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If traditional courts and arbitral tribunals lack jurisdiction to hear these disputes, then who or what will?

Arbitration is the only viable approach for blockchain-based disputes. Once blockchain technology achieves sufficient widespread commercial use, disputes involving blockchain technology will inevitably arise. What is needed is a fast, inexpensive, transparent, and reliable arbitral system, having decentralized jurisdiction across an entire blockchain, that renders ultimate judgments.


Developmental efforts are underway in the field to provide fully automated arbitral platforms for use with blockchains. One example, which relies on game theory, is the “Kleros” platform, which executes on the Ethereum network as an autonomous organization. Clement Lesage et al., Kleros, Short Paper v. 1.0.7 (Sept. 2019) (available at https://bit.ly/3eYoW8e).

Another approach that recognizes the necessity of human decision-makers is embodied in the “CodeLegit” arbitration library. That library provides a set of coded provisions that can be incorporated into a Smart Legal Contract to principally integrate a traditional arbitral proceeding into the contract and allow either party to pause, resume, modify, and end the contract.


Such platforms ultimately may prove useful in efficiently and cost effectively resolving simple, straightforward disputes where rule-based economic analyses suffice. Many legal disputes, however, require, to reach a “just” result, subjective analysis by skilled, knowledgeable human decision-makers familiar with the industry and commerce at issue, the technology, and the underlying law, who render decisions not dictated reflexively by rules or algorithmic predictions but on their own wisdom accumulated through years of experience. There, automated platforms may prove to be inadequate.

An effective practical approach for blockchain administrators may well be to impose a contractual framework onto all their participants to which each participant would assent as a condition for joining the blockchain. That framework would: specify a certain arbitral forum (e.g., CPR [which publishes Alternatives], the American Arbitration Association/International Centre for Dispute Resolution, the World Intellectual Property Organization or other institution) to which participants would bring their disputes for resolution. The institution would have sufficient power to enforce all resulting resolutions, define a specific process, set forth a governing rule set, and define or reference governing substantive law.

An interesting parallel to this framework is the Uniform Domain Name Dispute Resolution Policy, or UDRP, and its associated rules, both adopted by ICANN—the Internet Corporation for Assigned Names and Numbers—on Oct. 24, 1999, used to redress cybersquatting of domain names (for certain generic top-level domains, such as .com, .edu, .org, and various country codes).

The UDRP is a voluntary alternative to national court adjudication. The UDRP specifies, for example, in Paragraph 4 substantive provisions that collectively constitute prima facie cybersquatting; enumerates, with reference to the rules, a summary arbitral procedure; and defines limited relief—cancellation or transfer—available to prevailing complainants.

Domain name registrants, wherever situated in the world, contractually agree to be bound by the UDRP as a condition of registering their domain names at accredited registrars. Those registrars also agree, through their ICANN accreditation agreements, to implement the UDRP as a necessary condition of accepting registrations.

This framework could be implemented by a global industry-wide consortia which might also, illustratively:

(a) Define interoperability standards of software components of BaaS and other blockchain infrastructures and also of APIs (application programming interfaces) between legacy

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software systems and blockchain infrastructure to facilitate and expedite development and commercial exploitation of blockchain technology, and permit competitive offerings of infrastructure software components;

(b) Certify, based on those standards, operability, and robustness of internal components for blockchain as a service infrastructure to promote their adoption and use; and

(c) Define and promulgate a scheme for accrediting arbitral institutions to provide dispute resolution services under the framework.

Aside from arbitration overcoming the principal obstacle to national litigation, jurisdictional limits caused by the decentralized nature of blockchains, arbitration presents the following other distinct advantages over litigation which uniquely render arbitration ideal for resolving blockchain-based disputes.

Proprietary Information Protection

Confidentiality is an important feature of arbitration. Protection of proprietary information is not only important to the parties; it is also important to arbitral institutions and its neutrals.

Under CPR rules, parties, arbitrators, and CPR itself will treat an arbitration, any related discovery, and the decision of the tribunal as confidential, subject to disclosure in connection with and as required by any judicial proceeding ancillary to the arbitration. Rule 18, 2018 CPR Non-Administered Arbitration Rules (available at http://bit.ly/2LUN8L5).

Maintaining privacy and security of personal information is also an important aspect of arbitration. Arbitral institutions now have policies to address their role in securing personal information, with arbitrators now dealing with information security early in the proceeding, usually during the preliminary hearing with parties and/or their representatives.

Specialized Knowledge

Not only is arbitration more efficient and cost-effective than litigation, it also gives parties involved in the dispute the opportunity to select their arbitrator(s), giving all parties confidence that an equitable solution will be reached. Jean Baker, Arbitrators Provide Technical Expertise, Confidentiality, Corp. Counsel Bus. J. (January/February 2020) (available at http://bit.ly/2MTTsqO).

With the complexity of the underlying technology and likelihood of technical issues, it is important to ensure that the tribunal addressing these disputes has specialized knowledge or expertise. Because software development is an integral part of a smart agreement, an arbitration clause relating to a dispute over a smart agreement should include a clause requiring arbitrators to have requisite experience in software development.

Procedural Flexibilities

An arbitral process is remarkably open-ended and relatively informal. It’s a blank canvas on which parties can collectively create the exact process they need and no more. Parties using Smart Contracts and Smart Legal Contracts should formulate a specific arbitral process for disputes.

Under institutional rule sets, parties are completely free and have total autonomy to decide what specific steps they will use and when, and all related aspects, subject only to affording mutual due process.

These rule sets, while sufficiently definite and inclusive to define a minimal but essential framework of an arbitral process that can yield a legally binding award, are intentionally broad and quite malleable to provide parties with sufficient latitude to exquisitely adapt the process to fit the dispute’s characteristics.


In some instances, successive blockchain transactions can occur quickly. Consequently, to be effective and prompt, an arbitral proceeding must be focused and short: reduced, as much as possible, to its essential elements to render an award in a manner that minimizes adverse impact on future incoming transactions.

Dramatically limiting the available time during which the proceeding occurs forces counsel to sharply concentrate their efforts from the onset on the core issue(s) in contention, excluding all tangential issues from discovery, briefing, motions, and the hearing itself. Where very little time is allotted for arbitration, all discovery and motion practice may well be eliminated altogether.

As discovery costs are often the largest cost-driver in an arbitration, its elimination alone can yield significant cost savings. Furthermore, a short process time may only permit the merits hearing to consume no more than a few hours—a morning or an afternoon.

An emergency arbitration, as defined in, for example, the CPR arbitration rules, is such a proceeding. 2018 CPR International Non-Administered Arbitration Rule 14, and Rule 14 in both the 2019 CPR Rules for Administered Arbitration of International Disputes and the 2019 Administered Arbitration Rules. (All CPR rules available at http://bit.ly/2IZMkUE).

An emergency proceeding can yield an award in no more than a few weeks, and, with the proceeding further condensed in time, in just a few days. As the needs of some blockchain disputes involving smart agreements may, to a considerable extent, parallel those of disputants seeking emergency relief, institutional emergency arbitration rules provide a particularly germane starting point for developing a rule set designed to handle disputes involving smart agreements.

Procedural Considerations

In a blockchain-related smart agreement dispute, much, if not all, the evidence will reside on the blockchain itself.

Depending on the nature of the dispute, it may therefore be necessary for arbitrators hearing such disputes to be provided with secure, read access to all salient (if not every) stored transactions on the blockchain. This requires that the arbitrators be provided with appropriate client software to securely access, read, and copy transaction information from.
individual blocks along with whatever permissions, cryptographic keys and/or other credentials are necessary to properly use that software.

**Typical Clauses**

As Smart Contracts are written in software code, they lack the typical clauses found in most legal contracts that establish the foundation for an arbitration, such as the consent to arbitrate, seat of arbitration, governing law, arbitral institution, and governing rules.

That does not mean, however, that such clauses do not apply to the arbitration of Smart Contracts. They do, in fact, apply. Parties need to address these aspects through a separate governing agreement.

As discussed in Part 1, a Ricardian Contract or a smart legal contract, that includes both “smart” (computer-executed) and “non-smart” (traditional text-based) clauses, allows parties to address all necessary contract terms well in advance of a dispute.

**Consent to Arbitrate**

Article II of the 1958 New York Convention on the Enforcement of Foreign Arbitral Awards (the “Convention”) requires that, for international enforcement under the Convention, agreements to arbitrate be in writing. It defines the term “agreement in writing” to be “an arbitral clause in a contract or an arbitration agreement, signed by the parties or contained in an exchange of letters or telegrams.”

Smart Legal contracts are, however, nothing more than software code, which usually only a programmer fully understands. It would therefore be nearly impossible to meet the Convention’s consent-to-arbitrate requirements without an analogous text-based contract as a companion to a Smart Legal Contract.

**Arbitral Seat**

The framework for the arbitration is established by the arbitral seat. Selection of the seat will have practical and legal consequences. For example, the law of the seat provides the procedural law for the arbitration, including a tribunal’s authority, powers, and duties. It also establishes the court where an award may be challenged.

Because smart agreements are geographically distributed by nature, it is important to consider the practical and legal effect a seat may have on the dispute being arbitrated. Given the novelty of smart agreements, parties should fully consider how the arbitral seat may affect the dispute and specifically whether smart agreements are legal, enforceable and arbitrable in the seat and where awards can be enforced. Once consideration is given to those factors, the seat can be specified accordingly.

**Enforceability & Validity**

Unless and until there is sufficient participant confidence and legal clarity on Smart Legal Contract enforceability—whether in the United States or elsewhere—parties intending for their underlying transactions to have a legally binding effect should consider incorporating arbitral clauses, governance and/or automatic enforcement mechanisms to limit circumstances in which they will require judicial intervention, and/or to facilitate enforcement of arbitral or judicial decisions.

Internationally, arbitral awards rendered in any signatory member state are enforceable, under the Convention provisions and subject to its conditions, in about 160 other signatory member states.

As the concept of awards for Smart Legal Contracts, produced through automated blockchain technology, is novel, a question invariably arises as to whether these awards constitute a valid award for purposes of enforcement under the Convention and particularly by national courts of its member states.

Article I of the Convention is silent on any specific form an arbitral award must take, including whether it must be in written form or not, or in a specific format, to be signed by the arbitrators. Hence, it is likely that, under the Convention itself, a blockchain-based award, authenticated in code, may be considered valid, though the authors are not presently aware of any ruling from a court or other forum which addresses the issue. Sara Hourani, “The Legal Reality of the Recognition and Enforcement of Cross Border Blockchain Based Arbitral Awards: Beyond Futuristic Idealism?” Off the Chain (May 18, 2019).

Assuming the Convention per se presents no evident limitation to recognizing and enforcing such awards, then the focus shifts from the Convention to national legislation, which might recognize and enforce such an award, or not.

In that regard, the Convention contains provisions that refer judges back to the application of relevant domestic law. For example, a national court may refuse to recognize and/or enforce an arbitral award if, under Article V(1)(e), it has not yet become binding on the parties or has been set aside or suspended by the competent court at the seat of arbitration—or if, under Article V(2)(b), it lies contrary to that nation’s public policy.

Consequently, Article V may limit recognition and enforcement of blockchain-based Smart Legal Contract awards that are only authenticated in code, if those awards are invalid under applicable national law at their seats of arbitration or their places of enforcement.

So far, the current legal framework under the Convention appears to allow for recognizing and enforcing blockchain-based arbitral awards if they are valid under the law at the seat of arbitration and/or the place of enforcement.

Clearly, over time, some jurisdictions may be more willing than others to recognize and enforce these novel forms of arbitral awards. In that regard, Article VII(1) encourages other multilateral or bilateral state agreements on the recognition and enforcement of arbitral awards to take precedence over the provisions of the Convention to encourage recognition and enforcement of foreign arbitral awards, potentially motivating agreements among member states to specifically validate blockchain-based awards. It remains to be seen, once appropriate jurisprudence starts appearing from the former jurisdictions, just how open they will be and what conditions, if any, they will impose.

**Governing Substantive Law**

The parties to an arbitration are free to contractually select, in their arbitration agreement, whatever body of substantive law they want to govern their arbitration. This is done by specifying, through a choice-of-law clause, the substantive law of a jurisdiction, preferably a jurisdiction having a long-term, consistent, fair, and well-developed body of commercial juris-
The focus of scholarly and practitioner debate has moved from whether substantial use of virtual proceedings is permissible and desirable to an evolving discussion of best practices to ensure that such proceedings operate smoothly and fairly. With more than a year of anecdotal experience behind us, this article discusses how the transformation has unfolded and addresses certain issues that still need some fine tuning.

**Permissible Process?**

Many leading arbitration platforms have long expressly or implicitly sanctioned use of virtual processes in connection with arbitral proceedings (see, e.g., LCIA Rule 19.2 (available at https://bit.ly/3rEjPhb)). And at least one professional group, the National Academy of Arbitrators, responded quickly to the impracticability of in-person hearings by issuing a formal advisory opinion broadly sanctioning virtual proceedings even over a party’s objec-

**Virtual Arbitration: Fad Or New Normal?**

BY NORMAN FEIT

The pandemic-prompted shift to virtual arbitral proceedings has inspired protocols and spirited debate concerning technology nuances, integrity of the proceedings, and even fundamental fairness, particularly where witness confrontation must be accomplished remotely.

Yet the concept of virtual arbitral proceedings—at least for selective portions—is nothing new. Panels have for decades used telephonic or video feed to accommodate pre-hearing proceedings, occasional witness testimony, and argument. What has changed dramatically, however, is the widespread movement to a predominantly if not entirely virtual platform rather than just for isolated pieces.

While the transformation may have been a grudging fallback for some when the pandemic escalated and dampened plans for short-term postponements of hearings, the success and efficiency of virtual proceedings solidifies them as a mainstay of arbitrations in at least some hybrid form. The economies of time and cost are simply too great to resist, whatever in-person advantages are sacrificed and potential pitfalls arise.

The focus of scholarly and practitioner skilled arbitrators with arbitral, legal, and technical expertise and experience; effective and efficient case management; financial oversight and management; separation and insulation of the arbitral tribunal from discussions with the parties concerning arbitral fees and each party’s financial status, and reliance on the institution for appropriate guidance by the tribunal and the parties.

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Blockchain Ledgers, considering the immutable trust and security they provide, and, by extension, smart agreements which incorporate these ledgers, are evolutionary technologies that are destined to experience rapidly expanding use across diverse fields. Through that use, disputes will inevitably arise. Arbitration offers a highly practical, if not the only realistic way to resolve them efficiently and effectively.

The author provides consulting and advisory services, including as a neutral, at New York City-based Feit Services LLC (see www.feitservices.com). He is a member of the CPR Dispute Resolution Banking, Accounting and Financial Services; E-Discovery; and General Counsel Panels of Distinguished Neutrals. (CPR publishes this newsletter.) He also is a member of the American Arbitration Association Roster of Commercial Arbitrators and a FINRA Arbitrator, and is on numerous mediation rosters. He is an adjunct professor at Fordham University School of Law. He is former global head of Litigation and Regulatory Proceedings at Goldman Sachs. He previously spent a decade practicing litigation with Sullivan & Cromwell. The author wishes to express his gratitude to David Brodsky, James H. Carter, Laura Kaster and Jack Levin for sharing their insights on this topic. His recent contributions to this newsletter include the March cover article, “To Triage or Not Triage?” 39 Alternatives 41 (March 2021) (available at https://bit.ly/3fuPM3), and “How ‘Blind’ Is a Mediator’s Proposal?” 38 Alternatives 135 (October 2020) (available at https://bit.ly/38oYhIo).

**The Institution And the Rules**

Through an arbitration agreement clause, parties are free to contractually select whatever institution they want to administer their arbitration, and whatever rule set they choose out of those then provided by the institution. They should have such a clause in any agreement underlying a Smart Contract and directly within a Smart Legal Contract itself.

Illustratively, in many contracts, the parties specify an institution and select its arbitration rules then in effect. Alternatively, parties can also choose to arbitrate on an “ad hoc” basis, i.e., having the arbitral tribunal rather than an institution completely administer the proceeding. Parties often do so to save institutional filing fees and other costs.

But a preference for ad hoc arbitration may be short-sighted. The advantages obtainable through institutional administration often significantly outweigh whatever cost savings an ad hoc process might provide, let alone when in a complex and time-sensitive proceeding, such as a blockchain-related arbitration.

Benefits of institutional administration include, for example, an existing panel of skilled arbitrators with arbitral, legal, and technical expertise and experience; effective and efficient case management; financial oversight and management; separation and insulation of the arbitral tribunal from discussions with the parties concerning arbitral fees and each party’s financial status, and reliance on the institution for appropriate guidance by the tribunal and the parties.

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The substantive law of well-known jurisdictions, such as the states of New York and California, are often used, as is English law. A choice-of-law clause should exist in any agreement underlying a Smart Contract and directly within a Smart Legal Contract itself.