THE EFFECTIVENESS OF ARTIFICIAL INTELLIGENCE IN SIMPLIFICATION OF ARBITRATION PROCEEDINGS: FICTION OR SEVENTH SEAL IN THE WORLD OF ARBITRATION?

Shakhzoda Tuychieva

Abstract: The term “online arbitration” has several meanings but is most often used to describe an arbitration conducted using remote communication technologies between the participants in the process. In this age of ubiquitous computing, discussing their use may seem redundant and obvious. In the proceedings held under the auspices of the world’s leading arbitration institutions, modern remote communication technologies are widely used. For example, correspondence between the parties to the process (parties, arbitrators, office) is carried out by e-mail; procedural documents and evidence are submitted electronically; organizational, meetings and interrogations of witnesses, and sometimes entire hearings, are conducted by telephone or videoconferencing; hearing transcripts are often stored using LiveNote systems, which allow attendees to view transcripts in real-time. With the spread of electronic document management, the disclosure of electronic evidence (e-discovery) is increasingly being used. The current project will mainly discuss the development of AI in Commercial Arbitration and its influence and impact on the speed and cost of arbitral proceedings. In the first part of the work, I will focus on the history and origins of AI in Arbitration mentioning the impact of COVID-19 and partial transfer to virtual hearings. Also, it will provide some data from UNCITRAL and ICC about virtual hearings. The second part of the work discusses and argues on effectiveness and efficiency of virtual hearings in arbitration, including translation and transcriptions during proceedings. I will analyze whether the e-discovery reflects on confidentiality and privacy matters. Third, I consider the most critical ones because the discuss the most problematic issue - arbitrators selection. Undoubtedly that 50% of the case on jurisdiction arise from arbitrator’s challenge, which reflects on speed and sufficient costs of the Parties. After discussing the selection tools, I decided to consider replacing arbitrators with AI, which deprived of objective or any possible challenge possible causes. Although I cover arbitration matters, in this Part, I want to provide with comparative analysis of the litigation process – judge selection and its possible replacement with AI. The conclusion will provide weaknesses and possible problems with these issues, including relevant solutions or ideas to discuss.

Keywords: Artificial Intelligence, E-Discovery, Covid-19, Online Arbitration, ADR, ODR, Arbot

* Penn State Law, University Park, Pennsylvania
Table of Contents

Introduction ........................................................................................................................................... 139
I. Efficiency of Arbitration in Virtual Hearings .............................................................................. 140
II. AI and Arbitrator Selection Processes ....................................................................................... 144
Conclusion ........................................................................................................................................... 147
The Effectiveness of Artificial Intelligence in Simplification of Arbitration Proceedings: Fiction or Seventh Seal in the World of Arbitration?

INTRODUCTION

The term “online arbitration” has several meanings but is most often used to describe an arbitration conducted using remote communication technologies between the participants in the process. In this age of ubiquitous computing, discussing their use may seem redundant and obvious.¹

In the proceedings held under the auspices of the world’s leading arbitration institutions, modern remote communication technologies are widely used. For example, correspondence between the parties to the process (parties, arbitrators, office) is carried out by e-mail; procedural documents and evidence are submitted electronically; organizational meetings and interrogations of witnesses, and sometimes entire hearings, are conducted by telephone or videoconferencing; hearing transcripts are often stored using LiveNote systems, which allow attendees to view transcripts in real-time. With the spread of electronic document management, the disclosure of electronic evidence (e-discovery) is increasingly being used.²

According to traditional arbitration rules, there are no barriers to online arbitration. It requires solving practical problems of identifying the parties to electronic communication and their representatives and creating electronic document management systems that will ensure control over the parties' actions with evidence loaded into such systems. However, there is no doubt that the practice will, in any case, follow the path of increasing the use of online technologies in arbitration and will be able to overcome all difficulties. Suppose online arbitration does not save a lot of money and time. In that case, it at least makes the interaction between all parties involved in the process: parties, witnesses, experts, arbitrators and the arbitral institution. Thus, there is simply no alternative to the further spread of online arbitration.³ Large companies sometimes have numerous disputes about the negligible value they would prefer not to arbitrate because the costs and hassle would be greater than the potential benefits. In this case, online arbitration may be the most effective solution.⁴

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⁴ The Hague Conference on Private International Law, Draft Guide to Good Practice on the Use of Video-Link under the Evidence Convention 2019, available at: https://assets.hcch.net/docs/e0bee1ac-7aab-4277-ad03343a7a23b4d7.pdf
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The conclusion will provide weaknesses and possible problems with these issues, including relevant solutions or ideas to discuss.

I. EFFICIENCY OF ARBITRATION IN VIRTUAL HEARINGS

Recently, the CIArb has issued a new Framework Guideline on the Use of Technology in International arbitration.\(^5\) Interesting features for research in this guideline include arbitrator selection tools to provide impartiality and independence. The work of this tool is based on data that selects relevant arbitrators with relevant experience from a specific list of institutions or from the general database. Also, the question at stake is whether confidentiality and privacy will be observed in online hearings, how to avoid cyber-attacks or data loss, and what will be the cost of the hearings. The rules also envisage transparency of remote hearings. For instance, the online hearing may entail parties joining at different times of the day or night with different impacts on their levels of concentration. Arbitration after post pandemic could be described as efficient, affordable, and generally reliable with tools that have been developed to ensure that all parties in attendance have audio-visual access to each other, as well as to digitized hearing bundles and live transcripts.\(^6\) We also consider it necessary to highlight electronic document management. Since we are talking about the development of the e-justice system, we should understand it in a broad sense as e-court litigation and all related processes, including the filing of arbitration applications and other procedural documents via the Internet, the filing and use of evidence in electronic form and the conduct of judicial meetings online.\(^7\)

Elements of electronic arbitration are possible when a case is created electronically. Since the arbitration process is formalized like any other legal process, the electronic arbitration


\(^6\) Antonios Dimitracopoulos, Virtual Hearings In Arbitration: Are They As Effective As They Are Efficient?, available at: https://www.mondaq.com/arbitration-dispute-resolution/962616/virtual-hearings-in-arbitration-are-they-as-effective-as-they-are-efficient

system is implemented through electronic document management and case management. For the effective use of electronic document management, it is necessary to solve several tasks:

- Firstly, the regulatory framework should strike a balance between the requirements of the Arbitration Law and the Information Technology Law;

- Secondly, the system should optimally combine the openness and accessibility of litigation with reliable information protection;

- Thirdly, it is necessary to find a balance between the legal requirements of maintaining paper and electronic records;

- Fourthly, the system of electronic document management and electronic arbitration itself should be cost-effective, without unnecessary and unjustified costs for maintaining documentation in electronic form.

A progressive approach, the use of electronic documents, electronic document management and, as a result, a reduction in arbitration costs do not exclude the problems identified by practice. Their analysis concludes that the careful use of electronic documents is justified. However, all arbitration institutions worldwide are exploring the use of online arbitration and are developing suitable approaches to address emerging issues. Problems with the use of electronic documents in arbitration include:

1. Difficulty in ensuring the integrity of documents, establishing the authenticity of documents that are not certified by an electronic digital signature. The record received by the Arbitral Tribunal may contain inaccurate information due to improper copying of documents sent by e-mail. The document is not subject to disclosure. Possible distortion of e-mails (cover letters, notifications);

2. Failure to provide an adequate level of confidentiality. As an alternative to an electronic digital signature, it is proposed to provide access to the electronic file for the parties to the process by issuing a password and login for access. For example, according to the draft RAA Online Arbitration Rules, access of arbitration participants to the online dispute resolution system is provided by providing a login and password to authorized representatives of the parties. When working with the System, each person acting on behalf of a party to the

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The Effectiveness of Artificial Intelligence in Simplification of Arbitration Proceedings: Fiction or Seventh Seal in the World of Arbitration?

arbitration is personified and represents that party in the arbitration. All actions performed by such a person in the System are considered the actions of this party;

The login and password must be protected by the person they are issued, but the password and login can be lost, stolen, etc. It does not matter whose fault it is; more importantly, confidentiality is violated, and significant damage (not only material) will be caused to arbitration participants. To prevent unauthorized access to the online dispute resolution system, arbitration institutions use appropriate system security software;

3. The difficulty of achieving a balance between paper and electronic documents at the stage of initiating the arbitration. We are talking about the joint filing of electronic and paper documents. In particular, if the goal is fully electronic administration of the arbitration procedure and the claimant files a request for arbitration by filling out a standard electronic form. Still, at the same time, a paper copy of the contract containing the arbitration clause or arbitration agreement is sent. It is unclear how to achieve such a combination and which priority should be given to an electronic document (which will be delivered faster) or its paper copy. Simultaneous sending of a copy of the agreement on referral to arbitration can be made by mail (letter) and electronic documents on the same day. The electronic document will arrive on the same day, and the letter - only a few days later, that is, the simultaneity of sending documents will be observed, but it is not clear how to ensure that the documents arrive at the arbitration court in complete form.

4. Determination of approaches to the form of the arbitration clause. This problem is related to the previous one. This stems from the particular importance of the arbitration clause, which, as stipulated, for example, in Russian and Belarusian legislation, must be in writing. The legislation of some countries allows reservations to be made either orally or electronically. If this approach is implemented in the legislation of both countries, it will be easier to form a single set of electronic documents. However, given our traditions and mentality, we venture to assume that the adoption of a number of legislative acts will take some time;

5. Lack of an institution of proper notification in electronic form. In general, there is still no unequivocal answer to how to notify the parties quickly and reliably in electronic arbitration. All existing methods (e-mail, SMS, etc.) do not guarantee that the notification

will be carried out. There have been attempts to simply assume that sending means receiving a message electronically, but this is not the case.

Moreover, it is worth considering some practical implications and sufficient patterns used in the arbitration to facilitate and promote AI in this dispute resolution.

2.1. Kleros. The Kleros platform is designed to resolve disputes through arbitration in smart contracts. In short, this platform offers “decentralized justice”. The arbitration process on this platform can be activated automatically upon non-execution or improper execution of a smart contract and freezes the funds transfer until the conflict is resolved. So, to activate this process, the parties to the smart contract must first select Kleros as a dispute resolution service provider in their smart contract and agree on the main features of the process (the so-called Kleros sub-court, in which the dispute will be considered, the number of jurors (arbitrators) in a case, etc.). This fact can be regarded as the conclusion of an arbitration agreement and confirmation of the consensus of submitting a potential dispute to arbitration.

The main idea of this platform is to emphasize the importance of Thomas Schelling’s theory that in the absence or impossibility of negotiations, people will choose “focal points” to reach a consensus. Thus, in the Kleros system, the decision is made by a vote of a “jury” who are anonymous and are selected by the platform based on their nomination, depending on their industry of specialization (for example, e-commerce, insurance or transport). Jury fees are paid by the party that initiated the trial.

Despite the feasibility and relative accessibility of these methods, first of all, there is a possible problematic recognition and enforcement of such a decision by the Kleros jury, as well as the issue of collecting procedural expenses for jury fees, evidence collection, etc.

I disagree that decisions on the Kleros platform are unenforceable since now 160 countries worldwide are signatories of the New York Convention of 1958. Suppose this platform, instead of jury decisions (an attribute of national legal proceedings), introduces a system of international arbitration. In that case, enforceability given decisions by national courts can be guaranteed to some extent.

16 According to Schelling's legal-theoretical model, these "focal points" reflect each person's expectations of what the other person expects from him, which, in turn, will push people to work together, as a result of which the parties achieve "win-win" results. Thomas C. Schelling “The Strategy of Conflict”, p. 29 (http://elcenia.com/iamapirate/schelling.pdf)
18 The Kleros Handbook of Decentralized Justice (https://ipfs.kleros.io/ipfs/QmZeV32S2VoyUnqJsRRCh75F1fP2AeomVq2Ury2fTi9V4z/Dispute-Resolution-Kleros.pdf)
2.2. Juris Platform. To protect a smart contract in the legal field, this platform offers the integration of the Juris protocol. This will include the Juris arbitration code in the smart contract.

The inclusion of this arbitration code in a smart contract provides access to the Juris contract tool library, which, in turn, allows you to generate a unique arbitration agreement code for inclusion in a smart contract.20

Thus, in the event of a dispute, the claiming party accesses the smart contract through the Juris control panel and begins the process of initiating the Juris protocol.

The system automatically freezes the activities of both parties under the smart contract and automatically creates an individualized account to hold all funds. It collects all the necessary documents in one case and sends a notification to the parties involved about the process. Further, the dispute resolution process provides for the automatic transfer of the case to mediation and arbitration, in particular:

a. Self-mediation. Through the Juris dashboard, disputing parties will access a wide range of mediation options. The instruments allow the parties to agree to enforce the contract as originally written mutually, to return all parties to their positions before the contract was signed (analogous to smart restitution), or any intermediate solution that all parties considered fair and implemented.21

b. SNAP solution. If it is impossible for the parties to resolve the conflict themselves, they can activate the Simple Neutral Arbitrator Poll (SNAP) procedure. This procedure does not provide for the issuance of a decision binding on the parties to the smart contract. On the contrary, it gathers the necessary number of active arbitrators of the Juris platform to issue their opinion on how the parties should act in this situation.

c. Mandatory PANEL Solution. Suppose the parties are unable to resolve their dispute to the satisfaction of each party. In that case, either party may activate the Juris Peremptory Agreement for Neutral Expert Litigation (the “PANEL”).

The founders of the Juris platform insist on the enforceability of PANEL decisions based on the New York Convention of 1958, as it is analogous to arbitration with an automated method for resolving disputes that have arisen.

Methods for automating arbitration are highly diversified, and most of the ideas involve implementing infrastructure for virtual hearings and/or artificial intelligence.

II. AI AND ARBITRATOR SELECTION PROCESSES

Recent research questions the possibility of AI tools to perform tasks of neutral decision-makers and whether it will provide fairness as the main component of arbitration. The feature of robot arbitrators is that they can provide and recognize any translations transcripts based on

21 Ramsay Brown et. al. “Juris Whitepaper 9/18/18”, p. 17; See: https://drive.google.com/file/d/1318kIGEYL4g02VudL-C-BCnvpKujTnbF/view
cognitive neuroscience. Encryption technology such as blockchain could enable the secure transmission of electronic documents and ensure cybersecurity in the arbitral process. Recently arbitration community started discussion about Arbitration Bot (the “ArbBot”), which could serve as replacement of the arbitrator person. Similar to a human arbitrator, ArbBot will be required to ensure the equality of arms during the arbitration. As to the recognition and enforcement of the award, with detailed research of previous cases, various examples and outcomes, ArbBot could be programmed to render arbitral awards. However, its recognition and enforcement under New York Convention might be questionable and not stand the test of the NYC grounds. Still, NYC could be adapted to amendments in the global and interpreted “technologically”. It still seems as sci-fi fiction, therefore this part of the work will discuss arbitrator selection tools to provide optimal impartiality and independence of the arbitration. Moreover, it further elaborates Artificial intelligence as arbitrator and comparatively AI as judge with decisive abilities on the dispute matters.

3.1. Arbitrator selection tools and diversity on arbitral panels

In the Upper English Court *Pyrrho Investments Ltd. v. MWB Property Ltd.* (2016), electronic document disclosure technologies were used through coding algorithms for the first time in the history of English legal proceedings. In this corporate breach of fiduciary dispute, there was a thorny issue of finding relevant correspondence in e-mail recovered from one party’s backup tapes, where the total number of documents was 17.6 million. In the second stage of electronic disclosure of records, the number was reduced to 3.1 million through electronic de-duplication. From the point of view of further accelerating the consideration of the case, the court used the most convenient tool for electronic disclosure of documents, which benefited the administration of justice. Electronic disclosure of documents is the discovery of a (possible) electronic document (e-mail, voice mail, databases, documents stored on servers) and granting the opposing party the authority to examine this document.

The system of electronic disclosure of documents in international practice has become widely used, in particular, thanks to the Protocol on Electronic Disclosure in International Arbitration, developed by the Certified Institute of Arbitrators (CIArb), which encourages arbitration practitioners and the arbitral tribunal to raise the issue of electronic disclosure of a document at the stage of preliminary hearings on the organization arbitration process, which will also automate the process of obtaining evidence and their other presentation.

3.2. Artificial intelligence as an arbitrator.

There is a growing number of followers of the innovative idea to use artificial intelligence technologies as an arbitrator in the arbitration community. Although arbitration deals only with private rights, there are still certain mandatory requirements - both procedural and formal - to protect the interests of the parties and the integrity of arbitration. The use of artificial intelligence tools in adjudication may violate the procedural rights and public policy of the seat of arbitration. Thus, the use of artificial intelligence in the adjudication process should be very limited. At this stage in the development of artificial technologies, they are proposed to be used to study and generalize the law, process and analyze the arguments of the parties, as well as to cross-check the decision of the tribunal against the decision of artificial intelligence, since now transferring the final decision and the outcome of the case to the competence of a computer algorithm can be fraught with systemic failures, ultimately leading to a breakdown in the administration of justice.
When analyzing this thesis, it should be considered that almost every arbitration begins with the choice of an arbitrator (arbitrators) by the opposing parties. And now, the general perception is that replacing a human arbitrator with an AI arbitrator can have both positive and negative effects.

As for the disadvantages of the AI arbitrator, the main disadvantage is the right to make decisions by the AI arbitrator. The second stage of arbitration is the presentation of claims and defense on both sides. The question arises whether the AI arbiter would be smart enough to process both sides of the story, link the actual position to the law, and then decide. This is a pertinent question because a machine, even an artificial intelligence machine, is only as smart as the data that has been entered into the system. Indeed, the “mind” of an AI arbiter will be limited by information that limits its focus. In other words, the one who enters data into the artificial intelligence program will be able to influence the final decision of the AI arbiter.

Information embedded in a computer program has two origins: it may be included by third parties and/or by the programmer who created the algorithm. When developing or entering information into a computer program, the presence of this significant risk is noted - the likelihood of “contamination” of computer code by unconscious prejudices of people involved in the development process. The results of the conclusions of a computer program, as noted, cannot be objective, because reality itself is biased.

Among other things, in various jurisdictions there are significant restrictive rules for resolving a dispute by an AI arbitrator. So, for example, you can analyze the question of the arbitrability of a particular dispute. In AT&T Technologies v. Communication Workers of America, et al. The U.S. Supreme Court held: “Unless the parties expressly and unmistakably provide otherwise, the question of whether the parties have agreed to arbitration (a matter of substance) shall be decided by the court and not by the arbitrator.” However, the U.S. Supreme Court has not established “who” should determine the arbitrability of a dispute if the intention of the parties can be clearly and unmistakably determined. This issue was further addressed in First Options of Chicago v. Kaplan by the Supreme Court with the proviso that this will depend on what the parties have provided for in the arbitration agreement. In other words, the arbitrator should have applied to the court to determine the arbitrability of the dispute that had arisen, even if he believes that there is a clear and unmistakable indication that the arbitrator has jurisdiction for such a determination. If an AI arbitrator (that is, a computer program) is involved in the case, does he have to go to court to obtain such approval of the arbitrability of the dispute?

In our opinion, despite the noticeable progress in the capabilities of artificial intelligence, there is another significant drawback - the motivation of the decision. When deciding, the arbiter is obliged to provide the reason and the logical chain of such conclusions, while the current situation with computers is such that their algorithms can calculate the decision but are not able to provide explanations for their decisions.

Despite the presence of numerous shortcomings in the existing technologies of artificial intelligence, in our opinion, they need to be trained and developed in them the ability to adapt to different legal models. This can only be achieved if these technologies are gradually used in resolving disputes under new generation contracts that were concluded on blockchain platforms as a probation. With the subsequent adaptation of the AI arbitrator to the specifics of practical issues, we can get a perfect technology for out-of-court dispute resolution.

3.3. Artificial intelligence as a judge
It is undeniable that the intervention of artificial intelligence technologies in the decision-making process in legal proceedings cannot guarantee the observance of the goals and objectives of justice, since each case is unique, which laid the foundation for the discretionary powers of judges. However, it is worth recognizing that today algorithm technologies have already begun to expose and indicate what is “right” and what is “wrong”, in particular, internet algorithms decide which advertising posts should be visible to Internet users, also about which employees to fire and even send to prison.

Thus, in the United States, in criminal proceedings, artificial intelligence technology “COMPAS” is used, which bases its decisions on the basis of forecasting analytical data on the criminal risk assessment system. Followers of similar risk assessment systems make the criminal justice system fairer by replacing judges’ bias and intuition with a more objective assessment of the situation. However, even this system could not avoid reproaches and doubts about impartiality, since in 2016 ProPublica published an analysis of the decisions of the COMPAS platform accusing it of bias against African Americans, since the platform in relatively comparable cases where African Americans and whites were accused, classified African Americans as “high risk” offenders.

It is worth making a reservation that in criminal proceedings, in most cases, the court’s decision is reduced to finding guilty / not guilty or acquittal. In this plane, the use of artificial intelligence seems acceptable, while the possibility of using these technologies in making a decision in civil or economic proceedings is complicated by a plurality of elements.

However, many jurisdictions have adopted the practice of A.I. dispute resolution. For example, the states of Michigan, Ohio, New York, and Texas already have unique dispute resolution programs in civil, tax and transportation legal relations through artificial intelligence.

Given the differences between litigation and arbitration, most of the reasoning concludes that AI judges should not and cannot fully resolve disputes. However, this does not mean that it is proposed to abandon technologies completely. On the contrary, they are proposed to be used as one of the stages that the parties to the dispute are invited to go through before taking the case to court and allow the judge to evaluate the decision of the AI judge. The main reason for such conclusions is the interpretation of identical factual data by a computer and a person differently.

CONCLUSION

Artificial intelligence cannot substitute arbitrators and practitioners. It should be taken in mind that AI is sci-fi, but alternatively developed due to statistics and development of technology. It can be used in any machinery field of human development, but in law it is still hardly imagined because of inconsistent, unique approach of the lawyers to the dispute resolution matters. The attempt to automate law (particularly, the time-consuming and labour-intensive processes) has been ongoing for decades, but still need further elaboration and scholar research. So far, it has only been successful in performing bespoke legal tasks and aiding the practitioners. AI has revolutionized many processes like e-discovery, and greatly improved procedural efficacy. However, as to complete replacement of human functions in dispute resolution process, AI is not manageable and constituted as fiction. Thus, I believe that that day when technology would allow decision-making by machine arbitrators, time spacing will be possible throughout the times and humanity would discover planets outside the solar system.