3) he underscored the importance of how this was presented to States, in particular, the importance of avoiding inconsistencies or gaps, and to this end, he invited the WG to consider as a potential source of inspiration the UNCITRAL Legislative Guide which contained a series of recommendations on what the law ought to contain, alongside a series of key terms. The *Chair* concurred with Mr Dubovec's three points. He noted that the modest approach would be to limit the taxonomy to the principles, and a more ambitious one would be broader. *Ms Elisabeth Noble (EBA)* agreed with Mr Dubovec and noted the challenge of requiring common concepts and definitions (e.g., digital assets). Regarding

the taxonomy more broadly, she emphasised that it should focus on the concrete problems the WG was concerned with.

158. *Mr Ignacio Tirado (UNIDROIT)* clarified that the project's mandate was to establish principles rather than a legislative guide, but that an expanded mandate could be sought from the Governing Council at the next session.

159. *Ms Carla Reyes* urged caution regarding definitions which could be ambiguous and difficult. She suggested perhaps the best approach was to note the debates occurring out there and what definitions others were using.

160. *Mr Alexander Kunzelmann (UNCITRAL)* congratulated the Secretariat for their work on this so far. He noted that the preliminary work appeared to focus on DLT and concurred with Ms Reyes' note of caution. He provided an update on the progress of UNCITRAL's work in the area of taxonomy, noting that their approach was to take note of the wealth of terminology and terms out there, while recognising that, as lawyers, a decision would be taken on how to frame and conceptualise a given legal relationship. He queried whether a taxonomy should be a glorified glossary or something more elaborated, as well as what the relationship between the principles and the taxonomy should be in terms of sequencing.

161. *Mr Klaus Löber (ECB)* agreed with Mr Dubovec, Ms Noble, and Ms Reyes and thanked the Secretariat for the work done so far. He noted that the taxonomy could serve as an inspiration for the work of other organisations. Regarding the sources of the definitions, he suggested relying more on those that sought to distil those concepts in a more functional and abstract form (looking at standard setting bodies, both regulatory and technical).

162. *Mr Ignacio Tirado (UNIDROIT)* noted that Ms Reyes' remarks and the lengthy document proved that there was a need for a legal taxonomy and for consistency in the use of terms, remarking upon the rapid evolution of terms and technology. He confirmed that the terms ought to refer to and link with the principles themselves. Depending on the finality of the document, the terms would need to be different (given that the same words were used with different meanings). He queried whether the WG was in a position to provide long-standing definitions beyond those to be used in the principles.

163. *Mr Jeffrey Wool* recommended that the taxonomy feature a high analytic and synthetic component and aim for clear definitions with a focus on legal concepts as opposed to the technological aspect. A key question was how the taxonomy would link with and contribute to the consistent use of the principles. In terms of timing, he noted that the taxonomy work may need to wait for the work to progress on the principles themselves. He referred to the UNIDROIT Principles on International Commercial Contracts which consisted of a lean set of principles alongside a more elaborate commentary. He noted there was a real requirement for consistent terminology which could help drive legal thinking forward. Finally, he encouraged the WG to be broad rather than narrow.

164. *Mr Jason Grant Allen* noted the importance of this discussion on taxonomy to assist in illuminating the overall scope of the project. Considering the panoply of digital assets out there, he noted the importance of defining legal categories, and doing so in a technology neutral manner. He urged the WG to aim broadly and be ambitious, noting that it could contribute conceptual rigour in establishing and determining those conceptual categories from a legal perspective.

165. *Ms Louise Gullifer* understood a taxonomy as less akin to a dictionary and more of a map of legal concepts which helped in drawing lines between categories, which went hand in hand with a legal analysis. It was more than a list of definitions as it sought to ascertain how those definitions fit together. She emphasised that any lists of definitions should be specifically targeted for private law purposes, rather than a much broader audience (e.g., technologists, economists).

166. *Ms Carla Reyes* urged the WG to restrict the taxonomy to the terms needed for the principles, with a sharp focus on private law issues. She cautioned against any attempt to define terms for the sake of creating definitions (e.g., defining blockchain) as this would risk undermining the project's credibility. She noted it was the lawyers who were clamouring for consistent terminology rather than the industry itself which appeared to be happy with the current state of ambiguity.

167. *Ms Gérardine Goh Escolar (HCCH)* agreed with Ms Reyes, Ms Gullifer and Mr Allen. She noted that the HCCH was at the first stages of coming up with private international law principles and underscored the importance of aiming to be technology neutral. She noted the industry participants did not seem to require consistent terminology, but the lawyers certainly did. The HCCH looked forward to contributing to UNIDROIT's work where possible, while noting that they themselves would be relying upon the terms laid out in this taxonomy.

168. *Mr Alexander Kunzelmann (UNCITRAL)* noted that with regard to the past UNIDROIT/UNCITRAL discussions regarding a "legal taxonomy", the report of the 2019 Rome workshop was available here and the report of the 2020 Vienna workshop was available here.

169. *Mr Steven Weise (ALI)* urged the WG to look at taxonomy which would examine how the concepts related to one another (perhaps organised in an alphabetical list). He noted the great potential added value of linking the concepts together; in the case of an Excel spreadsheet, he found the filters to be particularly helpful. He also noted that this mapping could assist with identifying where there were problems and gaps and a lack of clarity, and that it was hence very useful in steering the work as it progressed. *Ms Carla Reyes* agreed with Mr Weise's approach which aimed at creating a tool to help the WG to find the issues – and resembled Ms Gullifer's perspective as she understood it.

170. *Mr Ignacio Tirado (UNIDROIT)* suggested that the work on taxonomy start by first defining to the extent possible the terms needed for the purpose of carrying forward the work, noting that the resulting document would be helpful for legislators.

171. The *Chair* suggested that a specific subgroup could be set up to work on taxonomy issues.

172. *Mr Philipp Paech* agreed with this approach, noting the value of the harmonising effect which would greatly contribute to building a common understanding. He noted the parallel with previous UNIDROIT work on intermediated securities and netting which introduced concepts and definitions. He noted the taxonomy work might need to trail the other work, proceeding once the scope was well established and some progress had been made on the actual substance of the principles.

173. *Mr Ignacio Tirado (UNIDROIT)* acknowledged the difficulty of coming up with definitions at the outset and noted the need for coordination with UNCITRAL. He referred to the etymology of the word taxonomy (from the Greek "taxis" and "nomia"). He suggested that the final definitions could be left for a later stage, but that an initial classification of the concepts could be done in order to have something to provide to UNCITRAL for its work on digital economy.

The subject matter of the project (I. C)

174. The *Chair* turned to a discussion on scope. He pointed to the UNCITRAL MLETR, and noted the definitions contained at Art. 2 of "electronic record", "electronic transferable record", and Art. 10.

175. *Mr Philipp Paech* noted the usefulness of looking at other definitions, while urging the WG to avoid identifying any base or model at too early a stage.

176. *Mr Marek Dubovec* noted that the Art. 11 definition of control did not in fact define control as it was a functional equivalent to possession. The UNCITRAL MLETR focused on instruments and

documents, such as traditional negotiable instruments and documents, but that countries may provide for a broader category of assets, which could lead to overlap with this project in those States providing for a broader category. Also, the notion of control was not defined, and he explained that different mechanisms may satisfy the notion of control (i.e., a token which represented a bill of lading, or another approach would be a registry, which was commonly used in the industries involved.) *Mr Jason Grant Allen* noted the usefulness of the UNCITRAL MLETR.

177. *Mr Charles Mooney Jr.* noted that national legislation (e.g., USA and Japan) which provided inspiration for the UNCITRAL MLETR could provide inspiration for what the WG was endeavouring to do, while noting that the text itself will not be directly useful.

178. *Mr Alexander Kunzelmann (UNCITRAL)* noted that the UNCITRAL MLETR was not developed with the concept of digital assets in mind, but that, indeed, an electronic transferable record would appear to be a digital asset (or a linked asset). He also noted that the notion of "control" was not developed with proprietary aspects in mind, but rather for a functional equivalent of possession, as noted by Mr Mooney and Mr Dubovec.

179. The *Chair* referred to para. 46 of Issues Paper which identified four criteria for defining a digital asset and sought input from the WG members as to what ought to be the dividing line, particularly in civil law systems, between an asset amenable to being an object of property and not, whether tangible or intangible, via exclusive control being recognised or not, or through any other criteria, such as transferability for instance.

180. *Mr Philipp Paech* agreed with the Chair that the project should cover all of these aspects and questions raised. Regarding the first question, he noted that the *erga omnes* effect should be the first distinguishing principle. Regarding the second question, he remarked this was at the heart of the discussion and would certainly require several days' worth of discussions.

181. *Mr Klaus Löber (ECB)* appreciated how the Chair had presented these core questions. He noted that all of these points raised were being faced in the real world. In particular, he highlighted the questions relating to the link (between a token and an underlying asset whether bonds, a form of collateral, a real property link, etc.). Regarding the criteria of transferability, he queried whether the WG was looking at the transferability of the data or the content of the data. He emphasised that the legal concepts to be applied were challenging. Lastly, he noted that in using terms such as assets, in practice, there was a large variety of approaches taken, even where the technology may look similar. For instance, it was important to ascertain whether tokenisation was based on DLT or not. In some cases, the legal design of such a structure may be based on traditional systems like a registry, and the token was merely a representation of that. He urged the WG to cast a broad net, and first have a very clear conception of what kinds of digital assets it wished to include, to then subsequently attempt to apply the legal notions. *Ms Elisabeth Noble (EBA)* expressed full agreement with Mr Löber.

182. *Mr Luc Thévenoz* remarked on proprietary vs non-proprietary rights in the discussion of digital assets as the subject of property. He sounded a note of caution, noting that the Swiss experience was that regardless of whether it was a personal right or not, that the claim had certain *erga omnes* features which could indeed qualify as proprietary. He noted that *erga omnes* had a special status in insolvency, meaning it could be set aside from the custodian's other assets, and that these rights could be traced, and provided for an especially strong claim for the owner to get them back. In this manner, an insolvency protection for digital assets could be built. He noted the difficulty to trace, follow, and get back the assets, for once a transaction in the blockchain was effectuated, there was no real possibility to reverse the transfer, meaning that getting back from someone who unjustly claimed or held would be a challenge. He hypothesised that perhaps the doctrine of unjust enrichment could be useful. He was uncertain whether the difference between property and non-property rights was critical. Referring to shares, bonds, and shares in a collective

investment scheme, it was more important to note there was a change in the record or a transfer of the token, which actually transferred the intangible right, for if the real-world asset was not intangible but was subject to consumption, possession, destruction, then that link cannot be of the same strength, because it was not the same fate for the outside asset. For that kind of link, there was a long tradition of experience with bills of lading or warehouse receipts, allowing for the transfer of ownership or secondary interests in the cargo, but at the same time, someone could do the same with the actual asset, leading to a conflict between the status of the tradeable instrument (e.g., bill of lading) and the real-world asset. Finally, he noted that the WG would need to revisit these conceptual points because a digital asset could be viewed in two ways: (1) as akin to a registry; or (2) as a token, which were two metaphors for looking at the same reality in a similar manner to intermediated securities which relied on metaphors and fictions. He emphasised that clarification was needed as to what was meant by a digital asset.

183. *Mr Marek Dubovec* noted that the preliminary question concerned what was a digital asset. Mr Löber and Mr Thévenoz addressed a number of issues which were identified in the Issues Paper regarding claims linked to DLT. He then noted a number of points concerning different categories of broader assets: (1) one was digital twins, and other fractional tokens; (2) another concerned bills of lading or warehouse receipts; (3) and a third were central bank digital currencies. In thinking about control, all three categories must be considered. The second category corresponded to real world business models which existed. Those transactions could be set aside for the time being as there were already existing solutions. He invoked the example of private keys vs public keys, noting that the industry might not welcome these.

184. *Ms Louise Gullifer* picked up on Mr Löber's comments on the different kinds of links and agreed with Ms Noble that the taxonomy would come into play here in order work out which relationships were legally similar and why. It was necessary to analyse the law and the situations and work out what was legally relevant.

185. *Ms Carla Reyes* noted that not all non-native assets were tethered to other assets, explaining that there were non-native digital assets (e.g., Metronome). She urged caution when referring to different assets.

186. *Mr Jeffrey Wool* noted the general relationship between digital assets and real-world assets. He emphasised the importance of the use and role of registries which he saw as the future in this area. Historically, it was deemed that for a bill of lading, no registration was needed, noting the contrast with the Cape Town Convention, in which third parties (not just for perfection and priority and insolvency) were bound by the registry. A fundamental question to ask was when parties should be bound by what was on a registry.

187. *Mr Jason Grant Allen* noted that the vast majority of countries (in terms of the legislative guidance the project could provide) would most likely be incorporating these digital assets into their domestic legislative framework, and he urged the WG to carefully consider the proprietary questions.

Item 6: Organisation of future work

188. The *Chair* turned to the organisation and planning of future work, starting with the fixing of future dates for WG sessions two, three, and four. Regarding intersessional work, the Chair proposed that a number of subgroups be established with two co-chairs to represent both common law and civil law jurisdictions. The four subgroups would address the following topics: (1) holding (including custody); (2) transfer; (3) secured transactions; and (4) taxonomy (in coordination with UNCITRAL) and private international law issues (in coordination with HCCH). All members and observers were welcome to participate in all groups. The Chair noted that the objective was for each subgroup to come up with preliminary draft provisions (for example, what should the requirements be regarding

the effectiveness of a transfer; or what would be the list of conditions to determine whether a party was a holder) for presentation to the WG at its next session.

189. The WG members discussed how the subgroups might best coordinate their work. Several WG members highlighted that the various topics were all interconnected, and it was agreed that special care would be taken to ensure communication and coordination between the subgroups. In particular, it was emphasised that a coherent and consistent approach to terminology and taxonomy needed to be adopted by all subgroups. The *Secretariat* confirmed that they would ensure close coordination across the four subgroups and would begin by convening a meeting of the co-chairs of the subgroups, the Chair of the WG and the Secretariat to coordinate and plan the work.

190. *Mr Ignacio Tirado (UNIDROIT)* noted the taxonomy aspect of the project would take a two-fold approach, first focusing on a mapping exercise in addition to defining concepts before going into greater detail. Regarding the involvement at the subgroup level of industry experts to assist with highly technical questions, he clarified that they would be invited to present at the next WG session in March 2021 for the purposes of ensuring full transparency.

191. *Mr Luc Thévenoz* queried what the expected format of the work would be (i.e., a set of principles or a model law). The *Chair* confirmed that the output was envisaged to be a set of principles, plus an accompanying commentary.

192. The *Secretariat* confirmed that it would circulate an email to all WG members and observers explaining the formation of subgroups and inviting all to volunteer for the subgroups of their choice. In terms of preparation for the next WG session in March 2021, the Secretariat would: (1) update the Issues Paper with the results of the discussion of the WG's first session; (2) discuss the report or deliverable of each subgroup; and (3) in March 2021, organise for presentations to the WG from all external participants.

193. The *Chair* thanked all of the participants for their contributions.

Item 7: Any other business

194. No further items for discussion were noted.

Item 8: Closing of the session

195. The *Chair* thanked all participants for their contributions to a very productive first session.

196. The *Chair* declared the session closed.

ANNEX I

AGENDA

1. Opening of the session and welcome by the UNIDROIT Secretary-General
2. Tour de table – Presentation of participants and observers
3. Adoption of the agenda of the meeting and organisation of the session
4. Election of the Chair of the Working Group
5. Consideration of matters identified in Issues Paper (Study LXXXII – W.G.1 – Doc. 2)
   (a) Preliminary matters (I)
   (b) Scope of the proposed Guidance Document (II; A – B – C)
   (c) Issues to be covered in the proposed Guidance Document (II; D)
6. Organisation of future work
7. Any other business
8. Closing of the session

ANNEX II

LIST OF PARTICIPANTS

EXPERTS

Mr Hideki KANDA (Chair)	Professor of Law Gakushuin University Japan
Mr Jason Grant ALLEN	Senior Research Fellow Humboldt University of Berlin Australia
Mr Reghard BRITS	Associate Professor University of Pretoria South Africa
Mr Marek DUBOVEC	Executive Director Kozolchyk National Law Center (NatLaw) United States of America
Ms Louise GULLIFER	Rouse Ball Professor of English Law University of Cambridge United Kingdom
Mr Charles MOONEY Jr.	Professor of Law University of Pennsylvania United States of America
Mr Philipp PAECH	Associate Professor London School of Economics & Political Science Germany
Ms Carla REYES	Assistant Professor Southern Methodist University United States of America
Ms Nina-Luisa SIEDLER	Partner DWF Germany
Mr Luc THÉVENOZ	Professor Université de Genève Switzerland
Mr Jeffrey WOOL	Senior Research Fellow Harris Manchester College, University of Oxford United States of America
Ms Mimi ZOU	Fellow University of Oxford People’s Republic of China

INTERGOVERNMENTAL ORGANISATIONS

EUROPEAN BANKING AUTHORITY (EBA)	Ms Elisabeth NOBLE Senior Policy Expert Banking Markets, Innovation and Products
EUROPEAN CENTRAL BANK (ECB)	Mr Klaus LÖBER Head of Oversight DG Market Infrastructure and Payments
HAGUE CONFERENCE ON PRIVATE INTERNATIONAL LAW (HCCH)	Ms Gérardine GOH ESCOLAR First Secretary Permanent Bureau
UNITED NATIONS COMMISSION ON INTERNATIONAL TRADE LAW (UNCITRAL)	Mr Alexander KUNZELMANN Legal Officer International Trade Law Division
	Mr Thomas TRASCHLER Associate Legal Officer International Trade Law Division

NON-GOVERNMENTAL ORGANISATIONS

THE AMERICAN LAW INSTITUTE (ALI)	Mr Steven WEISE United States of America
KOZOLCHYK NATIONAL LAW CENTER (NatLaw)	Mr Bob TROJAN Senior Advisor United States of America

PRIVATE SECTOR REPRESENTATIVE

THE INTERNATIONAL SWAPS AND DERIVATIVES ASSOCIATION (ISDA)	Mr Peter WERNER Senior Counsel United Kingdom

GOVERNING COUNCIL MEMBER

Mr Attila MENYHÁRD	Professor of Civil Law - Head of Department Elte Law Faculty Civil Law Department Hungary

OTHER OBSERVERS

BANCA D'ITALIA (CENTRAL BANK OF ITALY)	Mr Nicola DE GIORGI Senior Legal Counsel
	Ms Vincenza PROFETA Senior Legal Counsel

MINISTRY OF FINANCE OF THE CZECH REPUBLIC	Mr Alex IVANČO Department Director Financial Markets III Department

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	Ms Anna VENEZIANO Deputy Secretary-General
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