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PROMOTING EFFICIENCY OF ARBITRATION IN INDIA BY USING TECHNOLOGY

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Abstract

With the advent of COVID-19, the Indian legal system has been compelled to introduce more and more technological advancements into the dispute resolution game. While public forums have been welcoming technology with open arms, private adjudicative mechanisms like arbitration have had their own set of experiences and challenges in adopting these technological advancements, at least, as a necessity to deal with COVID-related circumstances. While many are aware of this obvious change in the functioning of Indian arbitrations, most are still oblivious of the extent of technological advancements available for use in arbitration and the consequential challenges arising from such usage. One point to be noted here is that any literature available on the subject tends to compare India with the position prevailing globally without considering the unique framework of the Indian arbitration landscape. Moreover, a lack of concrete literature and research into this area has prevented Indian arbitration players from benefitting from this "opportunity in disguise". This article considers the ground realities of the Indian arbitration regime and aims to produce findings relevant for stakeholders to adopt more technological tools as means to conduct arbitration proceedings effectively and efficiently.

I. Introduction

Technology is being used in international arbitration and at least to a limited extent, in the Indian arbitration regime. However, in the persistence of and after the pandemic the Indian courts have by and large not come across any issue arising from the use of technology in arbitration. Any literature available on the subject is either under the garb of online dispute resolution or deals with hypothetical possibilities regarding the use of technology in India. Moreover, there is no available literature that comprehensively deals with the impact of COVID-19 on Indian arbitration.

This lack of literature and jurisprudence on the use of technology in arbitration can be indicative of three possible scenarios. *First*, that arbitral tribunals seated in India are not routinely using technology and thus, there are no issues arising from the use of such technology that could possibly reach Indian courts. *Second*, that arbitral tribunals are using technology in a very limited sense and only to the extent that such usage is necessary to deal with the pandemic-related exigencies. Hence, more sophisticated issues do not arise for adjudication by the Indian courts. *Third*, technology may be used by the parties privately without disclosing the same to the arbitral tribunal and hence, the non-user party may not be aware of any issues arising out of the use of such technology. In any case, the existence of these three scenarios indicates that there is no available knowledge or research pertaining to the use of technology in Indian arbitrations.

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Since the confidentiality of arbitration proceedings is a general rule and much jurisprudence regarding the research topic has not reached Indian courts, the author has also undertaken a few consultations with some practitioners and subject experts regarding their experience with technology in India. Consultations have been carried out with Dr. Amit George (Advocate, High Court of Delhi), Mr. Anish Jaipuriar (Partner, AKS Partners, New Delhi), Mr. Garv Malhotra (Partner, Skywards Law, New Delhi and Visiting Faculty at NLSIU), Ms. Gunjan Chhabra (Partner, Adwitya Legal, New Delhi), Mr. Jeevan Ballav Panda (Partner, Khaitan & Co, New Delhi), Mr. Nitin Gupta (Managing Partner, the Law Chambers, New Delhi), Mr. Promod Nair (Senior Advocate, Karnataka High Court and Visiting Faculty at NLSIU), Ms. Shalaka Patil (Partner, Trilegal, Mumbai), Mr. Surjendu Sankar Das (AOR, Supreme Court of India), Mr. Tariq Khan (Registrar, International Arbitration and Mediation Centre, Hyderabad) and Mr. Vikas Mahendra (Partner, Keystone Partners, Bengaluru and Founder of CORD). These experts are arbitration practitioners and top law firm partners having experience in both domestic and international arbitration. It is imperative to mention here that these consultations have not been undertaken to give any empirical findings with respect to the extent of technological proliferation in Indian arbitration, but simply to understand the experiences and identify the issues faced by such practitioners.

This article has been divided into five parts. Part II identifies and summarises the use of technology in the international arbitration regime. This involves classifying the current technological tools into categories, examining the extent of use of each category of tools, and summarising associated global trends. Part III deals with the contemporary position of the Indian arbitration regime as regards the adoption of technology. Part IV outlines the present and future possible challenges regarding the use of technology in arbitration in India. These concerns are discussed under three headings, namely, legal concerns, practical concerns, and technological concerns. Part V embarks on an analytical study of the challenges proposed in Part IV and, by examining the data collected in Part II and III, offers suggestions for use of technology in India seated arbitrations.

II. Use of Technology in International Arbitration

Even before the advent of the COVID-19 pandemic, international arbitration lawyers had been using technological tools for various purposes. Technological tools are used simply because they are efficient in nature, and arguably cost effective. Thus, these advantages prompt the usage of technology in international arbitration. Another motivating factor is *necessity*, i.e., the pandemic. Owing to restrictions and difficulties in the cross-border movement of stakeholders, technology has also become a necessity in the global arbitral community. This part of the article identifies the key technologies available today and global trends as regards the use of technology to discover the extent of popularity of technology in international arbitration.

A. Available Technological Tools

Technology can be used for various purposes at the different stages of arbitration. These can be classified into four broad categories, namely, online tools, algorithm-based software, assistive technological tools, and app-based tools. There may be some overlap among certain tools, which may fit into more than one category.

i. Online Conduct of Arbitration Proceedings

This is the most common use of technology in arbitration in the current times. It involves the conduct of arbitral proceedings over a virtual platform and includes sending of documents via e-mail. Similarly, virtual arbitration hearings have been routinely used for case management conferences and preliminary hearings to set up a schedule and timelines for the various stages of arbitration.

To facilitate virtual hearings and online arbitration, many popular arbitral institutions like the Singapore International Arbitration Centre ["**SIAC**"] have offered a one-stop solution by collaborating with various service providers. Thus, they have introduced a common platform for the conduct of proceedings, sharing of documents etc.[1] This includes a mix of services like cloud storage software, video conferencing software etc.

In fact, as per one recent survey, the administrative support provided by an arbitral institution for the conduct of virtual hearings is the most prominent factor when deciding on arbitral institutions and rules.[2] This indicates the importance of the use of technology in arbitration.

ii. Algorithm-based software

Algorithm-based software or Artificial Intelligence ["**AI**"] technologies have been the most remarkable contemporary technological tool in the arbitration landscape. AI tools have opened new opportunities by providing services like data analytics software, amongst others.

Lawyers are already employing AI to conduct low-level legal tasks, such as reviewing contracts, researching case laws, and reducing due diligence tasks by screening evidence and eliminating unnecessary documents.[3] This has led to a significant reduction of time and costs which could be otherwise utilised to conduct other important tasks, such as preparation of arguments and pleadings. Another example is the use of software like 'ClauseBuilder®' to draft arbitration clauses.[4] Similarly, parties are using platforms like Arbitrator Intelligence to get reports on potential arbitrators to appoint the most qualified and suitable arbitrators according to preferences and rankings.[5]

Parties may be sceptical about using AI tools at the adjudication stage particularly because arbitration produces a binding award. Given the present level of sophistication of such technologies, it is theoretically possible that an error may find its way into the award, which may be irreversible. On the other hand, parties often use other technology-assisted techniques like e-negotiation and e-mediation during pre-arbitration stages as they do not necessarily lead to a binding outcome. Many such tools

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1 David Bateson, *Virtual Arbitration: The Impact of COVID-19*, 9 INDIAN J. ARB. L. 159, 163 (2020); Chahat Chawla, *International Arbitration During COVID-19: A Case Counsel's Perspective*, KLUWER ARB. BLOG (June 4, 2020), *available at* http://arbitrationblog.kluwerarbitration.com/2020/06/04/international-arbitration-during-covid-19-a-case-counsels-perspective/.

2 *2021 International Adaptation Survey: Adapting Arbitration to a Changing World*, WHITE & CASE, *available at* https://www.whitecase.com/publications/insight/2021-international-arbitration-survey [*hereinafter* "WHITE & CASE"].

3 Daniele Verza Marcon, Erika Donin Dutra & Lukas da Costa Irion, *Artificial Intelligence in Arbitration: Should We Consider the Possibility of Decision-Rendering AI?*, 36 YOUNG ARB. REV. 14, 16 (2020).

4 *AAA-ICDR Technological Services*, AMERICAN ARBITRATION ASSOCIATION, *available at* https://www.adr.org/TechnologyServices/aaa-icdr-software-and-online-tools.

5 *About Us*, ARBITRATOR INTELLIGENCE, *available at* https://arbitratorintelligence.com/about/.

like 'Cybersettle' use sophisticated algorithms to provide optimal settlement options.[6] This can certainly enhance the effectiveness of pre-arbitration machinery.

One recent phenomenon related to AI is blockchain arbitration. Blockchain arbitration emerged as a corollary to the increase in the use of cryptocurrencies and smart contracts. In its essence, blockchain arbitration is a self-executing contract where various legal obligations of the parties are automatically triggered on fulfilment of certain conditions. The chief advantage of this system is that the award is made in cryptocurrency or any other value on blockchain technology. Thus, the award can become self-enforcing after certain conditions are met, thereby ameliorating the need for formal recognition and enforcement proceedings. Similarly, simpler steps like invocation of an arbitration clause, appointment of an arbitrator, etc., can be done through blockchain arbitration. Although this form of arbitration has not become entirely popular yet, there is evidence of players in the arbitration community practicing the same.[7] The most common service provider is CodeLegit, which has published its own set of rules that may be applied in blockchain arbitration.[8]

Amongst these various tools, a recent survey has revealed that among the various technological tools employed for dispute resolution, there has been a growth in the use of AI, with the most common form of use of AI being in technology-assisted document review.[9] Moreover, AI has attracted significant attention from the global arbitral community, with AI tools becoming *sine qua non* in big law firms. Small and mid-sized firms have also followed suit and started adopting these technologies.

iii. Assistive technologies

In the current scenario, cutting-edge technology such as speech recognition in translation or interpretation have the potential to render human translators or secretaries otiose. Although limited human intervention is required to supervise and ensure the accuracy of the data, assistive technologies have greatly improved the efficiency of arbitration proceedings. In fact, live transcription service providers like Fireflies[10] and Otter[11] have become more popular with the arbitration community especially after the advent of the COVID-19 pandemic. These platforms can be integrated into almost any virtual hearing platform, and these can provide substantially accurate transcription of the arbitration proceedings.

Another point to note here is that, unlike courtroom litigation, arbitration allows for procedural flexibility in making submissions and presenting arguments. Therefore, arbitration lawyers also employ basic technological tools like Microsoft PowerPoint to make their submissions, which may not be permitted in a conventional courtroom.

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6 CYBERSETTLE, *available at* http://www.cybersettle.com/.

7 Pietro Ortolani, *The Impact of Blockchain Technologies and smart contracts on dispute resolution; arbitration and court litigation at cross-roads*, 24 UNIFORM L. REV. 430, 434-35 (2019).

8 *CodeLegit White Paper on Blockchain Arbitration*, GOOGLE DRIVE, *available at* https://docs.google.com/document/d/1v_AdWbMuc2Ei70ghITC1mYX4_5VQsF_28O4PsLckNM4/edit.

9 WHITE & CASE, *supra* note 2.

10 *Overview*, FIREFLIES, *available at* https://fireflies.ai/product/overview.

11 OTTER, *available at* https://otter.ai/.

iv. App-Based Technologies

With the emergence of smartphones and android operating systems, portable phones are fully functional computers available on the go. Today, all our daily activities are done through apps. Arbitration has not fallen behind and has adapted to suit the busy life of practitioners. However, apps have not yet become popular in the international arbitral community when compared with other forms of technology.

Many of the technological tools discussed in the previous sub-sections are also available in form of apps. For instance, simpler technologies like Google Translate and Microsoft PowerPoint are available in the form of mobile apps.

Some arbitral institutions also use apps to create a user-friendly platform to access their website and provide services. The most common example of this is the Dispute Resolution Services (DRS) app of the International Chamber of Commerce ["**ICC**"], which allows the user to seemingly access resources and arrange for bookings, meetings etc.[12] Similarly, the SIAC launched an app in 2011 to access its website.[13] However, to the author's understanding, this app is not in vogue these days. Law firms, private organisations and other entities have launched their own apps providing access to a host of arbitration resources which can be accessed on the go.[14]

B. Global Key Developments

Given the abundance of available technological tools, the next question that immediately arises is in assessing how popular these tools are in the international arbitration landscape. Globally, there have been some key developments with respect to the use of technology in arbitration. Of course, some of these are in the aftermath of the pandemic. Nevertheless, all these trends point to the increasing tendency of using technology in arbitration.

i. Initiatives by Arbitral Institutions

In response to the pandemic, many arbitral institutions, including the Hong Kong International Arbitration Centre,[15] and the Chartered Institute of Arbitrators,[16] have issued guidance notes to facilitate virtual hearings. These guidance notes are in the nature of 'clarifications', expressly stating that virtual conferencing is compatible with the existing institutional rules. On the other hand, arbitral

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12 *4 Reasons to Download the New ICC DRS App*, ICC (Sept. 18, 2019), *available at* https://iccwbo.org/media-wall/news-speeches/4-reasons-to-download-the-new-icc-drs-app/.

13 John Savage, *SIAC Arbitration: Some Strong 2010 Numbers & an App*, KLUWER ARB. BLOG (Feb. 24, 2011), *available at* http://arbitrationblog.kluwerarbitration.com/2011/02/24/siac-arbitration-some-strong-2010-numbers-and-an-app/.

14 *See, e.g., DIA (Damages in International Arbitration) App Launch for the Americas and Europe,* INT'L COUNCIL COM. ARB. (Nov. 4, 2021), *available at* https://www.arbitration-icca.org/dia-damages-international-arbitration-app-launch-americas-and-europe; *Covington's Arbitration App Lays Key Resources at Practitioners' Fingertips*, COVINGTON (July 23, 2015), *available at* https://www.cov.com/en/news-and-insights/news/2015/07/covingtons-arbitration-app-lays-key-resources-at-practitioners-fingertips.

15 *HKIAC Guidelines for Virtual Hearings*, HONG KONG INT'L ARB. CTR. (May 14, 2020), *available at* https://www.hkiac.org/sites/default/files/ck_filebrowser/HKIAC%20Guidelines%20for%20Virtual%20Hearings_3.pdf.

16 *Guidance Note on Remote Dispute Resolution Proceedings*, CHARTERED INST. ARB. (2020), *available at* https://www.ciarb.org/media/8967/remote-hearings-guidance-note.pdf.

institutions like the London Court of International Arbitration,[17] and ICC,[18] have released a new version of their rules that expressly incorporates the role of virtual hearings, electronic signatures etc. Apart from this, almost all arbitral institutions are encouraging dialogue on the subject through webinars, conferences etc., to increase awareness and encourage the use of technology in arbitration.[19]

v. Initiatives by States

Mere amendment of institutional arbitral rules is not enough to legitimise the use of technology in arbitration. Since arbitration is a seat-centric concept, the use of technology cannot be permitted unless and until the seat or the enforcing state recognises such proceedings.

Historically, the Convention on the Recognition and Enforcement of Foreign Arbitral Awards ["**New York Convention**"] does not expressly provide for the use of technology, except for the formation of arbitration agreements through the exchange of telegrams.[20] Some jurisdictions, such as Hong Kong, have extended this definition to include arbitration agreements formed by the exchange of e-mails or other modes of data interchange.[21] However, in the past few years, some countries like the United Arab Emirates,[22] Netherlands[23] Jordan,[24] etc., have provided for the use of technology in their laws by recognising the usage of video conferencing, electronically signed awards etc, in arbitral proceedings.

Apart from the legislative efforts, the judiciary around the globe has also been proactive in encouraging the use of technology in arbitration. For instance, courts in the USA,[25] Austria,[26] and Egypt,[27] have held that there is no indefeasible right to a physical hearing, and virtual hearings do not raise any due process concerns or result in unequal treatment of parties. It is imperative to mention here that courts have not expressly ruled with regards to any other issue arising out of the use of technology in arbitration. However, use of technology has also been encouraged in ordinary court proceedings. For instance, the Justice Division of the High Court in the United Kingdom ["**U.K.**"] Court in *Pyrrho Investments* v. *MWB Property*,[28] permitted the use of predictive coding technology for filtering electronic documents, subject to a common protocol agreed upon by the parties. Since arbitration by its very

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17 *LCIA Arbitration Rules, 2020*, LONDON COURT OF INT'L ARB. (Oct. 1, 2020), *available at* https://www.lcia.org/Dispute_Resolution_Services/lcia-arbitration-rules-2020.aspx.

18 *ICC Arbitration Rules, 2021*, INT'L CHAMBER COM. (Jan. 1, 2021), *available at* https://iccwbo.org/dispute-resolution-services/arbitration/rules-of-arbitration/.

19 *See, e.g., Technology in Arbitration*, CHARTERED INST. ARB., *available at* https://ciarb.org/events/technology-in-arbitration/.

20 Convention on the Recognition & Enforcement of Foreign Arbitral Awards arts. II & III (2), June 10, 1958, 330 U.N.T.S. 38.

21 Arbitration Ordinance, (2011) Cap. 609, § 19(4) (H.K.).

22 Federal Law No. 6 of 2018 on Arbitration, Art. 28(2)(b) (U.A.E.).

23 Art. 4:1072b Rv (Neth.).

24 Arbitration Law, No. 31 of 2001, Art. 10(a) (Jordan).

25 Carlos Legaspy v. Fin. Indus. Regulatory Auth., No. 1:20-cv-4700 (N.D. Ill., 2020).

26 Oberster Gerichtshof [OGH] [Supreme Court] July 23, 2020, 18 ONc 3/20s, *available at* https://www.ris.bka.gv.at/Dokumente/Justiz/JJT_20200723_OGH0002_018ONC00003_20S0000_000/JJT_20200723_OGH0002_018ONC00003_20S0000_000.pdf (Austria).

27 Mah. kamat al-Naqd. [Court of Cassation], case no. 18309, session of 27 Oct. 2020 of 17 Feb. 1972, year 1442 (Egypt).

28 Pyrrho Inv. v. MWB Prop., [2016] E.W.H.C. 256 ¶ 33 (Ch.) (U.K.).

nature is a consensual process, it is reasonable to imply that the courts would have a pro-technology attitude towards the use of technology in arbitration, if consensual and adequate operating procedures are adopted. Recently, the Sao Paulo District Court stayed the enforcement of an arbitral award on the ground that the arbitration proceedings were tainted by cyber hacking.[29]

vi. Research suggesting increase in the use of technology

The 2018 Queen Mary survey indicated that 60% of the answering respondents had "*always*" or "*frequently*" used videoconferencing room technologies in their arbitral proceedings.[30] Moreover, the 2021 version of the survey has indicated an increase in the use of AI technologies in arbitration.[31] Interestingly, this survey has also displayed that the degree of use of video conferencing and hearing rooms has more or less remained the same,[32] implying that the use of such technologies has reached the saturation point and has already become the industry norm in the international arbitration community.

Recognising these developments, some global bodies have also published reports, guidelines, protocols etc., dealing with various aspects of technology in arbitration. For instance, the Seoul Protocol on Video Conference in International Arbitration,[33] has become the talk of the town, especially when the subject is the use of video conferencing in arbitration. Similarly, the International Council for Commercial Arbitration – New York City Bar Association – International Institute for Conflict Prevention and Resolution Cybersecurity Protocol for International Arbitration,[34] deals with important data privacy and technological issues, which may arise from the use of technology in arbitration.

Lastly, the U.K. Jurisdiction Taskforce has recently published its Digital Dispute Resolution Rules for the resolution of blockchain disputes. Here, blockchain arbitration has been proposed to be a substitute for the current escrow mechanism.[35]

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29 Cosmo Sanderson, *Brazilian Pulp Award Leads to Cyber Hack Challenge*, GLOBAL ARB. REV. (Apr. 12, 2021), *available at* https://globalarbitrationreview.com/cybersecurity/brazilian-pulp-award-leads-cyber-hack-challenge, *cited in* Niccolò Landi, *Remote Hearings: Observations on the Problem of Personal Data Protection and Cybersecurity*, ICCA REPORTS NO. 10 127 (2022), *available at* https://cdn.arbitration-icca.org/s3fs-public/document/media_document/ICCA-Reports-no.%2010_Right-to-a-Physical-Hearing7%20Nov2022.pdf.

30 *2018 International Arbitration Survey: The Evolution of International Arbitration*, QUEEN MARY UNIV. OF LONDON 32 (2018), *available at* http://www.arbitration.qmul.ac.uk/media/arbitration/docs/2018-International-Arbitration-Survey-report.pdf.

31 WHITE & CASE, *supra* note 2.

32 *Id.* 2.

33 *Seoul Protocol on Video Conference in International Arbitration is Released*, KCAB INT'L (Mar. 18, 2020), *available at* http://www.kcabinternational.or.kr/user/Board/comm_notice_view.do?BBS_NO=548&BD_NO=169&CURRENT_MENU_CODE=MENU0025&TOP_MENU_CODE=MENU0024.

34 *ICCA-NYC Bar –CPR Protocol on Cybersecurity in International Arbitration*, INT'L COUNCIL COM. ARB. (2019), *available at* https://cdn.arbitration-icca.org/s3fs-public/document/media_document/icca-nyc_bar-cpr_cybersecurity_protocol_for_international_arbitration_-_print_version.pdf.

35 UK Jurisdiction Taskforce, *Digital Dispute Resolution Rules*, LAWTECH UK (2021), *available at* https://35z8e83m1ih83drye280o9d1-wpengine.netdna-ssl.com/wp-content/uploads/2021/04/Lawtech_DDRR_Final.pdf.

Thus, it is evident that technology has penetrated almost all stages of dispute resolution, including pre-arbitration and post-arbitration stages. Although the pace of adoption of various technological tools may vary, it is amply clear that the international arbitral community is rapidly adopting technology in arbitration. There is extensive academic discussion as regards the pros and cons of technology in arbitration, which are not explored within this article. However, the increasing discourse and development at all fronts indicates the importance of technology in international arbitration.

III. Contemporary Use of Technology in Indian Arbitration Regime

A. A Bird's Eye View of Indian Arbitration Landscape and Technology Law

The Indian arbitration framework is governed by the Arbitration and Conciliation Act, 1996 ["**the Act**"].[36] The Act is divided into four broad parts. Part I governs the arbitrations seated in India, irrespective of the nationality of the parties. Part II deals with the recognition and enforcement of foreign arbitration awards. Part III deals with conciliation and Part IV deals with miscellaneous provisions.

As far as technology law is concerned, it is governed by the Information and Technology Act, 2000 ["**IT Act**"].[37] The preamble to the IT Act states that it is a statute enacted to "… *provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication*…"[38] A cursory reading of the IT Act provides legal recognition to electronic records, wherever such records are required to be in writing,[39] and digital signatures.[40] Thus, any interaction of technology with arbitration in India would require an examination of the IT Act.

B. Adoption of Technologies

i. Historical Recognition

The Supreme Court of India had recognised the role of e-mail at various stages of arbitration almost two decades before the pandemic. In the case of *Grid Corporation of Orissa* v. *AES Corporation*,[41] the Supreme Court held that while appointing the third arbitrator, it is not necessary that the two party-appointed arbitrators physically meet or give their decision in writing. It was held that it is sufficient if the third arbitrator is communicated of his appointment by any mode,[42] which may be extended to include communication by e-mail. Similarly, the Court has also upheld the validity of arbitration agreements formed through an exchange of e-mails without the actual signing of a physical document.[43] In 2015, Section 7(4)(b) of the Act was amended to include arbitration agreements formed through "*electronic means*." The 246th Law Commission noted that this amendment was proposed to

36 Arbitration & Conciliation Act, 1996, No. 26 of 1996 (India) [*hereinafter* "Arbitration Act"].
37 Information & Technology Act, 2000, No. 21 of 2000 (India).
38 *Id.* Preamble.
39 *Id.* § 4.
40 *Id.* § 5.
41 Grid Corp. of Orissa v. AES Corp., (2002) 7 SCC 736.
42 *Id.* ¶ 23.
43 Trimex Int'l v. Vedanta Aluminium Ltd., 2010(1) S.C.A.L.E. 574, ¶ 49; Shakti Bhog v. Kola Shipping, (2009) 2 S.C.C. 134, ¶ 14–17.

bring the Act in conformity with the United Nations Commission on International Trade Law Model Law on International Commercial Arbitration.[44]

ii. Shift to Virtual Hearings

Social distancing has already compelled arbitral tribunals and arbitral institutions across the globe to switch over to tech-savvy arbitral proceedings, which are primarily conducted using video conferencing technologies. In the Indian context, there is no statutory embargo regarding the conduct of arbitral proceedings via video conferencing or other means of technology. Section 19(2) of the Act allows the parties to agree upon the procedure of conduct of arbitral proceedings. Similarly, Section 19(3) of the Act enables the arbitral tribunal to conduct the proceedings in any manner it deems appropriate in case there is no agreement between the parties regarding the conduct of proceedings. Recently, the Delhi High Court has also affirmed this position and has held that no party has an indefeasible right to a physical hearing or a virtual hearing, and the sole discretion as to the manner of hearing rests with the arbitrator.[45]

Apart from this, new domestic players like Centre for Online Resolution of Disputes (CORD),[46] and ODRWays Solutions Private Limited (Sama),[47] have also introduced specific platforms with facilities like breakout rooms etc., to facilitate the shift from physical arbitration to virtual hearings.

One practitioner who is a currently a partner in the dispute resolution wing of an India based full-service law firm, had noted that though virtual arbitrations have found their way into the Indian arbitration landscape, arbitral tribunals are always ready to switch back to physical hearings. This is because in international arbitrations, parties from various jurisdictions are involved. Therefore, it is feasible to employ video conferencing to save costs and time. On the other hand, in domestic arbitrations, parties are usually operating around the seat of arbitration and, hence, it is easier to shift to physical arbitration.

iii. Ad Hoc Protocols for the conduct of arbitration

Most practitioners including law firm partners, Senior Advocates, independent practitioners specializing in domestic and international commercial arbitration noted that due to the absence of any guiding institutional rules, most arbitrators do not agree on any *ex-ante* protocol for the conduct of arbitration proceedings, which certainly poses as a hindrance to the smooth conduct of virtual arbitration proceedings. However, some exceptions to this general position came to light during consultations with practitioners. The most common exception was the degree of experience and willingness of the counsels of both parties.

One practitioner who is currently the Managing Partner of a dispute resolution law firm based out of New Delhi, pointed out that as a general practice, the counsel for one party proposes a protocol which may be followed throughout the arbitration. Subsequently, the counsel for the other party may suggest

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44 *246th Report of Law Commission on Amendments to the Arbitration & Conciliation Act, 1996*, LAW COMM'N INDIA 42 (Aug. 2014), *available at* https://lawcommissionofindia.nic.in/reports/Report246.pdf [hereinafter "LAW COMM'N INDIA"].

45 Result Serv. v. Signify Innovations India (O.M.P. (I) (Comm.) 23 of 2021, decided on May 17, 2021, Delhi HC).

46 *About Us*, CORD, *available at* https://resolveoncord.com/about-us/.

47 *About Us*, SAMA, *available at* https://www.sama.live/about-us.php.

certain changes to the proposed protocol, and finally, a mutually consented protocol would be agreed upon by the parties. The sophistication of such protocols depends upon the skill of the practitioners. Nevertheless, these protocols usually cover the choice of video conferencing platform, submission of pleadings etc.

Another exception that was disclosed is that arbitrators with heavy caseloads have drafted their own protocols addressing major issues which they have faced in their arbitrations, and these protocols are implemented as procedural guidelines. It was pointed out by one of the practitioners who is currently the Managing Partner of a dispute resolution law firm based out of New Delhi that in a case, the presiding arbitrator had implemented a protocol based on SIAC guidelines.

iv. *Marginal shift towards Documents-only arbitration*

Section 29B of the Act enables the parties to opt for fast-track arbitration, where the parties can submit all their pleadings along with relevant documents, and the award is made on the basis of these documents and pleadings, without any opportunity of an oral hearing. The principal advantage of fast-track arbitration is that the award must be made within six months from the date on which the arbitral tribunal enters into reference, thereby resulting in considerable time and cost savings. Despite this advantage, it has been seen that parties rarely opt for fast-track arbitration in India.[48]

In this respect, it is noteworthy to mention that even prior to the outburst of the COVID-19 pandemic, the National Internet Exchange of India (NIXI) was the only body in India which resolved all disputes through such a "documents only" arbitration. All disputes pertaining to *.in* domain names are mostly resolved through e-mail, such that all submissions and documents are submitted via e-mail and even the award is pronounced online, often without any opportunity of oral or virtual hearing.[49] Such a mechanism has ensured minimal disruption in the resolution of domain name disputes in COVID-19 times. Another independent practitioner and former senior associate at a leading Indian law firm, who also acts as an arbitrator, noted that in less complex and low-value disputes, parties may agree to documents-only, arbitration and employ case management software etc., where all the documents are uploaded and the final award is pronounced online.

v. *Rare Use of other technologies*

During consultations with various practitioners, law firm partners, senior advocates and top management of various Indian arbitral institutions who have vast experience in handling both domestic and international commercial arbitration as both arbitrator and counsel, it was found that most arbitral tribunals have switched to virtual hearings as a means of necessity. Moreover, a practitioner revealed that the use of mobile applications is not very prevalent except for organising the calendar, calculating billable hours, etc.

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48 Alipak Banerjee, Sahil Kanuga & Payal Chatterjee, *Fighting an Arbitration in Times of Distress: An Indian Perspective*, BAR & BENCH (Apr. 22, 2020), *available at* https://www.barandbench.com/columns/fighting-an-arbitration-in-times-of-distress-an-indian-perspective.

49 *INDRP Rules of Procedure*, IN REGISTRY (June 28, 2005), *available at* https://www.registry.in/indrprulesprocedure.

However, it was also found that apart from video conferencing, other technologies like transcription services, predictive coding, etc., were not being used even if the practitioner and/or arbitrator is routinely using such technologies in international arbitration.

Some practitioners also revealed that other technologies usually involved the use of live transcription services and that too in very exceptional circumstances, provided, they had enough budget and consent of all parties to use these technologies. Nevertheless, the practitioners affirmed the fact that the use of such technologies leads to cost savings.

One practitioner opined that it could lead to cost savings of up to eight times the cost that would have been incurred on manpower in doing the same task. Furthermore, these technologies were found to be efficient with minimal errors.

vi. Limited or no role of Court-Annexed Arbitral Institutions

In case of an *ad hoc* arbitration, if the parties are unable to agree upon the appointment of the arbitrator, recourse must be taken under Section 11(6) of the Act for the appointment of the arbitrator. As per this provision, in the case of a domestic arbitration, such an application is made to the respective High Court, and in the case of an international commercial arbitration seated in India, the application is made to the Supreme Court. Once the arbitrator is appointed, such courts usually direct their affiliated centres to conduct the proceedings (at the request or with the consent of both the parties). For instance, in Delhi, the proceedings are administered by the Delhi International Arbitration Centre ["**DIAC**"]; in Punjab & Haryana, the proceedings are administered by the Chandigarh Arbitration Centre; in Orissa, the proceedings are administered by the Orissa Arbitration Centre; and in Karnataka, the proceedings are administered by the Arbitration Centre of Karnataka Arbitration Centre, and so on.

Pre-COVID, these institutions mostly provided a physical venue for hearing, a commonplace to store documents, and performed ancillary functions. However, consultations with various practitioners, law firm partners, senior advocates and top management of various Indian arbitral institutions who have vast experience in handling both domestic and international commercial arbitration as both arbitrator and counsel revealed that after COVID-19, whilst most privately managed arbitral institutions have efficiently adapted their working, court-annexed arbitral institutions have become redundant in as much as they have not provided any support for virtual hearings, guidance notes, etc. At the same time, it was also noted that since majority of the Indian arbitration caseload is handled by court-annexed arbitral institutions, initiatives by private arbitral institutions have made little difference in the conduct of arbitral proceedings.

Moreover, court-annexed arbitral institutions continue to be relevant today only when there is a need for physical hearings for examination of witnesses, submission of documents, etc. Amongst these observations, DIAC has emerged to be an exception as practitioners stated that it has been proactive in arranging the logistics of a virtual hearing. Nevertheless, in comparison to court proceedings and private arbitral institutions, practitioners and law firm partners having significant experience in

handling complex arbitrations in the pre-COVID era as well as during COVID expressed their general disappointment as these institutions have not even introduced the concept of e-filing.

The rules for these institutions are also drafted by a committee of their supervisory high court. In this respect, no endeavour has been made to update these rules to provide for the use of technology. For instance, the Gujarat High Court had recently published The Arbitration Centre (Domestic and International), High Court of Gujarat Rules, 2021 ["**Gujarat Rules**"].[50] In spite of experiencing virtual arbitrations, the Gujarat Rules provide for a physical set-up of arbitration by using phrases like "*oral hearing*,"[51] instead of "*hearing*", and submission of "*copies*"[52] of pleadings, instead of "*submission of pleadings*" etc. This indicates ignorance on part of state authorities in the use of technology in Indian arbitration, and further points to the same not being a priority.

vii. Effect of Electronically Executed Arbitration Clauses on related Court Proceedings

As already noted, an arbitration agreement through the exchange of e-mails is recognised under the Act. However, it is difficult to imagine a scenario where the parties separately send e-mails for the purpose of entering into an arbitration agreement. Nowadays, most commercial contracts contain arbitration clauses. An exchange of the contract documents containing the arbitration clause and acceptance through e-mail would be covered by this clause.

With the advent of COVID-19, an increasing number of contracts and documents are being signed, executed, and published online. This raises a question as to what happens if the contract is issued on a public platform in the form of a public tender and the lowest bidder electronically signs the same to create a binding contract that contains an arbitration clause. Although arbitration is not concerned with the concept of territorial jurisdiction as the arbitrator derives their jurisdiction from the arbitration agreement, the Act provides for various situations where court intervention is required.[53] These state courts operate on the concept of territorial jurisdiction and hence, it is imperative to examine the effect of technology on these proceedings.

The online execution of a contract can have an impact on the court proceedings under the Act, which is slowly being explored by the courts. For instance, the Calcutta High Court declined to exercise its jurisdiction under Section 9 of the Act because under Section 13(3) of the IT Act, an electronically issued document is deemed to be issued from the place where such person ordinarily carries its business.[54] In this case, since the place of business fell outside the original side jurisdiction of the Calcutta High Court, the Court dismissed the application for lack of jurisdiction.

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50 Arbitration Centre (Domestic & International), High Court of Gujarat Rules, 2021, Gujarat Government Gazette, pt. IV-C (Feb. 15, 2021).

51 *Id.* Rule 34.1

52 *Id.* Rules 24.3 & 25.5.

53 *See, e.g.,* Arbitration Act, §§ 9, 11.

54 Golden Edge Eng'g v. B.H.E.L., AIR 2020 Cal. 217.

Similarly, the Punjab and Haryana High Court has held that in the absence of a seat clause, the court exercising jurisdiction over the place of business, by applying Section 13 of the IT Act, would have jurisdiction to entertain an application under Section 11(6) of the Act.[55]

Thus, it may be concluded that any adoption of technology in Indian arbitration has been a consequence of the pandemic. However, this transition has been slow as the purpose of such adoption is to meet urgent exigencies. The use of technologies apart from video conferencing has found its way into Indian arbitrations, but only in exceptional circumstances. The positive takeaway that emerges from the research is that even though the Indian arbitral community has had limited exposure to technology, users of such technology seem to recognise the benefits arising from the use of such technology and are ready to endorse more usage of technology in Indian arbitrations.

IV. Challenges

In the previous part, it has been identified and affirmed that India is not regularly using technology in arbitration when compared with international standards. This is because of various problems and concerns associated with the use of technology. Whilst some of these concerns may have been noticed in the previous part, this part will identify the existing and potential challenges in the employment of technology in the Indian arbitration regime.

A. Legal Concerns

It is pertinent to mention here that till date, Indian courts have not frequently confronted any legal issue arising solely because of the use of technology or virtual hearings in arbitration. On the other hand, it has been seen that courts around the globe have increasingly been facing such concerns and, therefore, it would be useful to identify and comment upon possible legal objections that may arise from the use of technology in India-seated arbitrations.

i. Unequal Treatment of Parties

Some concerns have been raised with regards to the impact of technology on the equal treatment of parties.[56] Section 18 of the Act states that parties to the dispute must be treated equally. A white paper had noted that this issue may arise due to the use of different audio and video equipment by the parties, or where one party may be present in person and one party may be present virtually.[57] During consultation with practitioners and law firm partners having significant experience in handling complex arbitrations in the pre-COVID era as well as during COVID, it was found that such an issue is usually not raised in Indian arbitrations. Furthermore, such an issue has not cropped up before the Indian courts, but this lack of clarity certainly poses as a hindrance to the use of technology.

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55 Kundan Rice Mills v. Nat'l Commodities Derivative Exch., 2011 SCC Online P&H 4058.

56 Sonal Kumar Singh, Anish Jaipuriar & Sayantika Ganguly, *Artificial Intelligence in Arbitration: Revolutionary or Impractical*, MONDAQ (Jan. 19, 2021), *available at* https://www.mondaq.com/india/arbitration-dispute-resolution/1027248/artificial-intelligence-in-arbitration-revolutionary-or-impractical.

57 Centre for Arbitration & Research, *Virtual Arbitration in India: A Practical Guide*, MNLU MUMBAI 35 (2020), *available at* https://mnlumumbai.edu.in/pdf/Virtual%20Arbitration%20in%20India,%20CAR%20MNLU%20Mumbai.pdf [*hereinafter* "Centre for Arbitration & Research"].

ii. Fair & Reasonable Opportunity to present one's case

It has been seen that conducting virtual hearings is the only viable option left before tribunals to conduct arbitral proceedings during the pandemic. However, it is possible that virtual hearings may pose public policy concerns during enforcement of awards made consequent to such proceedings. To illustrate, suppose an arbitral tribunal fixes a hearing via video conferencing, which is opposed by one party on the ground of lack of digital copies of relevant documents, and the tribunal rejects such opposition and proceeds with virtual arbitral proceedings. The objecting party may now argue before the court that it was denied full and equal opportunity to present its case and, therefore, an award passed consequent to a virtual hearing is liable to be set aside. Conversely, suppose one party requests for a virtual hearing and the arbitral tribunal insists on a physical hearing, the same may result in undue delay and misconduct on the part of the arbitral tribunal to conduct the arbitration proceedings. Apart from these difficulties, virtual hearings may also pose *due process* concerns, which may be raised before the enforcing court under the Act.

In India, a domestic arbitral award can be set aside only if a specific ground is made out under Section 34 of the Act. In this respect, denial of equal opportunity of being heard is an explicit and valid ground to set aside an arbitral award.[58] Similarly, unexplained and inordinate delay in the making of an award is also a ground for setting aside an award.[59] These two grounds create a paradoxical situation. On the one hand, undue insistence on virtual physical hearings during COVID-19 could prove to be problematic as it may amount to the denial of equal opportunity of being heard. On the other, indefinitely delaying the proceedings solely on the ground of COVID-19 may constitute as inordinate delay.

iii. Lack of Clarity on Confidentiality

Confidentiality is a hallmark benefit of arbitration. However, previously, Indian law did not expressly provide for the confidentiality of arbitral proceedings. It was only in 2019 that Section 42A was introduced in the Act, which provided for the confidentiality of arbitral proceedings.[60] However, the wordings of Section 42A have raised concerns with respect to the effectiveness of this provision. It has been pointed out that only arbitrators, arbitral institutions and parties are bound by this provision, and not tribunal secretaries, witnesses, etc.[61] Another issue related to confidentiality is its effect on non-signatories. Non-signatories are not "*parties*"[62] to the arbitration agreement, but they are still impleaded as parties to the arbitration in certain situations. It has been opined by commentators that the wordings of Section 42A would not cover such non-signatories.[63]

In response, this author is not in complete agreement with this comment. This is because there is a whole line of jurisprudence specifying when non-signatories may be impleaded as "*parties*" in

58 Arbitration Act, § 34(2)(b)(ii).
59 K. Dhanasekar v. Union of India, 2019 SCC OnLine Mad 38989, ¶ 10.
60 Arbitration & Conciliation (Amendment) Act, No. 33 of 2019, § 9 (India).
61 Centre for Arbitration & Research, *supra* note 57 at 36–37.
62 Arbitration Act, § 2(1)(h) (Indian law defines party to mean a party to an arbitration agreement).
63 Tariq Khan, *The Who, Why & When of Confidentiality in Arbitration Proceedings*, SCC ONLINE BLOG (Jan. 21, 2021), *available at* https://www.scconline.com/blog/?p=242532.

arbitration.[64] There is no reason to speculate that the courts would adopt a strict definition of parties under Section 42A – when the court has adopted a liberal definition of the term "*parties*" – while ordering the impleadment of a non-signatory. In other words, though it is admitted that impleadment of non-signatories is possible only in exceptional circumstances, whenever such an impleadment is allowed, the courts would adopt the same liberal definition of "*parties*" in extending the scope of Section 42A to non-signatories.

It is noteworthy to mention here that the interpretation of this provision has not come up before courts and, hence, it is difficult to predict its impact on the enforceability of an award. Nevertheless, breach of confidentiality can have practical consequences such as deterring some parties from using third-party software and technologies in their arbitrations.

iv. Issues pertaining to Blockchain Arbitration

By its very nature, an award rendered through blockchain arbitration may be unenforceable in India.[65] Since a blockchain award is distributed on a blockchain ledger, it raises questions about the place of rendering of the award, stamping of the award, and original copy of the award, etc. Even assuming that such awards are self-executing and the need for instituting formal recognition and enforcement proceedings does not arise, the losing party may use these ambiguities to delay enforcement of such awards by securing interim orders in its favour.

B. Practical Concerns

As important as the legal concerns appear to be, they tend to disappear when more and more technology is being used. This is because use of more and more technology would lead to an increase in the chances of any legal issues arising out of use of technology in arbitration reaching the Indian courts and hence, being interpreted conclusively. Therefore, it becomes imperative to identify the ground realities that have hindered the adoption of technology in the contemporary Indian arbitration landscape.

i. Reluctance from Arbitral Community

During consultations with various practitioners, law firm partners, senior advocates and top management of various Indian arbitral institutions who have vast experience in handling both domestic and international commercial arbitration as both arbitrator and counsel, it was found that a lack of awareness regarding the use of technology amongst the Indian arbitral community is the primary hindrance to the use of technology in India. This is because most senior practitioners, judges and arbitrators have spent their careers in a physical arbitration environment and, hence, there is a passive and involuntary reluctance from the arbitral community to employ technology in arbitration. Moreover, such arbitrators also insist on submission of physical copies of all records and having

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64 Soorjya Ganguly & Somdutta Bhattacharyya, *Binding Non-Signatories to an Arbitration- Charting the Shifting Paradigms*, ARGUS PARTNERS (Nov. 22, 2019), *available at* https://www.argus-p.com/papers-publications/thought-paper/binding-non-signatories-to-an-arbitration-charting-the-shifting-paradigms/ (summarizing the Indian law on the subject).

65 Ritika Bansal, *Enforceability of Awards from Blockchain Arbitrations in India*, KLUWER ARB. BLOG (Aug. 21, 2019), *available at* http://arbitrationblog.kluwerarbitration.com/2019/08/21/enforceability-of-awards-from-blockchain-arbitrations-in-india/.

physical hearings as far as possible. Per one practitioner who is currently the registrar of a leading Indian arbitral institution and former partner of a leading dispute resolution law firm in India, the general environment and the history of the conduct of arbitration proceedings also poses a hindrance to the adoption of the use of technology. For instance, live transcription of arbitration hearings is not a routine practice in Indian arbitration. Therefore, it is difficult to imagine the employment of technology-oriented transcription services in Indian arbitration, even if they are available at cheaper rates. In other words, a technology-oriented transcription service would not be seen as a cheaper alternative to human based transcription service. Rather, it would be viewed as an additional cost burden.

ii. Untrained Arbitrators

As a corollary to the previous challenge, one reason that may explain the reluctance of Indian arbitrators is unfamiliarity with prevailing technologies. In the earlier part of this article, various technological tools and their uses in arbitration were identified. It is only natural to assume that many readers would be coming across these tools for the first time and even those who are familiar with such technologies would testify to the fact that the use of such technologies requires a certain degree of training. As already noted, the parties themselves arrange for virtual hearing support. This sometimes leads to logistical problems. For instance, it was pointed out by a practitioner who is a partner in a boutique dispute resolution law firm in India and founder of an online dispute resolution service provider, that due to the *ad hoc* nature of technological arrangements, there is no testing of equipment and software prior to the actual hearing to ensure its functionality. This sometimes leads to interruptions and problems during actual hearings, and can lead to more time-consuming proceedings, rather than time-saving proceedings. A further instance disclosed by another independent practitioner and former senior associate at a leading Indian law firm is the lack of awareness regarding features like break-out rooms. Therefore, the unfamiliar arbitrators usually deliberate their findings on the same platform or at a physical venue. This may lead to ego clashes, disruptions, health risks (due to COVID-19), etc.

In the ordinary court system, the Supreme Court has taken it upon itself to champion the Indian dispute resolution system into a tech-savvy era. In these COVID-19 times, the Supreme Court has been proactive in training judges, advocates and staff, in familiarising them with technological tools.[66] On the other hand, the Indian arbitration regime is a decentralised regime largely working on *ad hoc* arbitrations. This exacerbates the conundrum of where to attribute the responsibility for taking the the initiative to train Indian arbitrators in the use of technology.

iii. High Costs

The costs associated with the use of technology is a problem which has continuously plagued arbitration. Even the most sophisticated and repeat players are consistently worried about the costs incurred due to the use of technological tools in arbitration. Therefore, it is only natural that Indian

[66] Sparsh Upadhyay, *Over 1.6 Lakh Lawyers, Judges, & Court Staffers Trained Online by Supreme Court E-Committee during Pandemic Period*, LIVELAW (Mar. 21, 2021), *available at* https://www.livelaw.in/news-updates/1.6-lakh-lawyers-judges-and-court-staffers-trained-online-by-supreme-court-e-committee-during-pandemic-171502.

parties belonging to a developing country would be more worried about the costs. Consultations with practitioners revealed that costs are not an issue with respect to most India-seated arbitrations. This is because Indian arbitrations only use video conferencing software, which are either reasonably priced, or are free to use, like Google Meet.

Although with increased usage, the pricing of video conferencing platforms has come down, the costs of sophisticated AI tools continue to deter parties from using AI software.[67] Many practitioners noted that they use tools like transcription services only when they have enough budget for the same. Another practitioner who is currently the registrar of a leading Indian arbitral institution and former partner of a leading dispute resolution law firm in India and who frequently uses such technologies in international arbitration disclosed that in domestic arbitration, his proposal to use a particular tool was opposed by the Respondent, a Public Sector Undertaking, because of the high costs involved. Similarly, a leading law firm practitioner and partner having experience in dispute resolution and arbitration had also disclosed that his firm had taken an initiative to introduce more technology in Indian arbitration. However, this initiative could not take flight as parties viewed the costs associated with such technologies as an additional and unnecessary burden.

iv. Preference for Ad Hoc Arbitration over Institutional Arbitration

India continues to prefer *ad hoc* arbitration over institutional arbitration. While popular Indian arbitral institutions like Mumbai Centre for International Arbitration have encouraged the use of technology,[68] such benefits have not reached down to most domestic arbitrations as the same are oblivious of institutional arbitration. Of course, an *ad hoc* arbitration may get converted into an institutional arbitration when it is referred to a court-annexed arbitration centre, nevertheless, some practitioners and law firm partners routinely handling arbitrations in India have opined that there could be more use of technology if such an initiative is taken by arbitral institutions.

v. Lack of E-Stamping Facilities

Under Indian law, an award is to be sufficiently stamped before it can be enforced as a decree of the court. At the outset, it is clarified here that stamping is important for the enforcement of an award and not for the making of an award. This is because Section 31 of the Act provides conditions for making an award. These conditions do not enumerate the stamping of the award. The Delhi High Court has explained this distinction in the following words:

> "… *[T]he Arbitration Act does not… create a legal obligation on the parties in arbitration to pay stamp duty on an award. It is only when they begin taking steps to enforce the award that the parties are obligated to ensure that the instrument has been duly stamped…. Thus, the Arbitration Act envisages that the payment of requisite stamp duty on an award shall only be required when a party is seeking to get the same enforced under Section 36*."[69]

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67 WHITE & CASE, *supra* note 2.

68 *Annual Report 2021*, MUMBAI CENT. INT'L ARB. 1 (2021), *available at* https://mcia.org.in/wp-content/uploads/2016/05/mcia-report.pdf.

69 Mohini Elec. Ltd. v. Delhi Jal Board, 2021 SCC Online Del. 3506.

In this respect, it has been noticed that India is still at the nascent stages of introducing the concept of e-stamping.[70] However, until such time, the parties are compelled to get their awards physically stamped. A caveat that needs to be mentioned here is that the concept of stamping is not strictly related to an arbitration proceeding. Moreover, practitioners do not recognise physical stamping as a major hindrance to the use of technology in Indian arbitration as they view it as an everyday affair. Thus, in all fairness, it may be noted that the concept of e-stamping can lead to the complete virtualisation of the arbitration process, but it is not a hindrance per se.

C. Technological Concerns

It has been said that "*You know what I like about pen and paper? Nobody can hack into … [it].*"[71] A shift from a pen-and-paper arbitration regime to a tech-savvy regime is bound to bring its own unique set of challenges which need to be identified before technological tools are adopted.

i. Concerns Regarding Witness Coaching

A common issue that emerged during consultations with practitioners is that of witness coaching. To elaborate, in a virtual cross-examination, a witness is cross-examined in a two-dimensional virtual environment instead of a three-dimensional physical environment. Thus, there is a real possibility that a witness may open a chat service or a document on his screen during the cross-examination, or there may be another person present in the room providing answers to the witness.

Another common issue is that a witness may fake internet disruption and re-join after some time after being coached by their lawyer. In fact, it was found that this is such a prominent and pressing concern that even the most tech-savvy arbitrators prefer to conduct witness examinations in a physical setup. Although there is no empirical evidence suggesting this finding but nonetheless the consultations with various practitioners, law firm partners, senior advocates and top management of arbitral institutions seemed to meet at a consensus regarding this fact. Moreover, the arbitrators may sometime propose a hybrid model of cross-examination, where one person representing the cross-examining party would be present in the room to ensure that witness testimony is not coached. The obvious disadvantage of these solutions is that in a lockdown-like situation, the arbitration proceedings are bound to be adjourned resulting in delay.

Some practitioners including a partner in the dispute resolution and arbitration wing of a leading full-service law firm in India also disclosed that a few arbitrators order for makeshift technological solutions to counter this problem. For instance, one practitioner pointed out that during cross-examination, the witness would be ordered to log in from one additional device which would be placed behind the head of the witness providing additional vision. This mitigates the risk of witness coaching to some extent. On the other hand, other practitioners noted that they had used a 360 camera to counter this problem.

ii. Cybersecurity Concerns

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70 Martin Hunter, Simon Weber & Sadyant Sasiprabhu, *Arbitral Awards in Indian Arbitration, in* ARBITRATION IN INDIA 188 (Dushyant Dave, Martin Hunter, Fali Nariman & Marike Paulsson eds., 2021).

71 KINGSMAN: THE SECRET SERVICE (20th Century Fox 2014).

With arbitration being a highly confidential affair, the need to ensure the integrity of data on third party platforms assume high significance. In the past, websites of notable arbitral institutions like the Permanent Court of Arbitration have been hacked, which led to the leakage of highly sensitive data.[72] More use of technology would naturally lead to a higher risk of hacking and other cybersecurity concerns. In this respect, India has a poor reputation in relation to cybersecurity, with data hacks being a common news affair. For instance, in 2018, the Supreme Court's website was reportedly hacked.[73] Thus, such concerns hinder the adoption of technology in Indian arbitration.

iii. Data Protection Concerns

With the emergence of the global information economy, personal data is the new gold. Behavioural tagging, data profiling, among other, are some of the reasons which have led to the development of data protection law. While most of the literature concerning data protection and arbitration is aimed at ensuring compliance with existing laws, failure to establish a data protection protocol can have adverse consequences. Since arbitration involves disclosure of highly sensitive and confidential information, an unrestricted transfer of the same without the consent of the parties can be disastrous. For instance, counsel and arbitrators may share personal data pertaining to a particular entity with a funder.[74] Such a funder may use the data to determine the probability of that entity at succeeding in arbitration. Thus, such data processing can make or break a deal for the entity to secure a funding for its claim. A party that often loses may want to secure its data transfer so that its funding prospects are not diminished.

On the date of writing this article, India still does not have a data protection law. The previously proposed Personal Data Protection Bill, 2019,[75] aimed to form comprehensive law on the same, however, an updated form of the same is yet to be published and the same was withdrawn from the Lok Sabha in August 2022. Moreover, there have been some concerns as to whether the said Bill would effectively cover or even be applicable to arbitration in India.[76] Further, very recently a draft

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72 Luke Eric Peterson, *Permanent Court of Arbitration Website Goes Offline, with Cyber-security Firm Contending that Security Flaw was Exploited in Concert with China-Philippines Arbitration*, INV. ARB. REPORTER (July 23, 2015), *available at* https://www.iareporter.com/articles/permanent-court-of-arbitration-goes-offline-with-cyber-security-firm-contending-that-security-flaw-was-exploited-in-lead-up-to-china-philippines-arbitration/.

73 Ashok Bagriya & Bhadra Sinha, *Supreme Court Website Down, Reportedly Hacked, after Loya Case Verdict,* HINDUSTAN TIMES (Apr. 19, 2018), *available at* https://www.hindustantimes.com/india-news/supreme-court-website-inaccessible-reportedly-hacked/story-dFJFx9r34UKDKyNj9JAeLK.html.

74 Third Party funder refers to financing of a claim by an unrelated third party in exchange for a share from the proceeds of the award. For further discussion *see also*, Meenal Garg, *Introducing Third-Party Funding in Indian Arbitration: A Tussle between Conflicting Public Policies*, 6(2) NLUJ L. REV. 71 (2020).

75 *The Personal Data Protection Bill, 2019*, PRS INDIA (Dec. 11, 2019), *available at* https://prsindia.org/files/bills_acts/bills_parliament/2019/Personal%20Data%20Protection%20Bill,%202019.pdf.

76 Ananya Bajpai & Shambhavi Kala, *Data Protection, Cybersecurity & International Arbitration: Can they Reconcile?*, 8(2) INDIAN J. ARB. L. 1, 15 (2019); Tarun Krishnakumar, *Data Protection in India & Arbitration: Key Questions Ahead*, KLUWER ARB. BLOG (Apr. 16, 2019), *available at* http://arbitrationblog.kluwerarbitration.com/2019/04/16/data-protection-in-india-and-arbitration-key-questions-ahead/.

Digital Personal Data Protection Bill, 2022[77] has been released inviting public comments and the same has not been introduced in the Parliament as on date.[78]

Domestically, increasing attention is being paid to data protection, especially since the Supreme Court recognised the right to privacy as a fundamental right.[79] Now, in a scenario where arbitration players in India are already oblivious and sceptical of technological tools, a shabby data protection framework is undoubtedly a huge hindrance to the adoption of technology in Indian arbitration.

There are major challenges to the use of technology in Indian arbitration. Some of these challenges are in consonance with the challenges faced by the international arbitral community when it commenced the adoption of technological tools. Similarly, some of these hindrances, like high costs are also being faced by other jurisdictions. However, a majority of these challenges are unique to the Indian arbitration regime because of its arbitration landscape and history. These include lack of familiarity with use of technology in arbitration, reluctance to adopt technological tools in arbitration, lack of proper training etc.

The legal concerns appear to be ambiguous provisions requiring more interpretation. Barring witness coaching, these technological concerns also do not seem to be very pressing concerns. Rather, practical concerns like reluctance from the arbitral community and untrained users, appear to be the most prominent concerns hindering the adoption of technology in Indian arbitration. Although parties, counsels, and arbitrators may have devised temporary solutions to overcome these challenges, in the long run, these challenges are sure to become a bigger problem than they seem to be today. Practitioners and law firm partners routinely handling arbitrations in India have opined that a positive change is possible provided such challenges are properly addressed.

V. Suggestions and Conclusions

A. Suggestions

The research has revealed that there is a long road ahead, before India can match up to the best international practices regarding the use of technology. To cover this distance, this part offers suggestions which have been classified into three categories, namely- immediate, short-term, and long-term suggestions.

Broadly, an immediate suggestion implies an *ad hoc* solution which needs to be implemented as soon as possible. A short-term suggestion implies a suggestion which needs to be implemented within a span of one year. Finally, a long-term solution is continuous practice which needs to be adopted by various stakeholders to promote and sustain the use of technology in Indian arbitration.

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77 *The Digital Personal Data Protection Bill, 2022*, MINISTRY OF ELEC. AND INFO. TECH. (Dec. 7, 2022), *available at* https://www.meity.gov.in/writereaddata/files/The%20Digital%20Personal%20Data%20Protection%20Bill%2C%202022.pdf.

78 *The Digital Personal Data Protection Bill 2022*, PRESS INFO. BUREAU (Dec. 7, 2022), *available at* https://pib.gov.in/PressReleasePage.aspx?PRID=1881402#:~:text=The%20Ministry%20of%20Electronics%20and,of%20its%20public%20consultation%20exercise.

79 Justice K.S. Puttaswamy v. Union of India, (2017) 10 SCC 1.

A caveat that needs to be mentioned here is that some of the suggestions may be prior to the time period classification mentioned here. However, the purpose of the present classification is to suggest an ideal time period for the achievement of such solutions.

i. Immediate Suggestions

1. Procedural Guidelines by the Supreme Court

In the past, the Supreme Court has issued guidelines for the examination of witnesses through video conferencing.[80] During the pandemic, the Supreme Court also issued guidelines for the functioning of courts through video conferencing.[81] Therefore, due to a lack of any other central body, it is necessary that such guidelines are issued by the Supreme Court for the functioning of arbitral tribunals through video conferencing. These guidelines should account for witness tampering, cyber security, data privacy, etc. Moreover, these guidelines should duly consider the prerogative of the arbitrator to formulate their own procedure for the conduct of arbitration proceedings.

Although there are some guidance notes available in the public domain, any guidelines issued by the Supreme Court would obviously come with a sense of legitimacy, and there is a higher probability that these guidelines would be accepted by *ad hoc* arbitral tribunals. Moreover, such guidelines would also give implied ex-ante clarity on the interpretation of certain provisions which are still in the grey area. In fact, this is the reason why this article has not proposed any model guidelines as the same would be another fish in the sea of non-binding guidelines, which may or may not be followed by the arbitral tribunals.

2. Addressing due process concerns

It is necessary that the arbitrators consider various factors while allowing or rejecting a request for virtual hearing. These factors may include the stage of proceedings, reason for objection to virtual hearing, past conduct of parties in delaying the proceedings, etc. Such a reasoned order would help in avoiding a challenge to the award under Section 34 of the Act or a procedural order.

3. Amendment of Arbitration Clauses

It has been proposed to include virtual arbitration in arbitration clauses to overcome some of the potential legislative ambiguities.[82] In conjunction with the same, the author opines that even the pre-pandemic drafted arbitration clauses should be amended to incorporate the experiences learnt from virtual arbitration.

4. Incentives from arbitral institutions

Globally, some arbitral institutions have announced a reduction in administration fees if the parties agree to use technology in their arbitrations.[83] Similarly, another incentive is the use of an in-house case management portal of the arbitral institution on a trial basis for no extra charge. Some Indian

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80 State of Maharashtra v. Praful B. Desai, (2003) 4 SCC 601.

81 Re: Guidelines for Court Functioning through Video Conferencing during COVID-19 Pandemic, (2020) 6 SCC 686.

82 Tariq Khan & Pradhnya Deshmukh, *Scope of Online Arbitration & its Future in India*, USLLS ADR BLOG (May 1, 2021), *available at* https://usllsadrblog.com/scope-of-online-arbitration/.

83 Allison Goh, *Digital Readiness Index for Arbitration Institutions: Challenges & Implications for Dispute Resolution under the Belt & Road Initiative*, 38 J. INT'L ARB. 253, 258 (2021) [*hereinafter* "Goh"].

service providers disclosed that they had entered into agreements with some arbitral institutions for the use of technology, however, the details of such arrangements were not shared with the author. Therefore, in light of the same, the burden to popularise such arrangements falls on the Indian arbitral institutions who can offer incentives to promote the use of such technologies.

5. Incorporating non-disclosure agreements and data protection clauses with service providers

The previous part of the article has shown that there is some uncertainty regarding confidentiality and data privacy obligations of technological service providers. Therefore, until requisite clarity is achieved, it would be advisable if parties include non-disclosure agreements and confidentiality clauses in their agreements with the technological service providers. Similarly, they may also prefer to put clauses regarding data privacy and data storage.

ii. Short Term Solutions

1. More Indian service providers of technology and funders

It would take a long time for technology in arbitration to become an industry standard and, therefore, the high costs associated with it would be a problem for some time. Thus, to ensure that India capitalises on the benefit of technological advancements, a quicker solution is required. Consultations with various practitioners and service providers have shown that Indian service providers of technological tools are cheaper than the global service providers.[84] Hence, the entry of more and more Indian service providers into the market could address the cost problem to some extent. Similarly, the entry of funders who understand the benefits of technology and the Indian arbitration landscape can help nullify the apprehension of high costs by funding genuine claims.

2. Enactment of ACI as a training agency

Many practitioners noted that the lack of use of technology can be partly attributed to the lack of any nodal agency which could take initiative in this respect. Hence, it is noteworthy to mention here that the 2019 Amendment Act had proposed the introduction of Part IA into the Act, which provided for the creation of the Arbitration Council of India ["**ACI**"]. One of the functions of ACI was to train arbitrators and grade arbitral institutions to maintain appropriate standards.[85] Interestingly, the provisions pertaining to ACI have not been enacted till date. Therefore, it is imperative that ACI is established, as, only it can function as a nodal agency to promote technology in Indian arbitration. In other words, what the Supreme Court has done for the courts, ACI can do for arbitration. ACI can formulate a roadmap for training of arbitrators in the use of technology. Furthermore, during the grading of arbitral institutions, the ACI may also consider the recently proposed Digital Readiness Index to motivate arbitral institutions to inculcate more and more technological tools in their proceedings.[86]

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84 Vikas Mahendra, *Technology & Transcription in Arbitration*, BAR & BENCH (Apr. 20, 2021), *available at* https://www.barandbench.com/columns/technology-and-transcription-in-arbitration.

85 Arbitration & Conciliation (Amendment) Act, No. 33 of 2019, §10 (India).

86 *See generally* Goh, *supra* note 83.

In the past, commentators have also argued for entrusting this function to some nodal agency.[87] However, the problem with such solutions is that the proposed nodal agencies lack statutory backing. Thus, any solution proposed on the bedrock of such institutions is flimsy and voluntary. Even if for the sake of argument such a solution is accepted, it would still involve a long legislative process in converting such agencies into statutory bodies. On the other hand, the ACI can be established more quickly, which could evolve hybrid policies having a flavour of mandatory statutory compliances and incentive based voluntary initiatives.

3. Legislative Amendments to recognise technological tools in arbitration

The research has shown that there is nothing in the Act prohibiting the use of technology in arbitral proceedings. However, it can also be seen that due to a lack of precedent and legislative guidance, much of the contemporary discussion is centred on predicting the positive and negative consequences of the use of technology in Indian arbitration. It is noteworthy to mention here that with the exception of Section 7 of the Act, there is no other mention of technology in the Act. In contrast to this, many recently enacted foreign legislations expressly provide for the use of technology at various stages of arbitration, like witness examination, virtual hearing, award, etc. Surprisingly, the Act has been amended three times, in 2015, 2019, and 2021; but no endeavour has been made to inculcate express provisions with respect to the use of technology in Indian arbitration. Further, in case *ad hoc* arbitration continues to remain the norm, institutional guidance notes and ACI will not be able to make a major impact in the use of technology in *ad hoc* arbitration. Therefore, it would be advisable if the legislature amends the Act to bring it in line with international technology practices.

4. Enactment of Online Dispute Resolution Specific Provisions/Policies

Hong Kong has introduced an online dispute resolution scheme for certain types of disputes, provided that certain pre-conditions are satisfied.[88] Although various sectors and ministries may choose to adopt this route depending upon the nature of the sector, it would be beneficial if a specific provision is introduced in the Act. The Act already provides for a summary fast-track arbitration procedure, which may be opted by the parties.[89] Along similar lines, the legislature may enact a similar provision for online arbitration, which the parties may choose. Niti Aayog, in its recent report, had also noted that the Act should incorporate online dispute resolution specific provisions and supplementary rules.[90] The legislature may experiment with this suggestion through small-scale disputes. In India, the Micro, Small and Medium Enterprises Development Act, 2006,[91] ["**MSMED Act**"] was enacted that

87 *See, e.g.,* Nihal Raj, *New Technologies in Arbitration: Ensuring Independence & Impartiality*, ACADEMIKE (Dec. 10, 2020), *available at* https://www.lawctopus.com/academike/new-technologies-in-arbitration-ensuring-independence-and-impartiality/.

88 *COVID-19 Online Dispute Resolution Scheme Launched Today*, GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION (June 29, 2020), *available at* https://www.info.gov.hk/gia/general/202006/29/P2020062900651.htm?fontSize=1.

89 Arbitration Act, § 29B.

90 Niti Aayog Expert Committee on ODR, *Designing the Future of Dispute Resolution: The ODR Policy Plan for India*, NITI AAYOG 82 (Oct. 2020), *available at* https://www.niti.gov.in/sites/default/files/2021-11/odr-report-29-11-2021.pdf [*hereinafter* "Niti Aayog Expert Committee on ODR"].

91 Micro, Small & Medium Enterprises Development Act, No. 27 of 2006 (India).

introduced the concept of statutory arbitration for the resolution of small-scale disputes.[92] The legislature can amend the MSMED Act to create a concept of mandatory statutory virtual arbitration. This suggestion is also in consonance with the fact that presently, there is comparatively a greater proliferation of technology in low value arbitrations. This amendment will not only provide legitimacy to online arbitration but also promote the use of technology in arbitration.

5. Reimagining the role of Court-annexed arbitral institutions

Court-annexed arbitral institutions cannot thrive by holding on to a brick-and-mortar model of arbitration. Sooner or later, technology is bound to revamp the Indian arbitration landscape. Private arbitral institutions have already started gearing up for this revolution. It is imperative that the infrastructure of court-annexed arbitral institutions is ramped up to provide technological services. Also, the administrative staff of such institutions needs to be trained adequately to bring these institutions at par with private arbitral institutions. The relevance of this solution assumes importance as one independent practitioner who was a former senior associate at a leading Indian law firm had noted that if such lethargic attitude continues to persist, government authorities may consider shutting down such institutions. Therefore, it is suggested that court-annexed arbitral institutions embrace this inevitable change before it becomes a pre-requisite for their survival.

6. Enacting the Data Protection Law

It is necessary that India enacts its own data protection law. Many foreign arbitral institutions may be already adhering to global data privacy standards because of mandatory compliance with foreign data protection laws. However, enacting this law would also mandate the indigenous service providers to pay attention to data privacy concerns.

iii. Long Term Solutions

1. Increased use of technology

A simple solution to the high costs problem would be to let the market forces take on its full play. In other words, increased usage of technology would lead to more competition and consequent reduction in cost as and when such technology becomes the industry standard.

2. Co-ordination between Courts and Arbitral Tribunals

Co-ordination between arbitration and the judiciary can be done in two ways. *First*, ACI can co-ordinate with Supreme Court and gain from the judicial experience in the introduction of technology in court proceedings. The Supreme Court has revolutionised the Indian court system by adopting e-filing and virtual courts. Furthermore, courts have also started adopting AI to assist judges in decision-making.[93] ACI can use these lessons to formulate better and more suitable guidelines for Indian arbitration. *Second*, if use of technology increases, courts need to ensure that their rulings are pro-arbitration and pro-technology. In this respect, Section 5 of the Act provides for minimal judicial

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92 *Id.* § 18(3).

93 Amit Anand Choudhary*, Use of Artificial Intelligence will Transform the Judiciary but Technology will not be Allowed to Decide Cases: CJI*, TIMES OF INDIA (Apr. 21, 2021), *available at* https://timesofindia.indiatimes.com/india/use-of-artificial-intelligence-will-transform-judiciary-but-technology-will-not-be-allowed-to-decide-cases-cji/articleshow/82183403.cms.

intervention. Moreover, the courts have circumscribed their powers to set aside an award under Section 34 of the Act to a great extent.[94]

3. Continued innovation by arbitral institutions

The research has shown that India-based private arbitral institutions are in a better position to embrace technology in its functioning when compared to court-annexed arbitral institutions. However, this development is limited to the establishment of the bare minimum video conferencing structure. On the other hand, global arbitral institutions have established their own technological platforms for the conduct of arbitral proceedings like NetCase created by the ICC,[95] SCC Platform by the Stockholm Chamber of Commerce,[96] etc.

Innovation is important as parties will move to those platforms where innovative digital tools are available.[97] Thus, it is not enough that arbitral institutions stay one step behind global arbitral institutions. To increase the use of technology in Indian arbitration, it is imperative that arbitral institutions and other service providers keep innovating new digital tools. In this respect, Niti Aayog has identified a set of principles which such service providers may take into account while innovating.[98]

It is noteworthy to mention here that one practitioner who is an AOR at the Supreme Court of India and a former partner in the dispute resolution wing of a leading full service law firm in India, had opined that the burden of popularising the use of technology cannot be solely shifted to arbitral institutions as in any case, the parties always have the residual option to themselves agree on a service provider of their choice. In this respect, this article does not view arbitral institutions as the sole bearer of the responsibility of popularising the use of technology. No doubt this change can be brought only by the collective efforts of all stakeholders. Nevertheless, this article views arbitral institutions as a key stakeholder and expects the same standards of functioning that have been set by global arbitral institutions.

4. Developing Infrastructure

The use of technology essentially depends upon access to high speed and uninterrupted internet connection, computers, laptops, smartphones etc. The government should ensure that these necessities are available to everyone and there is no unwarranted disruption.

iv. Conclusion

This article has illustrated the existing use of technology in the Indian arbitration landscape, affirming that the contemporary Indian arbitral community utilised technology as a response to the pandemic and does not compare with international arbitration in terms of technological proliferation and

94 Ssangyong Eng'g & Constr. v. Nat'l Highways Auth. of India, 2019 SCC Online SC 677.

95 *ICC NetCase: A Secure Environment for ICC Arbitration*, INT'L CHAMBER COM., *available at* https://iccwbo.org/content/uploads/sites/3/2016/11/NetCase-Pamphlet-English.pdf.

96 *SCC Platform – Simplifying Secure Communication from Request to Award*, STOCKHOLM CHAMBER OF COMMERCE (Sept. 2019), *available at* https://sccinstitute.com/case-management/.

97 Colin Hutton, Rob Wilson & Laura West, *Innovation & Technology in International Arbitration: What lies ahead?*, LEXOLOGY (Nov. 26, 2019), *available at* https://www.lexology.com/library/detail.aspx?g=7d3d0aa5-dcbf-407c-8190-9ad68e06f9b3.

98 Niti Aayog Expert Committee on ODR, *supra* note 90 at 8–93.

comfort while using technology. The article then enumerated hindrances in the use of such technology and finally, proposed a comprehensive plan involving all stakeholders to promote the use of technology in Indian arbitration.

On one hand, the international arbitral community has been rapidly adopting technology on all fronts. Current innovations and technological best practices are the result of international discussion and initiative. On the other hand, India has been playing catch-up and has barely scratched the surface of the potential benefits that can be derived from the use of technology in arbitration. The lack of use of technology in arbitration is the reason why the legal jurisprudence pertaining to the same is almost non-existent in India.

The Law Commission of India in 2014 had suggested the use of tele-conferencing and videoconferencing in arbitration.[99] After six years, Indian arbitrators had to resort to this alternative, albeit because of COVID-19. Practitioners have noted that although the use of technology was due to COVID-19, parties have recognised the advantages of the same, especially in terms of cost and time saving. With respect to other technologies, India should not wait for another pandemic. It is amply clear that if used properly and rationally, technology can change the face of Indian arbitration. Moreover, reluctance to adopt further technological advancements would only pose as a hindrance in achieving the dream of making India a global arbitration hub.

Furthermore, COVID-19 cannot be seen as an end but only as of the beginning of the use of technology in India-seated arbitrations. In other words, the end of the pandemic (whenever the day comes) should not be viewed as *au revoir* to technology in Indian arbitration. This is because the Indian arbitration community, in any case, would have to match its standards to international arbitration. This does not mean that technology should be incorporated in a similar fashion as the international community. This article has advocated for a methodology to incorporate technology in arbitration considering the unique arbitral landscape of India. However, continued hostility towards the use of technology in arbitration would only lower the chances of India being selected as a seat of arbitration.

[99] LAW COMM'N INDIA, *supra* note 44 at 13.