

Kluwer Arbitration Blog

Arbitration Tech Toolbox: Are We Ready for the ArBot?

Abhilasha Vij · Friday, December 3rd, 2021

At the time the [New York Convention](#) (1958) and the [UNCITRAL Model Law](#) (1985) were being drafted, the possibility of sophisticated technology rather than natural persons running and controlling an arbitration must have seemed far-fetched. But, at the same time, the language employed in both the Convention and the Model Law did not expressly exclude the use of technological tools in conducting an arbitration or deciding the outcome of an arbitration. In fact, the Model Law [was amended in 2006](#) to respond to the evolving practices of international trade and technological development, such as the use of electronic communication.

While the underlying assumption of these instruments seems to remain that an arbitrator must be a natural person, such assumption is no longer fail-safe in the world of digitalization. The interpretation that only a natural person is capable of acting as an arbitrator seems limiting especially in light of growing demands for access to justice. Perspectives on this issue must be broadened to consider a more dynamic view - to include the possibility of reliance on the Artificial Intelligence (“AI”) Arbitrator, or Arbitrator-Robot (“ArBot”). In this post, I focus on the anatomy of the arbitral process and, in particular, the conduct of proceedings and the rendering of awards. I also discuss how use of an ArBot fits into the existing global framework for international arbitration as structured by the New York Convention and Model Law. For a detailed explanation on the use and mechanics of AI in arbitral decision-making, one could refer to my [previous article](#).

Today, virtually all stages of an international arbitration are facilitated by technology, with [tools widely available](#) for: selection of arbitrators, case management, discovery, legal research, document review and hearings. However, up to now, there is no all-encompassing AI tool that can conduct an arbitration from the commencement of an arbitration until the rendering of an award, without any human interference. It is predicted that AI tools will be able to conduct arbitrations and perform the tasks of neutral decision makers within the next [two decades](#), and commentators have already been questioning [whether such tools can ensure fairness](#). If the ArBot becomes a reality, what will the arbitral procedure look like? Will the requirements of the Model Law or the stipulations for enforcement under the Convention be met by an award rendered by an ArBot?

Conduct of Hearing

Party autonomy is the backbone of arbitration. This principle is enshrined in almost all rules and laws enacted on arbitration. Article 19 of the Model Law provides that subject to its provisions, the parties are free to agree on the procedure to be followed by the arbitrator for the conduct of arbitration. The parties may agree upon documents-only arbitration, limit the number of oral hearings, or agree upon an electronically conducted hearing. The only mandatory principle which holds weight is that the parties must be treated equally and be given a reasonable or full opportunity to present their case. Article 19(2) of the Model Law provides that the tribunal has the power to determine the admissibility, relevance, materiality, and weight of any evidence. This essentially enables an arbitrator to exercise discretion, including in the use of technology, in its assessment of evidence.

Where the parties agree to electronic proceedings, the arbitration would commence by filing an e-request for arbitration and would involve e-hearing, e-submissions, e-production of documents/evidence and would normally culminate in an e-award. For conduct of a seamless e-hearing, appropriate translation and transcribing technologies (such as that employed in [Opus2](#)) may be used by an ArBot. Voice recognition technologies also have the potential to substitute transcripts and facilitate e-hearings. Other tools incorporating natural language processing can analyse naturally occurring texts in e-submissions and witness testimonies, similar to human language processing skills. Technologies involving cognitive neuroscience can provide a means for lie detection and might be key to assessing witness credibility. AI tools such as [EDR](#) are already being employed in the review of documents for the purposes of e-discovery. The use of predictive coding in document production has also been recognised as [producing results that are superior](#) to traditional manual review. In simple contractual disputes, especially e-commerce disputes, the electronic documents will be readily available to be submitted to ArBot for evaluation. Encryption technology such as blockchain could enable secure transmission of electronic documents and ensure cybersecurity in the arbitral process. Individually, these tools are already facilitating the conduct of arbitration.

An ArBot will be a combination of the various technologies employed together to conduct an arbitration from the beginning until the end. Similar to a human arbitrator, the ArBot will be required to ensure that the parties are given equal treatment, are heard and have a full opportunity to present their case. This requirement could be programmed into the ArBot, and its verification could be a function within the domain of the administrator of the ArBot. The prescriptions of the Model Law are broad and may sufficiently accommodate the use of technology for the conduct of hearing, as described above. Given that party autonomy plays such an important role in arbitration, if the parties themselves agree to arbitration using an ArBot, their choice must be respected.

Arbitral Award

The ultimate goal of parties to an arbitration is to obtain an award that is final and

binding and that stands the test of the limited grounds of refusal of enforcement under the Convention.

Predictive analysis involves a machine learning from the data that is fed into it, formulating an algorithm, and applying it to the new set of data. Drawing from the various examples of applications of machine learning and predictive AI discussed in my [article](#), it may become possible to train a computer to render arbitral awards. In principle, even with the existing technology, ArBot can review facts and substantive laws, and predict outcomes. Since arbitration is known for confidentiality as one of its selling features, the issue of how data will be obtained to feed the algorithm is a critical one. Arbitral institutions are increasingly moving toward publishing international commercial arbitration awards, even if in redacted form. Court decisions on the proper interpretation of substantive laws are in the public domain. Together, the data can be used to train the ArBot.

The Model Law prescribes in Article 31 that an award must be in writing and that it must be signed by the arbitral tribunal. Article 32(2) of the Model Law prescribes that the award must provide reasons upon which it is based unless the parties agree otherwise. Some national legislation also requires that the award must be reasoned. Insofar as the award rendered by the ArBot is in writing and signed (electronically, of course) by the ArBot and is 'accessible' and 'usable' by humans (and, if required, reasoned), it could conceivably qualify as an award capable of being enforced. The award must therefore be interpretable by the various stakeholders involved in the process of arbitration, including the judicial forum in which a challenge to its enforcement would be heard. AI in its current form is not capable of providing an explanation for its decision in natural language. [Explainable AI \(XAI\)](#) is being used by several predictive analysis tools to study the impact of different inputs on the results produced by the machine. With further research into XAI, it may become possible for the ArBot to explain the important factors that it considered in rendering its decision. XAI would also enable the administrator of ArBot to inspect and trace the actions of the system. Therefore, XAI will be an important way forward to ensure transparency, accountability and reliability of such automated dispute resolution system.

One of the main potential obstacles to reliance on an AI-based decision maker is that an award rendered by ArBot might not stand the test of the grounds under the New York Convention. To seek enforcement of an award, the Convention mandates the production of an authenticated award and the original agreement, or certified copies. Regarding authentication and formalization of the award, many national regimes recognise e-signatures as valid authentication of an arbitral award. Additionally, award scrutiny (by humans) may be introduced to ensure that an award by ArBot meets any required standards of form and substance, thereby preventing the rendering of unenforceable decisions by the machine. This would help in making the decisions less susceptible to annulment by a national court.

That said, the above interpretation would only be helpful if the enforcement of such an award is not blocked under the Convention in the garb of public policy.

This possibility can be protected against by encouraging and moving toward interpreting international enforcement standards more liberally so as to condone the

use of non-human decision makers as arbitrators. The New York Convention is a living document that has assimilated drastic advances over the past 60 years. Public policy is a broad concept, interpreted varyingly by courts in the context of national or international standards and cultural, social, and political climate of the member States. The Convention or the Model Law do not define public policy. If reliance on the ArBot as arbitrator begins to catch on, it would be imperative for the member States to accommodate their standards of public policy to the growing demands of justice and fairness. Soft law instruments on the applicability of the Convention may be adopted to accommodate the technological advancements. The Model Law may also be amended to adjust to the new technologies. This may eventually result in transforming the national arbitration regimes of the member States.

Conclusion

Owing to COVID-19, the world entered a lockdown in 2020, and all trade and commerce was put to halt or forced to adapt to new realities. Technological disruption in the practice of international arbitration revived the industry and stimulated improvements in access to justice for parties to disputes. As a community, our experience signifies that technology is making our lives easier and is here to stay. In line with the technological advancements in the field of AI, ArBot is a realistic prediction of the future of dispute resolution. And when it arrives, we might as well be ready for it.

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The image shows a promotional graphic for Kluwer Arbitration Practice Plus. It features a blue background with a white checkmark icon and the text "Explore Practice Plus". Below this, there are two overlapping screenshots of the software interface. The top screenshot shows a user profile for "Gary S. Bore" with a "Relationship Indicator" section. The bottom screenshot shows a "Relationship Indicator" section with three donut charts and a list of results based on cases within a chosen area. The Kluwer Arbitration logo is visible in the bottom left corner, and the Wolters Kluwer logo is in the bottom right corner.

This entry was posted on Friday, December 3rd, 2021 at 8:05 am and is filed under Arbitration Tech Toolbox, Artificial Intelligence, New York Convention, Robojudge, UNCITRAL Model Law

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