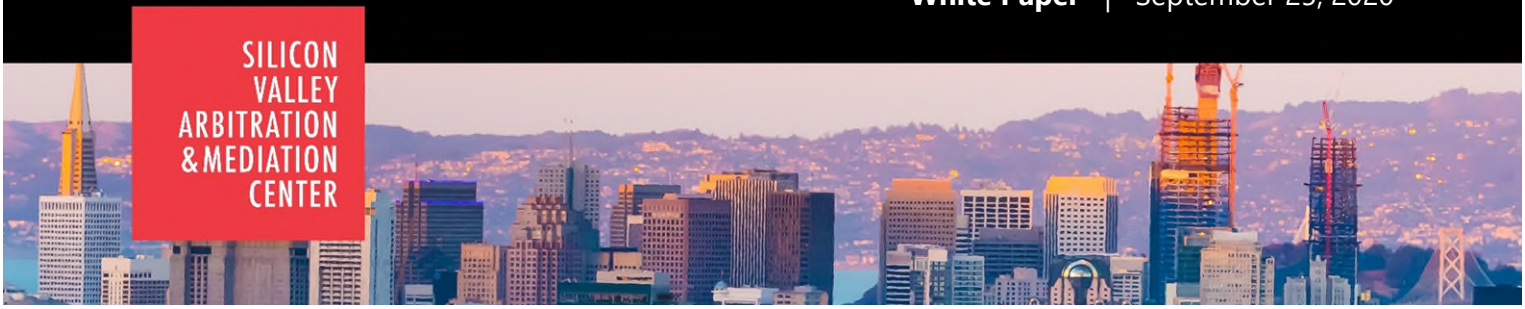

SVAMC Task Force on Tech Disputes, Tech Companies & International Arbitration

By Patricia Shaughnessy, Paul Cohen & Duarte G Henriques[1]

I. Technology Companies Dominate Global Industry but Seem Underrepresented in International Arbitration. Why?

1. Consider the technology sector and the international arbitration system, at their respective best: fast, flexible, forward-thinking. They ought to be a perfect match. Yet, for several years, specialists in transnational disputes have puzzled over a paradox: the technology sector – comprising some of the world's richest, most ubiquitous, and most sophisticated companies – has rarely resorted to the world's foremost (and arguably its only viable) form of global dispute resolution.

2. The technology companies that run the digital economy account for 15.5% of global economic activity.[2] But according to recent (2018) statistics, technology sector disputes referred to arbitration institutions form no more than 6% of the total at the ICDR,[3] around 5% of the ICC total,[4] 3.5% of the SCC caseload,[5] 3% of LCIA cases,[6] and are not even broken down within the category of "other" at SIAC.[7]

   These figures in fact represent a substantial uptick from the state of affairs 10 years ago, when international arbitrations involving technology companies were negligible in number. In that sense, they can be seen as progress. But they still fail to reflect the ubiquity of the technology sector in global commerce – particularly the major American players. Indeed, if one searches the database of Global Arbitration Review, a leading arbitration news publication since 2007, one finds a mere three references to arbitrations involving any of these household names (all of which can be found within a 50-mile radius of the headquarters of the Silicon Valley Arbitration and Mediation Center ("SVAMC")): AirBnB, Apple, Cisco, Facebook, Google, Intel, Netflix, PayPal, Twitter, and Uber. Even adding the Seattle behemoths Amazon and Microsoft adds only one reference.

   By contrast, a search on the same database for Exxon alone yields references to five separate arbitrations over the past two years alone. Granted, case references in a news database will provide an imperfect gauge of often-confidential and unreported arbitrations; but the evidence nonetheless indicates that something might be amiss.

   Is there something about these technology companies or the nature and type of disputes they have that leads them elsewhere to resolve their cross-border disputes? Are these companies taking their disputes elsewhere and avoiding arbitration? Or is there something about the nature of arbitration, or

the lack of familiarity with it, that explains the underuse of arbitration by technology companies (large ones in particular)? If so, what exactly underlies this? Or, by contrast, are tech companies catching up and catching on to arbitration's advantages? If so, how might we encourage that trend?

International arbitration, for better or worse, currently provides the only reliable route to enforce a decision transnationally, courtesy of the New York Convention. And do technology companies outside Silicon Valley and the US – from Bangalore to Beijing, from Singapore and Seoul to Stockholm – also punch below their weight in the world of international arbitration? The statistics above from arbitral institutions suggest so, but further study would be needed for confirmation and for fully understanding the situation.

3. If we assume that that technology companies underuse arbitration relative to their market share and arbitration's advantages over litigation, there could be a number of possibilities (in no particular order) why this is so:

    a. Technology companies might not perceive arbitration as the time and cost-efficient dispute resolution mechanism that it was meant, and is supposed, to be;

    b. Big technology companies (especially American ones) may feel that they enjoy a comparative advantage over smaller counterparties in the US litigation system, where they can overwhelm them with discovery requests and the possibility of a fickle, fact-finding jury, making the dispute too unappetizing to take to trial;

    c. Technology companies prefer the safeguards of de novo review and the appeal process over arbitration's finality;

    d. Technology disputes are not necessarily fit for arbitration and many disputes often arise outside the contractual framework and, therefore, are not covered by an arbitration agreement (for instance, disputes arising out of infringement of copyrights and patents);

    e. Arbitration's traditionally fluid processes may have hardened into more inflexible procedures that technology companies find unattractive;

    f. Despite their sophistication, technology companies' leadership (including in-house and outside counsel who may be involved in the procurement and contract negotiation phases) might be unfamiliar with the current state and particulars of international arbitration, and specifically with the availability of specialized arbitrators. They may hold a negative opinion of arbitration based on limited experience with domestic arbitration proceedings. Technology companies might be making decisions against arbitration, premised on a lack of information;

    g. Reported arbitrations between technology companies are a lagging indicator. Some data suggest that the number of such arbitrations has increased dramatically over the past decade; at this rate of expansion, technology arbitrations might sooner or later account for a share of arbitrations commensurate with the technology industry's size.[8]

    These possibilities are neither exhaustive nor mutually exclusive. They may represent a lagging indicator, as arbitration embraces technology and technology companies become more familiar with arbitration. At this stage, however, they represent our best educated guess as to the reasons for the current state of affairs.

4. With the aim of exploring all these questions and finding satisfactory answers, as well as pathways to greater collaboration between these communities, the SVAMC has established the Task Force on Tech Disputes, Tech Companies & International Arbitration (the "Task Force").

II. The Task Force and its Scope

5. Our interest in exploring the relationship between technology companies and arbitration is professional, but not pecuniary: the SVAMC is a not-for-profit organization dedicated to expanding the use of alternative dispute resolution in the technology sector. The SVAMC does not administer arbitrations, nor does it favor any particular arbitral seat or institutional rules over any other. The SVAMC works with leading technology companies, law firms, ADR institutions, as well as universities around the world, to provide educational resources regarding the effective and efficient resolution of technology-related disputes. It is a "think tank" with a global focus that encourages the use of alternative dispute resolution in the technology sector.

6. The Task Force aims to contact experts in the fields of technology and arbitration, ranging from academics, practitioners (either as adjudicators or advocates), institutional managers and, most importantly, users, of arbitration. It will design and conduct comprehensive and scientific surveys with the contacted people and entities with the intention of determining which, if any of the hypotheses above (or which others) best explain the perspective of technology companies on arbitration. The Task Force will maintain open and constant communication by convening periodic meetings, exchanging materials, and holding public events.

   The Task Force's future direction will be driven primarily by the conclusions offered by the data. Once we have examined and digested the survey responses, we will follow where they take us. Our initial hypotheses may be vindicated, or they may prove wildly off-base. In either event, the Task Force will aim at this phase to analyze, rather than to proselytize. The Task Force will also actively seek feedback, on the basis of which its functioning may be evaluated and modified.

   The composition of the Task Force, public announcements and regular work updates will be available on a micro-site on the SVAMC website.

7. For the purpose of this enquiry, we use an expansive definition of 'technology companies', motivated in equal parts by the awareness that there are no universally preferred definitions,[9] and by our desire to focus on how companies define themselves. We will consult people and corporations across the globe, in order to explore the impact of factors such as different cultures and domestic judicial structures.

   The focus of this project has deliberately been limited to arbitration, because alternative methods of dispute resolution such as mediation, expert determination and negotiation can co-exist with litigation or arbitration, and may not necessarily indicate a preference. We look at arbitration only because it is adjudicatory and binding, and is thus more likely to be perceived as an *alternative* to litigation. Further, on top of all the other advantages, arbitration in the only mechanism to finally resolve disputes that benefit from a virtually worldwide enforcement, under the 1958 New York Convention.[10]

   Once armed with data in the form of substantial input from the users and would-be users of arbitration in technology disputes, we shall proceed to make recommendations about how the arbitration process might better serve the technology sector.

III. Why Shouldn't Arbitration be Superior to Litigation to Resolve International Disputes?

8. The international arbitration community has often described arbitration to be significantly more efficient with respect to both time and cost, in comparison to litigation.11 However, there appears to be a growing realization that such efficiencies may be exaggerated, and that arbitration may end up being both lengthy and expensive.12 Institutions have taken note of these concerns, and have released various documents assessing their cost structures and recommending ways of making proceedings more efficient.[13]

   Many arbitral institutions have revised their rules to provide for more efficiency and introduced new features such as joinder, consolidation, and early dismissal of claims and defenses. Many arbitration institutions have introduced, or are in the process of introducing,[14] special arbitration rules providing for "expedited arbitration", which provide fast-tracked proceedings suitable for less complex cases. And in the past decade, arbitration rules and laws have responded to the need for quick interim and protective measures through interim relief and emergency arbitration provisions, which can result in enforceable decisions. Under most regimes, courts have concurrent jurisdiction to order interim measures, to support the arbitral process.

   Speed and efficiency, however, are not always the foremost concern for dispute resolution. There are equally (if not more) important considerations such as procedural fairness[15] and quality of decision-making. [16] Some companies might be sufficiently concerned about these to consciously forgo the perceived efficiency advantages of arbitration.

   A major advantage of arbitration that does appear to be universally recognized is its **flexibility** – parties can define the length of proceedings and the extent of expenditure that suits the needs of the case and interests of the parties.[17] While this ability may not be absolute, it is significant since parties can select procedural rules, institutions, and arbitrators with their specific efficiency interests in mind. Once a dispute is referred to arbitration, the parties continue to have substantial opportunities to adapt the procedures and to formulate the contested issues to suit their needs.

9. Arbitration thus can be more efficient than litigation if the parties so desire; the vast variety of alternatives within the field are likely to allow technology companies to structure proceedings that are efficient *for them*. But arbitration also has a few notable advantages that may make it preferable over litigation even when it is less efficient. For one, arbitration allows for technical disputes to be resolved by experts in the field, who are likely to have a more comprehensive understanding of the issues in contention. Some institutions even have rosters of arbitrators specialized in particular sectors, such as intellectual property[18] and information technology,[19] or provide search engines where arbitrators specialized in technology disputes can be identified.[20]

10. Second, arbitration is a private method of dispute resolution, allowing for companies to introduce confidentiality measures with relative ease.

11. Third, the New York Convention allows for arbitral awards to be recognized and enforced in 165 countries, making arbitration ideal for the resolution of transnational disputes. The wide global acceptance of the New York Convention, as well as the influence of the UNCITRAL Model Law on International Commercial Arbitration on national legislation, has substantially promoted the implementation of harmonized approaches in international arbitration. This can be contrasted with

the continuing parochial approaches of litigating in foreign national courts, which may put parties at a significant disadvantage, as they will have to engage with unfamiliar social and legal complexities.[21]

12. Finally, arbitration is flexible with innovations, and allows technology companies to ensure that their unique considerations can be accounted for, even where this requires the introduction of new and potentially disruptive technology. Indeed, the arbitration community has been open to the use of modern technology both to facilitate proceedings, and to improve their predictability.[22]

13. All these factors suggest that arbitration offers technology companies various advantages. However, the Task Force aims to engage with technology companies to assess just how well these characteristics of arbitration suit their needs.

IV. Does Big Tech Prefer Home Court Advantage?

14. American litigation has a (well-deserved) reputation for extensive discovery. Discovery is a form of litigant-led factfinding. It can take the form of interrogatory requests (written answers to a series of questions) and depositions (sworn oral testimony, recorded and transcribed, as well as document production. The latter is vastly broader in scope than comparable discovery in other jurisdictions, or in international arbitration.

15. Some technology companies, particularly large and well-financed American tech companies, might well prefer to use US discovery over the relatively narrow document production standards that typically govern international arbitration.[23] Aside from being familiar to American counsel, US discovery rules also place a considerable burden on the litigants. This is a burden that a smaller counterparty might not wish to bear.

16. American litigation is likewise known for its jury trials in civil cases, a right conferred on parties by the Constitution itself.[24] As with discovery, the vagaries of jury trial may well prove bewildering to non-American litigants.

17. Last but not least, American litigation provides that parties must bear their own legal costs, even if they prevail. The cost-shifting mechanism to the winning party common in international arbitration applies only under exceptional circumstances in a US dispute.

18. The titans of American tech – and perhaps also large and sophisticated non-American companies with extensive knowledge of the US system – might be loath to relinquish the relative advantage of these American procedures in a dispute with an international counterparty. And if that counterparty lacks the leverage or sophistication to insist on an arbitration clause rather than a US court forum, it likely is also liable to think twice about pursuing a claim against its more powerful would-be opponent.

V. Is One of Arbitration's Hallmarks – the Lack of Appeal Mechanisms – a Drawback for Technology Companies?

19. Arbitration largely precludes the possibility of appeals, with a vast majority of domestic laws as well as procedural rules allowing for awards to be challenged on very few grounds. Appeals provide the undeniable advantage of an opportunity to rectify incorrect decisions. A 2015 Survey suggests that the lack of appeal mechanisms is one of the most disliked characteristics of arbitration amongst in-house lawyers.[25] A global survey conducted in 2020 found that half of the respondents have experienced tribunals making "obviously wrong" decisions, and that nearly half

of the responding corporate counsels believe that a right of appeal would make international arbitration more attractive.[26]

20. At the same time, a majority of the international arbitration community appears to prefer the finality of arbitral awards, and finds that such finality plays an important role in making arbitration desirable. 71% of the total respondents in the 2020 survey are against the idea of introducing appeal mechanisms. Recently, some arbitral institutions (such as AAA-ICDR, JAMS, MARC (Mauritius) and the Spanish "CIMA")[27] have introduced an "opt in" appeal mechanism. However, we are not aware of any case where the parties agreed to this mechanism.

    There is thus an ongoing discourse about whether arbitral awards should come with the option of being appealable, making it is necessary to explore the needs and preferences of technology companies.

VI. Why Shouldn't Global Technology Disputes be Adequately Resolved by International Arbitration?

21. As arbitration began to expand from its traditional seats (such as London, Stockholm, Geneva and Paris), and reached other venues in different parts of the world (such as China, Hong Kong, Singapore, New York, California, Miami, and São Paulo), it has also reached new sectors of the economy. Indeed, we have witnessed the expansion of arbitration into areas such as the financial and banking industry, arts, sports, and other specialized areas of the law.

22. Specifically, the scope of arbitrability has been broadened to include intellectual property (IP) matters. As IP disputes take on an increasingly transnational character, arbitration has become a popular method of resolving them.[28] Various multi-million-dollar IP disputes have been resolved through arbitration in the recent past.[29] The WIPO Arbitration and Mediation Centre was founded to meet the growing need for IP dispute arbitration.[30] As previously discussed, many other international arbitral institutions have their separate rosters of specialized arbitrators.

23. At the same time, some questions about the validity and existence of IP rights extend beyond contractual relationships and cannot be arbitrated. Further, the position on arbitrability of IP disputes varies drastically across jurisdictions.[31] Consequently, technology companies are likely to have legitimate concerns about referring their IP disputes to arbitration. It is crucial to understand the full extent of these concerns before any solutions can be considered.

24. This expansion of arbitrability, as well as of geographical locations, poses new challenges, and necessitates dialogue between important players of the international dispute resolution field, in order to identify existing (mis)perceptions about arbitration. Based on these conversations, the use of arbitration can be demystified and reframed to suit the innovative and global nature of the technology sector.

VII. The Perceived (In)flexibility of Arbitration

25. Throughout the 21st Century, various scholars have expressed concern about the overregulation of arbitration.[32] Commonly cited examples of this overregulation include [33] the growing similarities between institutional rules, and the increasing number of soft law instruments.[34] Institutional rules also appear to be growing with respect to procedural mechanisms (such as summary dismissal, consolidation and joinder, interim measures, and the like), with some rules permitting scrutiny over arbitral proceedings and awards, putting limitations on when parties' counsels can be changed,[35] etc.

26. However, this apparent increase in regulation needs to be understood in the context of two considerations. First, what these regulations may take away in terms of party autonomy they provide for in enhanced security and predictability.[36] Legal harmonization allows for easier and predictable enforcement of awards internationally, and soft law instruments guide parties through situations that they may have not conceived of, such as conflicts of interest arising out of third party funding.[37]

27. Second, most sources of regulation do not strip parties of their ability to choose: instead, they allow parties to choose between a multitude of "preferences". For instance, despite increasing similarities, it has been found that institutional rules continue to have notable differences and provide parties with a range of options.[38] Similarly, the optional so-called "Prague Rules" have recently been introduced with the clear objective of giving parties an opportunity to use procedural standards with a "*civil law flavour*".[39]

28. Nonetheless, the Task Force will examine whether arbitration's perceived (if not real) ossification plays any role in the uptake of arbitration by the technology sector.

VIII. Awareness about Arbitration

29. It is possible that many technology companies simply lack experience and access to information to facilitate sufficient understanding and familiarity with arbitration to rely upon it, particularly when they and their lawyers have traditionally used litigation. The tech sector's relative non-involvement in arbitration suggests that the people who make decisions about whether or not to arbitrate have not heard of, or been fully informed about, its potential benefits. For example, even though there are many arbitrators who have expertise in technology law and disputes, tech company executives may not be aware of them, or lack the tools to seek them out. The international arbitration community has been criticized in the past for the information asymmetry about arbitrators. The overt reliance on word of mouth necessarily restricts the ability of new parties from accessing the entire market for arbitrators.[40] While there are initiatives being undertaken to rectify this asymmetry,[41] they are relatively new to the market. This suggests that the perspectives and concerns of key decision makers in the technology industry may have been long overlooked by the wider arbitration community.

30. A related possibility is that technology companies, or their external counsels, have a negative perception of arbitration based on limited experiences with domestic proceedings.[42] Such experiences may have led to fears that arbitration proceedings are poorly managed,[43] reflect litigation approaches, concerns that arbitrators may be biased towards the party that appoints them,[44] relief not fully awarded,[45] and time and costs may run high.[46]

31. Consequently, it is crucial to reach out to tech companies and their key decision makers in order to familiarize them with arbitration and to collaborate with them to create procedures reflecting their concerns and needs. Working together, experts and users can develop initiatives such as a tech arbitration "tool-kit" and practice guides to maximize arbitration's potential. This suggests the need for dialogue between arbitration experts and the tech industry for mutual understanding, and to explore opportunities and challenges altogether.

32. The final possibility that we have initially considered – again subject to confirmation or rejection upon further analysis – is that technology companies are simply late to the arbitration party. While it seems undeniable that tech is a much smaller part of the arbitration world than it is in the wider economy, some evidence suggests that this is changing fast. A recent analysis suggests that technology arbitrations have gone from virtually non-existent to increasingly commonplace in the past decade.[47]

33. "In 2010" the authors note, "the words 'technology' and 'arbitration' were rarely found together in the same sentence."[48] Over the past three years, by contrast, the ICDR has recorded in the vicinity of 400 technology cases per year.[49]

34. These statistics, coming from the AAA/ICDR, do not reflect a distinction between international and domestic arbitrations. Further study ought to demonstrate how the growth in the former tracks with the latter.

35. Recently, the international arbitration community has been exploring and integrating technological developments to enhance performance and respond to user demand.[50] The Covid-19 pandemic has accelerated the use of technology in arbitration, triggering an interest in better addressing technology issues.[51] This provides opportunities for arbitration to better serve the technology sector in resolving disputes[52] and for the technology sector to contribute to improving arbitration services.[53] For example, the UNCITRAL Commission 53rd session that took place in July 6 – 17,[54] included discussions on using technology in dispute resolution and will continue to consider technology and disputes.

IX. The Need for Systematic and Comprehensive Analysis and Recommendations to the Sector

36. The past few years have witnessed a surge of events and publications related to the use of arbitration for the technology sector. There is a large number of blog posts and articles where the advantages of the use of arbitration, relative to litigation, have been emphasized.[55] A few books dealing with this argument have also been published.[56] However, a majority of the literature available continues to be overly broad in nature, and there remains a need for comprehensive and deta iled research.

37. In any non-theoretical, broad-based inquiry about the use of arbitration in the tech sector, we need to examine the interests and priorities of the tech sector in order to ascertain what advantages arbitration has to offer, and how it can be shaped to best serve the industry. We further need to examine the nature of disputes the sector commonly deals with, as well as the factors that guide companies in selecting dispute resolution mechanisms. The tech sector develops quickly, as does access to information, making it essential to test our presumptions and study the trends in the industry with reliable data collection. Finally, we need to understand the existing perceptions of arbitration held by decision makers in technology companies, explore the potential challenges they face in selecting dispute resolution mechanisms, and examine how arbitration's adaptability could accommodate solutions.

38. In order to acquire this information, we must conduct surveys and interviews within the sector. Such surveys should employ scientific methodology to ensure reliable results. The study should be comprehensive and conducted across large samples and with broad international reach. A systematic and large-scale survey is crucial in identifying and analyzing the relationship between the technology sector and arbitration.

39. The conclusions from the comprehensive research will drive the dialog with the technology sector. The arbitration community must respond to the sector's concerns, in order to ensure that companies can be motivated to turn to arbitration because it benefits *them*, not just because it is good for us.

Endnotes

[1] The authors wish to thank Avani Agarwal for her invaluable support in the preparation and drafting of this White Paper.

[2] https://www.brookings.edu/research/trends-in-the-information-technology-sector/#footnote-2.

[3] https://www.icdr.org/sites/default/files/document_repository/2018_ICDR_Case_Data.pdf.

[4] https://file-eu.clickdimensions.com/iccwboorg-avxnt/files/2018statistics_iccdisputeresolution_898.pdf?m=3/11/2020%208:08:56%20AM&_cldee=cGNvaGVuQDQtNS5jby51aw%3d%3d&recipientid=contact-1e3862588dcfea11a812000d3aba77ea-30443a358a2742a1be1dc22b0d86cf60&esid=2178d473-c32e-4436-a562-b0e73a29d4cd.

[5] https://sccinstitute.com/statistics/ (disputes listed as IP).

[6] https://www.lcia.org/News/2018-annual-casework-report.aspx.

[7] https://www.jdsupra.com/legalnews/siac-maintains-its-position-as-a-47468/.

[8] Gary L Benton and Steven K Andersen, 'Technology Arbitration Revisited', *Dispute Resolution Journal* 74, no. 4 (July 2020): 25.

[9] Ben Thompson, 'What Is a Tech Company?', Stratechery by Ben Thompson, 3 September 2019, https://stratechery.com/2019/what-is-a-tech-company/.

[10] The New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards of June 10, 1958. The Singapore Convention on binding international mediations comes into effect in September 2020. It currently boasts more than 50 signatories – an impressive number, given its newness, but still more than a hundred fewer than the New York Convention. It remains to be seen whether binding international mediation will compete with international arbitration as an alternative to cross-border litigation.

[11] 'Advantages of Arbitration | Scottish Arbitration Centre', accessed 1 August 2020, https://scottisharbitrationcentre.org/?page_id=200; 'What Are the Advantages and Disadvantages of Arbitration? | Allen, Allen, Allen & Allen', Allen and Allen, 2 October 2009, https://www.allenandallen.com/arbitration-advantages-and-disadvantages/; 'Arbitration in Unprecedented Times: An Optimal Alternative for Resolving Disputes', Osler, Hoskin & Harcourt LLP, accessed 1 August 2020, http://www.osler.com/en/resources/regulations/2020/arbitration-in-unprecedented-times-an-optimal-alternative-for-resolving-disputes.

[12] 'Introduction to International Arbitration', accessed 1 August 2020, https://www.ashurst.com/en/news-and-insights/legal-updates/introduction-to-international-arbitration/; 'Efficient Arbitration - Part 1: Metrics', Kluwer Arbitration Blog, 16 June 2018, http://arbitrationblog.kluwerarbitration.com/2018/06/16/efficient-arbitration-part-1-metrics/.

[13] 'New LCIA Report Highlights Movement towards Cheaper and Faster Proceedings | ArbitrationLinks | Insights | Linklaters', accessed 1 August 2020, https://www.linklaters.com/en/insights/blogs/arbitrationlinks/2017/october-new/new-lcia-report-highlights-movement-towards-cheaper-and-faster-proceedings; 'ICC Arbitration Commission Report on Techniques for Controlling Time and Costs in Arbitration', *ICC - International Chamber of Commerce* (blog), accessed 1 August 2020, https://iccwbo.org/publication/icc-arbitration-commission-report-on-techniques-for-controlling-time-and-costs-in-arbitration/.

[14] See 'Working Group II: Arbitration and Conciliation / Dispute Settlement | United Nations Commission On International Trade Law', accessed 9 August 2020, https://uncitral.un.org/en/working_groups/2/arbitration.

[15] Paula Hodges, 'Drive for Efficiency and the Risks for Procedural Neutrality – Another Tale of the Hare and the Tortoise?', *Dispute Resolution International* 6, no. 2 (2012): 10.

[16] Jennifer Kirby, 'Efficiency in International Arbitration: Whose Duty Is It?', *Journal of International Arbitration* 32, no. 6 (2015): 12.

[17] 'Tips for Maximizing the Benefits of Arbitration', accessed 1 August 2020, https://www.americanbar.org/groups/litigation/committees/commercial-business/practice/2017/tips-for-maximizing-the-benefits-of-arbitration/.

[18] Panel of Arbitrators for Intellectual Property Disputes of the Hong Kong International Arbitration Center (https://www.hkiac.org/arbitration/arbitrators/panel-arbitrators-intellectual-property); SIAC's panel of arbitrators for intellectual property disputes (https://www.siac.org.sg/our-arbitrators/siac-panel#ip).

[19] The Swiss Chambers' Arbitration Institution provides a list of arbitrators specialised in IT and Data Privacy (https://www.swissarbitration.org/Arbitration/Find-Arbitrator-Counsel).

[20] Asian International Arbitration Centre Panelist Search Engine (https://www.aiac.world/panellist?name=&panel_type=&country=&specializes%5B%5D=2094&specializes%5B%5D=2097);

China International Economic and Trade Arbitration Commission Panel of Arbitrators (http://www.cietac.org/Uploads/201705/59074e909a6a7.pdf).

[21] 'International Business Disputes: Should My Company Use International Arbitration? – Silicon Valley Arbitration & Mediation Center', accessed 17 September 2020, https://svamc.org/cross-border-business-disputes-company-use-international-arbitration/.

[22] ARIA, 'The Use of New Technologies in International Arbitration', accessed 1 August 2020, http://aria.law.columbia.edu/the-use-of-new-technologies-in-international-arbitration/.

[23] The IBA Rules on the Taking of Evidence in International Commercial Arbitration, typically adopted in arbitrations today, does not permit interrogatories, depositions, or other such discovery devices (unless the parties have so agreed), and limits discoverable documents to those that are "relevant to the case *and material to its outcome*." IBA Rules Art. 3(3)(b) (emphasis added). By contrast, the American Federal Rules of Civil Procedure are considerably more liberal, and further state that "[I]nformation within this scope of discovery need not be admissible in evidence to be discoverable." F.R.Civ.P 26(b)(1).

[24] U.S. Const. amend. VII.

[25] '2015 Improvements and Innovations in International Arbitration - School of International Arbitration', accessed 1 August 2020, http://www.arbitration.qmul.ac.uk/research/2015/.

[26] 'Bryan Cave Leighton Paisner - BCLP Annual Arbitration Survey 2020 - Rights of Appeal in International Arbitration', accessed 31 July 2020, https://www.bclplaw.com/en-US/insights/bclp-annual-arbitration-survey-2020-rights-of-appeal-in-international-arbitration.html.

[27] *See* Optional Appellate Arbitration Rules, 1 November 2013, American Arbitration Association, available at- https://www.adr.org/sites/default/files/AAA-ICDR_Optional_Appellate_Arbitration_Rules.pdf; Optional Arbitration Appeal Procedures, June 2003, JAMS, available at- https://www.jamsadr.com/appeal/ ; Article 38 (Optional Appeal Procedure), MARC Arbitration Rules; Article 52 (Optional Challenge of the Award), Arbitration Rules, Civil and Mercantile Court of Arbitration.

[28] 'The Growing Importance of International Arbitration for Intellectual Property Disputes', The National Law Review, accessed 2 August 2020, https://www.natlawreview.com/article/growing-importance-international-arbitration-intellectual-property-disputes.

[29] Mihir Chattopadhyay, 'Recent Event: The Case for Arbitration of Patent Disputes', Kluwer Arbitration Blog, 25 February 2016, http://arbitrationblog.kluwerarbitration.com/2016/02/25/recent-event-the-case-for-arbitration-of-patent-disputes/.

[30] 'IP Arbitration on the Rise', Kluwer Arbitration Blog, 16 July 2019, http://arbitrationblog.kluwerarbitration.com/2019/07/16/ip-arbitration-on-the-rise/.

[31] Bar & Bench, 'Resolution of Disputes Involving IPR through Arbitration in India – An Analysis of the Legal Position', Bar and Bench - Indian Legal news, accessed 2 August 2020, https://www.barandbench.com/columns/resolution-of-disputes-involving-ipr-through-arbitration-in-india.

[32] See Julian D. M. Lew "Is There a 'Global Free-standing Body of Substantive Arbitration Law'?" in Albert Janvan den Berg (ed) International Arbitration: The Coming of a New Age? ICCA Congress Series, Volume 17 (Kluwer Law International; Kluwer Law International, 2013) 53 – 61, s II (3); Pierre Lalive Arbitration – the Civilised Solution (16 ASA Bull, 1998, no. 3) at 484; Stephan Wilske Chapter 1, §1.05: "The Current State of Ethics in International Arbitration" in Günther J. Horvath and Stephan Wilske (eds) Guerrilla Tactics in International Arbitration International Arbitration Law Library, Volume 28 (Kluwer Law International, The Netherlands, 2013) 30–31; Christian Oetiker and Anna Masser "Ad Hoc Arbitration in Switzerland" in Manuel Arroyo (ed) Arbitration in Switzerland: The Practitioner's Guide (Kluwer Law International, The Netherlands, 2013) 1097–1098; Dipen Sabharwal and Rebecca Zaman "Vive la difference? Convergence and Conformity in the Rules Reforms of Arbitral Institutions: The Case of the LCIA Rules 2014" (2014) 31(6) Journal of International Arbitration 708 – 712.

[33] See International Arbitration Law: Progress Towards Harmonisation, Richard Garnett, Melbourne Journal of International Law, Vol 3, 2002; The Role of UNCITRAL in Harmonization and Modernization of Arbitration in ASEAN, Datuk Professor Sundra Rajoo, http://uncitralrcap.org/wp-content/uploads/2015/12/harmonization-and-modernisation.pdf.

[34] For instance, see International Bar Association Rules on the Taking of Evidence in International Arbitration (2010), CIarb Guideline 10 Drafting Arbitral Awards Part 1 (2016), ICC Note to Parties and Arbitral Tribunals on the Conduct of the Arbitration under the ICC Rules of Arbitration (2019), Rules on the Efficient Conduct of Proceedings in Arbitration (Prague Rules) (2018).

[35] Article 18.4, LCIA Arbitration Rules (2014).

[36] Dalma Demeter, 'Freedom versus Security in Regulating ADR and International Arbitration', *SSRN Electronic Journal*, 2015, https://doi.org/10.2139/ssrn.2825059.

[37] International Bar Association Guidelines on Conflicts of Interest in International Arbitration (2014).

[38] Jonathan Lim, 'Are All Institutional Rules Now Basically The Same?', Kluwer Arbitration Blog, 9 April 2015, http://arbitrationblog.kluwerarbitration.com/2015/04/10/are-all-institutional-rules-now-basically-the-same/.

[39] 'GAR Reports on the Prague Rules', Российская Арбитражная ассоциация, accessed 2 August 2020, https://praguerules.com/news/gar-reports-on-the-prague-rules/.

[40] Fernando Dias Simões, 'Powered by Expertise: Selecting Arbitrators in Energy Disputes', *The Journal of World Energy Law & Business* 8, no. 6 (1 December 2015): 501–20, https://doi.org/10.1093/jwelb/jwv032.

[41] *See* Arbitrator Intelligence (https://arbitratorintelligence.com/); GART (https://globalarbitrationreview.com/arbitrator-research-tool); Lex Mundi (https://interactiveguides.lexmundi.com/lexmundi/lex-mundi-global-arbitration-institutions-guide).

[42] *See* Terrence McShane, 'Why A/E Firms Should Opt to Litigate instead of Arbitrate', https://www.constructionrisk.com/2016/09/ae-firms-opt-litigate-instead-arbitrate/.

[43] *See* Kshama Loya, Ashish Kabra, Vyapak Desai, 'Arbitration in India: The Srikrishna Report- A Critique', *Asian Dispute Review,* (2018): 4-12.

[44] 'Studies Conclude Arbitration Is A Black Hole With Repeat Player Bias (But Also Faster & Cheaper Than Court) | Lexology', accessed 17 September 2020, https://www.lexology.com/library/detail.aspx?g=db6eb4a7-cc3a-4d41-9aa8-301ef1da354d.

[45] 'Putting the Baby to Rest: Dispelling a Common Arbitration Myth - ARIA - Vol. 26, No. 1 | ArbitrationLaw.Com', accessed 17 September 2020, https://arbitrationlaw.com/library/putting-baby-rest-dispelling-common-arbitration-myth-aria-vol-26-no-1.

[46] 'Arbitration: Not Necessarily A Better Option Than Litigation', accessed 17 September 2020, http://www.btlg.us/News_and_Press/articles/arbitration.html.

[47] Benton and Andersen, 'Technology Arbitration Revisited'.

[48] Id.

[49] Id.

[50] *See* Ibrahim Shehata, 'Smart Contracts & International Arbitration', SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, 24 November 2018), https://doi.org/10.2139/ssrn.3290026; The Arbitration Institute of the Stockholm Chamber of Commerce et al., 'What Is Blockchain Arbitration and Can It Replace the NY Convention? - The Arbitration Institute of the Stockholm Chamber of Commerce', accessed 22 September 2020, https://sccinstitute.com/about-the-scc/news/scc-forecasts/what-is-blockchain-arbitration-and-can-it-replace-the-ny-convention/; Maud Piers and Christian Aschauer, eds., *Arbitration in the Digital Age: The Brave New World of Arbitration* (Cambridge: Cambridge University Press, 2018), https://doi.org/10.1017/9781108283670.

[51] *See* 'Fundamental Rights and Values in the Digital Age', Solair Conference 2020, accessed 22 September 2020, https://solairconference.com/; 'How to Advocate a Technology Dispute in Arbitration: Hot Tubbing and Other Techniques and Tips', ITechLaw Webinar 2020, https://www.itechlaw.org/events/webinar/how-advocate-technology-dispute-arbitration-hot-tubbing-and-other-techniques-and-tips.

[52] *See* 'Blockchain Arbitration Forum', Blockchain Arbitration Forum, accessed 22 September 2020, https://blockchainarbitrationforum.org/; 'Smart Arbitration', accessed 22 September 2020, http://smartarb.org/.

[52] 53rd Session, 'Commission Sessions | United Nations Commission On International Trade Law', accessed 22 September 2020, https://uncitral.un.org/en/commission.

[53] ARIA, 'The Use of New Technologies in International Arbitration'.

[54] 53rd Session, 'Commission Sessions | United Nations Commission On International Trade Law'.

[55] See- Raymond G Bender, 'Arbitration- An Ideal Way to Resolve High-Tech Industry Disputes', *DISPUTE RESOLUTION JOURNAL*, 2011, 9; Gary L. Benton, 'Technology Dispute Resolution Survey Highlights US and International Arbitration Perceptions, Misperceptions and Opportunities', Kluwer Arbitration Blog, 28 October 2017, http://arbitrationblog.kluwerarbitration.com/2017/10/28/technology-dispute-resolution-survey-highlights-us-international-arbitration-perceptions-misperceptions-opportunities/; 'Technology Disputes | Global Law Firm | Norton Rose Fulbright', https://www.nortonrosefulbright.com/en-in/knowledge/publications/imported/2018/07/18/05, accessed 29 July 2020, https://www.nortonrosefulbright.com/en-in/knowledge/publications/3e08910f/technology-disputes; Ignacio de Castro and Panagiotis Chalkias, 'Mediation and Arbitration of Intellectual Property and Technology Disputes: The Operation of the World Intellectual Property Organization Arbitration and Mediation Center', *Singapore Academy of Law Journal* 24 (2012): 1059.

[56] Thomas D Halket, Arbitration of International Intellectual Property Disputes, Juris Publishing (2012); Gerald B Halt et al, Intellectual Property in Consumer Electronics, Software and Technology Startups (Chapter 17), Springer (2014); Trevor Cook et al, International Intellectual Property Arbitration, Kluwer Law International (2010); Manuel Arroyo, Arbitration in Switzerland: The

Practitioner's Guide (Chapter 5), Kluwer Law International (2018); R.U.S. Prasad, Resolving Disputes in Telecommunications – Global Practice and Challenges, Oxford, 2011.

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