



## Concise Review of Technology Innovation in Industrial Arbitration Practice: An International Perspective

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### Abstract

Corporate communications lie at the heart of technology innovations in respect of modern industrial and commercial arbitration practices. As human interactions increase, commercial disputes and large-scale industrial conflicts are bound to occur. A veritable solution for this technology related emergence of dispute is anchored on the ability to use innovative technologies to the advantage of improvement in human relationships. The study has concisely shown that current practices that are contingent on advancement in technology applications can be used to increase efficiency of the industrial arbitration process. These practices view the communication infrastructure as the *virtual fourth party* that should be properly understood and equipped to harmonize the efforts of all other agents in the digital arbitration process, in the interest of justice. Further, the study also discussed the fundamental concerns for the design of an effective virtual fourth party digital platforms for arbitration proceedings. It also provided the best procedure that could be adopted by any *digital jurisdiction* for integrating parties in an arbitration proceeding into one central platform where exchange of pleadings, exhibits, arguments and any other issues can be effectively carried out. The findings of the study therefore affirm that as technology becomes increasingly complex, disputes arising from those technologies also assume complex dimensions which requires well articulated solutions.

*Keywords: scope of influence, disputable issues, digitally enabled arbitration practice, Artificial Intelligence, digital twin applications, online arbitration, equitable trust, virtual fourth party, binding arbitration instrument.*

### 1.0 Introduction

Industrial arbitration practice is premised on the effectiveness of corporate communications that reliably depends on information characterization and compartmentalization within the ambit of an expanded scope of activity. This expanded scope of activity implies the identification of the various interrelationships that involves exchange of values for service benefits or monetary compensations; within the context of specific activities incidental to a defined industrial sector.

The fundamental issue of industrial arbitration practice is the fact that the power or authority to arbitrate is covered under the parties agreement.<sup>[1]</sup> This means that once the parties have submitted to the arbitral jurisdiction that their agreement has stipulated, then the laws and rules of arbitration of that particular jurisdiction takes over the remainder of the processes.<sup>[2]</sup> Hence, the arbitrator having assumed jurisdiction, is at liberty to direct the parties to call their witness to give evidence, tender documents, and make submissions in order for the arbitrator to assess the value or weight of the evidence adduced and evaluate the submissions or presentations of the parties, including their general dispositions and behaviours before the panel.

In view of the foregoing template, this paper is designed to concisely review modern international practices in relation to the impact of technology innovation in the discharge of duties incumbent on an arbitration panel. It shall also examine the nature and scope of influence of technology innovation on

industrial arbitration practice. Hence, the entire review is about the dynamics and disrupting changing patterns of communication within the confines of industrial development. This means that society is affected when a change in communication pattern remarkably results to a change in behavior and social attributes.<sup>[3]</sup> Consequently, institutions and values that represent common societal aspirations are directly affected by the intervention of new technologies.<sup>[4]</sup> Unarguably, this view account for why new technology application catches up with all aspects of human endeavor, and changes the approaches to work or interrelationships.

Since arbitration practice is all about resolution of conflicts, this paper shall review the challenges that confront arbitrators and the parties in the process of adoption of new technology or reliance on digitally driven communication applications, in arriving at an enforceable arbitral decision or award. The important issue here border on the fact that communication between parties can be conducted under modern arbitration rules that provides for such remote hearing. This possibility thus draws impetus from the influence of new communication technologies on the conflicts that they are intended to solve, in addition to the different areas of deployment of such technology; which must be particularly intended to increase the efficiency of arbitration practice and promote sound justice delivery within a specific time frame and available resources.

## 2.0 Technology Innovation and Dispute Emergence

It is important to note that the advent of technology increased interpersonal interactions and also brought people with divergent views and interests together to perform single tasks. These interactions are capable of generating different forms of disagreements resulting conflicts and disputes of varying proportions. This effectively means that the advent of technology has a direct and indirect consequence of dispute emergence. As a matter of general observation, this understanding is based on the fact that increase in human interactions has the resultant effect of increase in possible range of disputes, whether such relationships are driven by new technology or not.

Incidentally, increase in computer hardware and networks for specialized applications also possess the capacity for increased possibilities of disputes. As was famously observed by Fisher, Ury and Patton<sup>[5]</sup>, “conflict is a growth industry”. This view pre-supposes the fact that the dynamics of creative enterprises, wealth creation from original ideas and management of change all possess the unlikelihood of smooth human relationships.

Further, growth industry of conflicting tendencies also implies the introduction of new conflict resolution mechanisms and strategies. These disputes settlements also bring to bear the need for expanded legislative framework that will serve as the basis for unbiased approach by arbitration panels.

Having settled the fact that industrial development like the emergence of new technologies usually come with varying degrees of dispute connotations and colorations, the following components are characteristics of such conflict indication:

- i. new ideas that can create business models or other forms of human relationships for direct and indirect benefits are not disputes free. This means that the potentials for disputes are inherent in business models and are only noticed as the businesses transit the various stages of change and incidental socio-economic responses. This means that at the inception, understanding all perspectives of dispute possibility are not possible or feasible. Was this understanding possible, then disputes can be prevented from happening.
- ii. the advent of a new business introduces resource and wealth generation which invariably thrive on information that are contained in operational data. The generation, processing, decision and performance evaluation feedback cycle of the management of such data resources are often

fraught with conflicts and disputable issues that were not perceivable and as such not provided for at the onset of such businesses.

- iii. as the business venture increases the diversity of its operation, more data would be generated, which will determine the direction of decision. This increased data gathering is also a potential for the growth of conflict and dispute.
- iv. technology creates value which in itself is not static and can be frittered away by the passage of time. This implies that value creation on the initiative of technology is significantly a time dependent resource that creates pressure on managers who must devise strategies to secure its increasing value. The drive to ensure that the value created by the new technology is protected and expanded, is likely to cause disputes requiring settlement.
- v. in the world of competition, complexity of product design and service rendering is often a mark of advantage. However, this strategy has been shown to possess possibilities for conflicts and disputes. In view of this understanding, complex systems introduce complex disputes than would normally be acceptable. <sup>[2]</sup> This is more appreciated by modern trends where computer program application undergoes constant changes to match with the pace of development and societal needs. These continuous changes often increase the possibilities of non-compliance with proprietary regulations, thus resulting disputes.<sup>[6]</sup>
- vi. where the scope of interest does not make it complicated to report a poor performance or infringement, then disputes are likely to be on the rise. On the other hand, where the organization fails to implement strategies that enhances customers' or clients' care, then disputes are likely going to rise due to issues of low attention to disputable issues.

In view of the foregoing, a clear illustration of the foregoing components of conflict generating dispositions of new technology is the online marketing store of eBay, where they have successfully implemented some online dispute settlement strategies that can handle over sixty million disputes yearly without recourse to arbitration or court proceedings.<sup>[7]</sup> Further, growth in this disputes settlement industry has also resulted the establishment of Internet Corporation for Assigned Names and Numbers (ICANN), which in turn originated and established the Uniform Dispute Resolution Policy (UDRP). This policy is a non-binding arbitration instrument and process that has enabled the smooth operation of online arbitration for which complaints resulting from online disputes are hardly brought to court.<sup>[8]</sup>

### **3.0 Process and Procedures in Virtual Arbitration**

As businesses advance from domesticated entities to internationalized conglomerates, their conflict situations also migrate to wider global spaces. This further creates opportunities for better arbitration solutions within the confines of technology driven virtual domains. For this to be possible, it is important to note that, as in the case of face-to-face or physical arbitration process, communication and management of the flow of information in terms of processing is the fundamental basis. This imply that while human arbitrators ask questions and evaluate documents, presentations and submissions, the virtual arbitration process is superintended by computer software that also requires input of relevant data and information which are processed according to laid down procedures and written programs.

In some cases, these programs process the information and leaves the decision to human arbitrator or arbitration panel members. In view of advancements in this direction of digitally enabled arbitration practice, studies have shown that the integration of Artificial Intelligence in order to activate and operate programmed tasks is a promising development. This AI application improves on its own performance without requiring any human or machine level interventions.<sup>[9]</sup>

Accordingly, AI could be used in arbitration proceedings to navigate all or most of the applicable laws or judicial precedents and pronouncements, thereby evaluating and authenticating the credibility of the evidence given by witnesses and specifically produce within the available resources more objective reasoning. This can significantly account for all information relevant to the nature of the case, in excess of human capability. Consequently, AI arbitration software seem to possess ability to surpass human performance in terms of quality of reasoning, time management, resource allocation, efficiency and over all decision making.

Incidentally, the foregoing is made possible by reason of communication platforms where input data are processed. Thus, bringing to relevance the fact that communication and input information processing creates a sense of a fourth counterpart in the arbitration process. This crucial role is thus, determined by the nature of disputes before the virtual arbitration panel, and further rely on the nature of information process and derivable results.

This process must thus, rely on *equitable trust* that can be reposed on the system, the convenience of use, ease of configuration and related expertise of its functioning.<sup>[10]</sup> It has been further asserted that the three identified critical issues above must form the basis of the deployment of any effective virtual arbitration tool or platform, that can viably survive competition and durability.<sup>[10]</sup> Further, the identified components are not designed to maintain a static position. Rather, they can be varied on the basis of their *sphere of influence* over the subject matter of consideration. Fortunately, as studies show, the initial state in the development of Online Dispute Resolution (ODR) indicated a reasonable sense of *process convenience*.

This means that the system had convenience of use and thus attracted parties across the globe since it was cost effective and enhanced easier communication without the barrier of distance and sharing of data and records, required for the exercise. This imply that virtual sitting and hearing of the arbitration panel is currently a common occurrence in most advance legal and arbitral jurisdictions. The meaning of this innovation is that once parties have decided the issue of forum and statute of application in their arbitration agreement, then hearing can be conducted by the nominated arbitrator in such forum and parties appear virtually.

In addition to the foregoing view, Wahab and Katsh [10] observed that at the initial stage of virtual arbitration proceedings, there were no software capability to enhance trust in the system, as to support decision making on the issue of expertise. However, advancements in software development has taken the center stage as a result of increase in processing speed and neural or networking capabilities. In the final analysis, the development of smarter systems has resulted software capability optimizations that have significantly reduced the advent of errors that previously were the basis of disputes.

### 3.1 Virtual Fourth Party Phenomenon

Further, it is to be noted that over the years, the efficiency of Online Disputes Resolution (ODR) strategies has been adopted by arbitration proponents to reduce the cost of arbitration and enhance the values that ensure quick discharge or dispensing of arbitral pronouncements. To all intents and purposes, the deployment of dispute resolution strategies in form of computer software has created a practical sense of “virtual fourth party”<sup>[10]</sup> which significantly ensure the flow and evaluation of information necessary for proper assessment of all contending issues. In view of the required performance characterizations, human rated activities such as, determining, evaluation, proposing, resolving, analyzing, etc. are written into computer readable codes and programs, thus enabling the “virtual fourth party”, i.e. the digital system to perform most of the assessment for the arbitration panel.

It is imperative to state that the support given to software intended for arbitration purposes are on the basis of the fact that the offline process is a mirror or a form of a *digital twin*, i.e. the physical image of

the digital process.<sup>[11]</sup> Consequent on the design of these digital twins, the nature and application of the software would undergo multi-dimensional changes in order to cater for a wide variety of changes with respect to other related or remote applications of the software. To this extent, the ODR approach is a digital codification of the physical Alternative Dispute Resolution (ADR) process which borders on the arbitrator and the parties' relative functions.

In view of the foregoing, the following fundamental elements and technical concerns are necessary for the design of a proper "Virtual Fourth Party" ODR system:

- i. impart characterization of emerging information systems on industrial and commercial disputes
- ii. application of advanced interface designs such as *augmented realities* and *blockchain technology* in order to support issues of trust, confidence, convenience and virtual enterprise
- iii. specialized training and orientation for data processing and information management made pursuant to set regulatory standards of taking evidence and evaluating same
- iv. digitally driven measures that can enhance data security, access and protection
- v. data prioritization and integrity for administrative reliance on records
- vi. promotion of access to operational records in timely manner
- vii. aggregation of ADR models and digitization of all relative parameters
- viii. design of effective technologies that support the various aspects of arbitration proceedings
- ix. data administrator for management of operational codes or algorithms
- x. specialized training for data management under virtual conferencing dynamics

It is imperative to note that *virtual fourth party* or online arbitration has grown in bounds over the years and this development has consequently produced standard procedures and processes<sup>[12]</sup> which have been amended by various arbitral jurisdictions to suit their peculiarities. In view of these likely changes to the original procedures, various jurisdictions have adopted this standard form under the following conditions of application:

- i. online arbitration commences by e-filing under the format approved by the institutional arbitration organization, based on the use of e-request for arbitration.
- ii. e-pleading requiring the opposing party to file responses attaching all relevant documents and exhibits. Under e-pleadings, e-production of documents or evidence to be relied upon are within the specific number of days allowed for the Rules of arbitral body, using emails to communicate and transmit records.<sup>[12]</sup>
- iii. e-hearing commences after documentary evidence supporting each party's claim or defense and counterclaim are set down or settled. e-hearing can be by audio or video conferencing using latest audio-visual facilities with the requisite connectivity.
- iv. parties submissions on the basis of documents that they have filed after examining their respective witness where necessary.
- v. closing oral or documentary argument and panel arbitral award.

#### **4.0 Understanding the Expanding Digital Jurisdiction of Stateless Arbitral Proceedings**

It is noteworthy to mention that technology innovation has resulted a generally acceptable *digital jurisdiction* that is not confirmed by space, time or distance. Characteristically, this arbitral jurisdiction is dependent on e-communication principles and practices that are driven by internet infrastructure and three cardinal principles of natural law, namely:

- i. ***The legal principle of procedural autonomy:*** This principle of civil pleadings enjoins the parties and their counsellors to enter into an agreement as to the nature and context of arbitral proceedings that support their aspirations, circumstances and conveniences; and same supported by electronic or digital platforms or templates. This clearly indicate that the parties' agreement to submit to arbitration must consciously and explicitly make such provisions that must also indicate the type of internet infrastructure that they would have to deploy.
- ii. ***The principles of civil neutrality:*** This principle requires the parties to deploy e-communication infrastructure and internet resources under a neutral digital space to communicate their claims, defenses and counterclaims in a manner consistent with the Rules provided for such under standard legislative instruments and tools for arbitral practices. Further, civil neutrality significantly imply that the use of internet and other digitally related tools should not in any way compromise the decision or determination of the case in any manner in favour of either of the parties. For instance, if there are issues between and organization and their host, a Corporate Social Responsibility initiative for arbitration should not in anyway be skewed to favour any of the party to the detriment of the other.
- iii. ***Submission to jurisdiction and acceptance of verdict except fraud, or infringement can be proved:*** As a rule of jurisdiction, once a party has submitted to a jurisdiction the party also agrees to be bound by its decisions except where fraud and other sorts of administrative infringements can be alluded and proved.

In view of these cardinal principles above, the *digitally stateless jurisdiction* imply that significant and critical information could be pleaded by the parties. This information can also be processed in digitally neutral manner and utilized to make determinations in the matter before the arbitrators. It should be noted that this can be done in more efficient and timely manner, beyond the natural tendencies incidental to such hearings; assuming it was a physical contact proceeding.

Further, with the advent of very sophisticated high integrity proprietary software, such as, AI and blockchain technology, the mode of taking evidence or presentation of documents at proceedings would be more efficient and there would be the possibility of digital recreation of historically related and factually circumstantial events which hitherto were difficult or impossible under conventional proceedings. Scholars have argued that this could result to reduced reliance on oral evidence.<sup>[10]</sup> The overall implication of these benefits would be more precise justice delivery on the basis of reliable, accurate, and responsible process accountability; with the inherent capability to digitally identify loopholes and false claims using recreated or reconstructed events profiles fixated on simulated blockchains under well-defined digital twin applications, where the blockchian repository is the mirror imagery of the parties claims, defenses or counterclaims.

It is also important to state here that digital jurisdiction would significantly depend on heuristics which can enhance human recognitive and cognitive memories within the specificities of the events, giving accurate and factual accounts of relevant issues incidental to the matter. In furtherance of this, more direct and specific cross-examination and re-examinations can be generated for clarity of the parties' arguments.

Although the technology is a work in progress, suffice to say that the electronic filing and management systems that support industrially related arbitration practice are currently in use. These platforms allow parties going for arbitration from different nations and jurisdictions to submit their documents and oral argument on the web-based communications referred to as e-filings<sup>[13]</sup>. These e-filings are operated on e-platforms<sup>[10]</sup> which are designed to enable online arbitral proceedings. The platforms also have standard video-conferencing facilities and applications for which mobile phones and gadgets could be deployed at any and every location that internet services are available all over the world. This means

that the arbitrators, parties, witnesses and counsellors could be located in various countries covered under the digital jurisdiction nominated by the parties in their arbitration agreement or arbitration clause of the main contract document. This is very novel and highly productive. Further, modern web-based arbitration platforms may be integrated with digital lie detectors to filter the evidence of witnesses, especially where oral evidence is in conflict with documentary evidence.

### 5.0 Adaptations and Compliances with Trending Digital Innovations

It is noteworthy to mention that digital innovations in arbitration proceedings is changing the landscape of industrial and commercial relationships especially where dispute resolutions outside the court system is desirable. In furtherance of the objective of strengthening arbitration practice, arbitration institutions and national legislatures are increasingly providing for remote digitally supported arbitration proceedings, by amending their rules of practice or making new rules that are supportive of the global trend.<sup>[10]</sup> A key example of this development is Art. 24(4) of ICC Arbitration Rules (2012) which provides for the use of video conferencing during case management.

Further, Appendix V of the same Rules provides that where in-person attendance is not mandatory or essential video-conferencing can be used for the proceedings and hearing of parties' arguments. In this line of events, Art 4(2) of Appendix (V) further provides for Emergency Arbitrator Rules, wherein it stipulates that under emergency arbitration, video-conferencing, telephone or other means of communication can be used, provided that the emergency arbitrator decides the mode that is appropriate in the circumstance. There is further provision in the ICC Rules that requires the use of email to communicate to the parties, whereby the parties are to provide their emails to the ICC.

A third instance in this digitally driven trend is that of the CRCICA which provided in Art 28(4) of the CRCICA Arbitration Rules (2011), that witnesses may not be required to be physically examined, since they can be examined by telecommunication means. It should further be noted that under the AAA Arbitration Rules (2013), where the arbitrator deems necessary, video-conferencing can be used in conduct of proceedings, including giving of evidence. In addition, the LCIA Arbitration Rules (2014) admonished the parties to an arbitral panel to conduct the arbitral proceedings by all legitimate means, including the use of video-conferencing, telephone or other mode of digital exchange of relevant contents.

Further, it is worthy of note that some of these institutional arbitration organizations have in addition to the provision in their Rules and Practice Guides made available web-based arbitration e-platforms, thus resulting to e-filing, and e-management of the arbitration exercise, etc.

In addition to the contents of the Rules of institutional arbitrators, some national legal jurisdictions have also adopted the trend. For instance, the Italian Code of Civil Procedure (Book IV, Title VIII, Italy) made provision for conduct of Court hearings by video conferencing.<sup>[14]</sup> Further, the Supreme Court of Switzerland has held that arbitrators can conduct hearing and proceedings by electronic or digital means, under the proviso that precautionary measures are adopted when such proceedings are conducted.<sup>[15]</sup>

Further, it is imperative to note that the precautionary measures referred to by the Swiss Supreme Court could be seen under the following attributes as established in the views of Hill [16] as captured in [ref. 10] as follows:

- i. such electronic means to be adopted must be agreeable to all arbitrators
- ii. the nominated arbitrators must participate in the discussion except an arbitrator is validly replaced
- iii. the parties must agree to the arbitrators deliberating online to arrive at a solution

- iv. the entire procedure and proceedings must be documented and must have also been provided for in the parties' arbitration agreement.

## Conclusion

The paper has established that a nexus exists between technological breakthroughs and the incessant emergence of disputes. This means that as more means of human interactions increase, the attendant frictions in interpersonal relationships would continue to generate conflicts. The desire to resolve these conflicts has resulted many strategies that rely on using the same technology to solve. Thus, Online Dispute Resolution and many other forms of *virtual fourth party* solutions have advanced in recent times. The benefits accruable from this initiative is intended to improve industrial and commercial relationships in terms of dispute or crisis management; thus, reducing the number or occasions where arbitration is called to the task. This view is supported by the efforts of eBay's e-platform for online dispute settlement. In this regard, many other institutional arbitrators are taking bold steps towards harmonizing the various issues that are related to effective digital level arbitration in support of the current trend.

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