Kluwer Arbitration Blog

ADR in the Blockchain Ecosystem: A Primer

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Certain blockchain-related disputes, such as those arising from the trading of cryptocurrencies, smart contracts, and the deluge of disputes resulting from the collapse of any cryptocurrency or token, are inevitable teething issues in the maturation of the blockchain. These disputes are likely to be resolved by both conventional and alternative dispute resolution (ADR) methods in the near future, resulting in the creation of precedents to guide the resolution of future disputes. However, the nature of blockchain transactions indicates that ADR methods are well-disposed to play a leading role in the resolution of blockchain disputes.

Peculiarities of the Blockchain Network

By their nature, transactions on the blockchain are intended to be pseudonymous, facilitated by a public cryptographic code which allows nothing more than the verification of transactions to and from the holder of that code. This pseudonymity inevitably results in serious issues when disputes arise, particularly when identifying the correct counterparty to disputes, since often such counterparties are hidden behind their public code. Thus, dispute resolution among such parties is often reduced to relying heavily on "John Does" (see, e.g., here), if not eschewing litigation altogether and relying heavily on on-chain solutions for dispute resolution. In the former case, it is entirely possible for the validity or even the enforceability of any ruling to be speculative at best. In the latter case, where current applications are less than satisfactory in their rigor and scalability, an added concern is the limited redress that on-chain solutions provide.

Other applications of blockchain technology carry with them their own issues. Smart contracts seek to remove the uncertainty from the execution of contractual obligations by reducing these obligations to self-executing transactions contained in discrete code. While these mechanisms intend to increase the degree of certainty in contractual obligations, the disconnect between programming language-based smart contracts and natural language-based legal norms can cause even greater uncertainty.

Among the bigger hurdles to establishing a dispute resolution mechanism for blockchain-related disputes is the principal premise of the blockchain: decentralization. The zero-oversight, peer-to-peer verification inherent in blockchain technology allows for transactions to be trusted without third-party verification, since all blockchain users are constantly checking and counter-checking the blockchain to confirm its validity. While at first blush, the trust inherently accorded to the blockchain network appears to provide benefits, the reality is that when the blockchain *cannot* be

relied upon to resolve a dispute, it seems unlikely that blockchain users will feel comfortable turning to state institutions to determine that dispute. After all, the promise of decoupling from central authority is part of what gives blockchain applications such as cryptocurrency and smart contracts their appeal.

ADR Solutions in Blockchain Disputes

Tailor-made Dispute Resolution

The flexibility afforded by ADR mechanisms – as a consequence of the importance placed on party autonomy in ADR – lends itself well to the resolution of blockchain disputes. While the general approaches to ADR are known quantities in practice, party autonomy often allows contracting parties to stipulate any manner of hybrid, multi-stage, culture-, religion-, or locality-specific mode of dispute resolution. Thus, where blockchain disputes are affected by peculiarities and circumstances which may be outside the purview of courts, ADR can provide a solution in the form of tailor-made dispute resolution.

Privacy and Third-Party Scrutiny

While the public interest inherent in litigation generally allows for some degree of public participation in proceedings, ADR avenues provide far greater scope for privacy. In *In re Teligent, Inc.*, the US Court of Appeals recognized that "[c]*onfidentiality is an important feature of mediation and other alternative dispute resolution processes*", and other jurisdictions have made similar observations.[1)] Confidentiality can be critical for certain blockchain applications. Cryptocurrency, for example, is reliant on the trust in the value assigned to it in order to maintain that value. This is doubly true for cryptocurrency exchanges, which compete with each other to create, establish, and maintain trust from their stakeholders. The available modes of privacy protection would allow networks, exchanges, and their stakeholders to resolve disputes without the inevitable trial by public opinion, which can and does follow certain disputes.

Technical Expertise

As the blockchain ecosystem often necessitates highly specialized applications of technical and legal expertise, ADR can also provide parties with greater confidence in any final resolution by allowing experts to resolve such disputes. Indeed, concerns have already been raised over shoehorning blockchain network solutions into conventional legal strictures (e.g., litigation) from various stakeholders. Both early-stage stakeholders and regulators alike would therefore be more comfortable engaging subject-matter experts to fill the statutory and regulatory gap, and it would benefit the ecosystem for such experts to play an active role in the development of precedent.

Speed of Decision-Making

Among the great promises of the blockchain network, alongside and as a consequence of its decoupling from central authority, is the increased speed with which transactions can be entered into, executed, and enforced. It is here that ADR again offers a solution that other forms of dispute resolution do not. Many jurisdictions have adopted the UNCITRAL Model Law on International Commercial Arbitration, which carries with it the promise of restricting the scope of judicial intervention and review of arbitral decisions.[2)] This decreases the likelihood that decisions in such cases will be tied up in endless appellate proceedings taking years—if not longer—to resolve. Furthermore, the advent of emergency arbitration could also aid in addressing fears of the dissipation of digital assets, by allowing injunctive relief in as little as 14 days, in some cases.

Current Arbitration Solutions

While it is clear that extant arbitral rules do indeed have sufficient flexibility to make arbitrating over blockchain disputes a possibility, specific initiatives have also been adopted to tailor arbitral solutions more closely to the needs of users.

As previously reported on this Blog, the Digital Dispute Resolution Rules, published in 2021, grant arbitral tribunals constituted thereunder powers specific to digital assets such as cryptocurrency and NFTs. Those powers extend to "*operating, modifying, signing or canceling any digital asset*" related to the dispute at hand, which would aid in preventing the dissolution of assets and the avoidance of enforcement. Further, these Rules attempt to resolve the issue of pseudonymity, by requiring parties to arbitration to "*provide details and evidence of their identity to the reasonable satisfaction of the tribunal.*" This would aid in ensuring the full and fair resolution of the dispute, and indeed, the enforcement of any award thereafter.

Further, the JAMS' draft rules on Smart Contract-related disputes attempt to cut to the heart of a dispute—the intended effect of the smart contract—by limiting deposition to "*one competent individual expert witness as to the meaning of the Smart Contract coding*" and limiting documents to be considered by arbitrators to "*the written contract, the computer code and the witness's testimony.*"

Notwithstanding these initiatives—which, to the author's knowledge, have yet to be tested in arbitral proceedings—we are sure to see any number of remedies, interim measures and expansions of authority arise from the current disputes already undergoing dispute resolution. As practitioners grow more used to dealing with blockchain disputes, the needs of users will certainly be reflected (both directly and inversely) in the awards and decisions resulting from these disputes. From that point, it will be the task of rulemaking bodies to formalize the solutions which have worked and build upon—or address—the issues that have been discovered in prior disputes.

Conclusion

A significant number of the peculiarities that make the blockchain network an uncomfortable fit for traditional modes of dispute resolution directly lend themselves to the use of ADR and, specifically, arbitration. The ever-growing list of applications for the blockchain network can only result in an ever-growing list of disputes for which tailor-made solutions are necessary. While it

cannot be doubted that many disputes can and will continue to be resolved by traditional modes of dispute resolution, the specific concerns of stakeholders on the blockchain network, including those enumerated by the author and others, will continue to require solutions that the varying modes of ADR are well-placed to fulfill.

References

?1 *In re Teligent, Inc.*, 640 F.3d 53 (2d Cir. 2011); *see also Symbion Power v Venco Imtiaz Construction Company* [2017] EWHC 348 (TCC) (holding that parties to arbitration have a "*legitimate expectation that arbitral proceedings and awards will be confidential to* [them].").

?2 Art. 34, UNCITRAL Model Law on Electronic Commerce.

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