

## INTRODUCTION

As part of the DIS initiative "2018 DIS Arbitration Rules Clinic", the working group "Technology in Arbitration" was established, which dealt with a wide range of issues relating to the use of technology in arbitration proceedings. This working group was led by Dr Felix A.R. Doerfelt (Addleshaw Goddard), Dr Paul Hauser (Clifford Chance) and Prof Dr Thomas Riehm (University of Passau). Between March 2022 and December 2023, the group organised eight thematically focused virtual roundtable discussions with representatives from arbitration practice. The individual roundtables were dedicated to the following topics

- **Roundtable 1 (3 March 2022): E-Discovery, document production and collaborative tools**  
**Speakers:** Alexander Demuth (then with Alvarez & Marsal, today with Secretariat); Raphael Kiess (Alvarez & Marsal)  
**Moderators:** Dr Paul Hauser (Clifford Chance); Dr David Tebel (rothorn.legal)
- **Roundtable 2 (17 March 2022): Data Security and Data Protection**  
**Speakers:** Björn Hundhausen (IDNow Germany); Dr Markus Burianski (White & Case); Dr Klaus Lüftenegger (Mercedes Benz Group); Dr Ryan Kraski (Mercedes Benz Group); Dr Joseph Schwartz (Wagner Arbitration)  
**Moderators:** Dr Paul Hauser (Clifford Chance); Dr Alexander Seitz (Kolman Jakobs Kramer)
- **Roundtable 3 (21 April 2022): Use of Technology during the Hearing**  
**Speakers:** Stephanie Kelso (Z Axis); Rachel Hodge (Z Axis); Dr Heiko Haller (Baker McKenzie)  
**Moderator:** Prof. Dr Thomas Riehm (University of Passau)
- **Roundtable 4 (12 May 2022): Virtual Hearings**  
**Speakers:** Dr Nils Schmidt-Ahrendts (Hanefeld); Prof. Dr Klaus Sachs (CMS); Dr Paul Hauser (Clifford Chance); Nicolas Martinez (Stockholm International Hearing Centre); Roopal Patel (Opus2);  
**Moderators:** Alexander Foerster (Advokat Foerster AB); Dr Paul Hauser (Clifford Chance)
- **Roundtable 5 (23 June 2022): Risk Analysis Tools**  
**Speakers:** Dr Karsten Grillitsch (Bosch); Dr Max Oehm (Baker McKenzie); Dr Malte Stübinger (Deminor); Dr Volker Schmitz (Ankura)  
**Moderators:** Dr Felix A.R. Doerfelt (Addleshaw Goddard); Prof. Dr Thomas Riehm (University of Passau)
- **Roundtable 6 (19 January 2023): Use of Electronic Platforms**  
**Speakers:** Dr Gisela Knuts (Helsinki), Lise Alm (Stockholm) and Jessica Puhr (VIAC)  
**Moderators:** Alexander Foerster (Advokat Foerster AB); Dr Paul Hauser (Clifford Chance)
- **Roundtable 7 (20 March 2023): Future Use of Technology in Arbitration**  
**Speakers:** Prof. Dr Maxi Scherer (Queen Mary University London/Wilmer Hale); Raphael Kiess (Alvarez & Marsal); Dr Alexander Steinbrecher (then Getir, today BVG)

**Moderators:** Dr Paul Hauser (Clifford Chance); Prof. Dr Thomas Riehm (University of Passau)

- **Roundtable 8 (21 December 2023): Large Language Models in Arbitration**  
**Speakers:** Glenn Baumgarten (Deutsche Telekom); Tim Kniepkamp (Suitcase); Kevin James Chan (then with Kennedys Lawyers, now with Clyde & Co)  
**Moderators:** Dr Felix A.R. Doerfelt (Addleshaw Goddard); Dr Paul Hauser (Clifford Chance)

The following sections document the key findings of the individual roundtables and develop best practices and recommendations for arbitration parties, party representatives, arbitral tribunals and arbitral institutions. As Co-Heads of the DIS Practice Group "Technology in Arbitration", we like to thank all speakers for the insights provided, and all participants of the roundtables for their valuable input during the lively discussions.

**FINAL REPORT FOR ROUND TABLE 1 OF THE PRACTICE GROUP OF  
TECHNOLOGY  
TOPIC: E-DISCOVERY, DOCUMENT PRODUCTION AND COLLABORATIVE  
TOOLS**

**1. Results**

E-discovery and the use of technical programs are still young and unexplored in arbitration. Along with the benefits of document collection, sorting and comparability, questions arise as to how the innovations can be used before tribunals and the extent to which AI programs can be entrusted with autonomy.

The Practice Group of Technology of the German Institution for Arbitration examined in its first Round Table the subjects of e-discovery, document production including the use of AI as well as collaboration tools and the associated disclosure risks in arbitration. In detail, arbitrators, lawyers, and IT experts discussed various technical innovations and programs, the extent to which programs such as *Relativity* and *Clear Review* can be helpful in dispute resolution and litigation, and their advantages and disadvantages.

**1.1 The Use of Technology in Discovery Proceedings**

Extensive and voluminous cases frequently come with a flood of documents and records that not only require considerable time to read through and process but are also effectively unfeasible to sort, categorize, and eventually be presented to the tribunal in a concise and comprehensive manner. Thus, e-discovery tools such as *Clear Review* were used to facilitate the handling of documents, in a sense leading to the merging of dispute and investigation practice.

The control of large volumes of documents, document review as well as document production are all part of arbitration. The use of (forensic) data analytics in a large scale is often necessary and beneficial to build a strong and structured case.

**1.1.1 Relevant Situations involving Document Review**

The usual starting point is the requests for production of documents made in the Structured Proceedings and Redfern Schedules, after which the tribunal decides to grant certain requests, leading to the parties collecting and exchanging documents, submissions, objections, etc.

Other situations involving document review arise from the common practice of information request lists, typically stored on shared drives and data rooms and ultimately resulting in the storage of duplicates, conflicting documents, and different versions of the same documents. Generally, technological innovations can provide guidance and structure when cases involve an excessive number of documents.

**1.1.2 Steps entailed in Document Review**

Before the technology-assisted review of documents can begin, the data must be collected, processed, and produced.

(a) Collecting Documents

The collecting and gathering of documents to be reviewed typically begins with a workshop involving the IT department. The purpose of this is to gain an understanding of where the documents are stored, the underlying server infrastructure. This additionally helps to gain an understanding of backup routines and any archiving systems where relevant documents may be stored.

Information can also be gathered whether users have any documents on their devices that are not centrally archived. As this is often the case, the next step is to deploy forensic hardware tools to examine laptops, mobile phones and other devices whenever required for a particular document production.

In terms of retracing deleted items, forensic hardware is usually able to track a deletion and the user who deleted the items, but this depends on the circumstances and the execution of the deletion itself. Alternatively, indicative methods must be used. Restoring deleted data became easier since the storage of documents moved to cloud based storage, leading to a remote data extraction rather than extraction from premise servers.

Naturally, gathering and assessing this information requires a secure and sound approach to privacy and data security. In this regard, additional stakeholders should be involved in this discovery – at least the information security officer and the data privacy officer or the worker's Council. This is particularly the case in international and cross border matters.

Some cases, especially in post M&A scenarios, require a strict confidentiality of the operations, investigations, and document productions. While it still would be easier to involve the people, in exceptional cases, the users will get only informed after the exercise. Nevertheless, especially these exercises require a lot of documenting and formally correct conduction of the processes.

(b) Process and Production of Data before Review

The following section describes the processing of data by the platform *Relativity*.

Before reviewing the collected data, it must be processed correctly. The process differentiates between structured data, such as tables, and unstructured data, such as e-mails.

After acquiring the data, the platform proceeds with a further technical filtering process, namely whitelisting. Here, the program differentiates between content and system files, sorting out the latter and only keeping files that contain content.

The next step is of great importance and consists of deduplication. This means that redundant data is identified and eliminated but without losing the information that the data has been located on different sources.

Following that, the program begins with the optional character recognition ['OCR'], making the documents searchable.

Afterwards, the data gets transferred from its processing environment to the reviewing environment, while the tool offers additional facilitating functionalities. In cases of multinational documents, the tool recognizes the languages of the document and may be allocated to the required language for review. Another helpful feature is e-mail threading, which may compile a complete e-mail thread instead of each e-mail having to be selected individually.

Lastly, the tool offers different options and possibilities to organize the following document review by, inter alia, determining relevant categories as well as an efficient tagging of documents.

(c) Technology-assisted Reviewing of Documents

Technology-assisted review, such as that offered by the platform *Relativity*, today constitutes a top-selling product and generally works by observing the users' activity and, based on the observations, suggesting relevant, similar documents to simplify research and review.

A grand part of technology-assisted review and one of its biggest advantages is the function of key word searching/search terms iteration. Hereby, the two components of machine learning and the users understanding of the case are combined.

The search of keywords begins with determining the relevant words, terms, and descriptions of the case, whereas by combining and refining the search terms, the keywords become progressively more precise. This allows for updated and comparable research and a constant review of the entire database without having to repeatedly reopen each document, ultimately saving a considerable amount of time.

It is important to note that the program always does a full search of the raw data and thus time savings cannot be achieved by index-based search tools. Hence, the efficiency of the search varies from case to case and depends on how the data is coded and transferred to the search syntax. However, in arbitration proceedings, it is highly unlikely to encounter a database that is too large to be searched within a reasonable amount of time. Typically, the search process runs smoothly and takes only a few seconds.

Once a document has been edited, the tool displays all related or linked documents and available information, such as whether the document was attached to an e-mail, the recipient of the e-mail etc. The tool thus allows for tracking changes over time. In addition, the platform can

classify files and automatically detect when files are missing (e.g., if v13 and v15 are present, the platform will detect that v14 is missing).

Concerning deleted documents, the review platform does not include deleted data itself, but it does contain the metadata of the files in question. This allows for the metadata to be searched in the previously collected data and for the roots to be traced back to previous files that have been deleted. As a result, deleted objects are already available in the forensic lab.

(d) Machine Learning Techniques and Algorithms

The platform utilises machine learning techniques and algorithms to identify responsive documents. Currently, this algorithm requires training through supervised learning. This training takes a considerable amount of time, and the platform requires a large number of documents, at least 60,000-80,000, to avoid an "overkill" on small matters. For smaller matters, the platform is therefore more suitable for structuring, grouping and categorising data.

Supervised learning currently requires one person to monitor and adjust the review. Whether this process will ever become fully automated and independent of human input depends not only on technological advancements but also on the admissibility of the data generated as evidence in court proceedings. In light of the developments of the past few years, it is to be expected that there will still be some changes in this respect.

1.1.3 Procedure for the Application of Technology

The most relevant tools for arbitration practitioners who want to apply technology to review large amounts of data are primarily *Relativity* and, in general, all the various plug-ins document review platforms have to offer, such as phonetic searching and automatic translation, auto-redaction, or privilege logs for prioritisation. An alternative platform would be *axiom forensic*.

Before using a document review platform, its need for early involvement should be anticipated. The potential user needs to be aware of the complexity of this approach and the scope of the exercise must be thought through before it is proposed to the client.

Another challenge lies in convincing the client, as this data review process involves significant additional costs. In addition, customers should be advised to support the data collection themselves via the cloud. Nevertheless, some clients, particularly those who have previous arbitration experience and want to save time in the current proceeding, are keen to consider or even recommend this approach.

After deciding that a document review platform will be used, the users should decide on a software and familiarise themselves with it. They should then verify the completeness of their data collection or determine if the data can be made

available quickly. This is particularly important at the start of data collection as time allocated to production is typically limited to 2 to 4 weeks. But once the exercise is up and running and the data is uploaded to the platform, the user will soon benefit greatly from its results as it will greatly facilitate the evidence collection mechanisms.

To ensure admissibility before the tribunal, it is crucial that all steps in the data review process are comprehensible and explainable to the tribunal. Ideally, the document collection should be recorded and prepared before the review to involve the tribunal and help them understand the technical application for assessing the evidence.

However, the tribunal's attention will most likely not be focused on the tool itself, but on the evidence and findings presented, unless the nature of the evaluation of the evidence is raised as an objection or argument by the opposing party.

## 1.2 Summary

In conclusion, despite its challenges, technological developments in document review are bringing significant benefits to the discovery and collection of evidence. However, it is important to avoid overusing platforms like *Relativity* due to associated costs and effort. Arbitration practitioners should carefully consider and consult with their clients before deciding whether the software is appropriate for their case and vice versa.

## 2. Best Practices

The use of technology in collecting, reviewing, and producing documents in arbitration is widespread. In particular, arbitrations dealing with large volumes of documents cannot be conducted without the help of review platforms and automate review. However, the level of automatization varies.

While the use of e-discovery has its roots in discovery heavy jurisdictions such as the US and UK it has spread to international arbitration and arbitral tribunals have published guidelines to address it.

### 2.1 Guidelines in Domestic Courts (US, UK)

E-discovery is wide spread in common law jurisdictions and for example the US and UK courts encourage it or sometimes even order parties to use analytical tools to lessen review burdens.<sup>1</sup>

The US embodied guidelines to the production, discovery, and disclosure of electronically stored information in its Federal Rules of Civil Procedure<sup>2</sup>, primarily in Rule 26. Additionally, US litigators often rely on the Sedona Principles.<sup>3</sup> The Sedona Principles are intended to serve as a set of best practices, recommendations, and

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<sup>1</sup> Cf. Para. 9(7) of the UK's Practice Direction 51U.

<sup>2</sup> US Committee on the Judiciary House of Representatives, 'Federal Rules of Civil Procedure' (2023).

<sup>3</sup> The Sedona Conference, 'The Sedona Principles, Third Edition: Best Practices, Recommendations & Principles for Addressing Electronic Document Production' 19 SEDONA CONF. J. 1 (2018).

principles for handling electronically stored information issues in federal or state litigation.

For the UK, guidelines on e-disclosure can be found in the UK's Practice Direction 51U of 2021.

## 2.2 Guidelines in Arbitration Institutions

While some arbitration institutions have adopted guidelines for the use of e-discovery most institutions have left it in the arbitrators' procedural discretion to deal with that issue.

The general rule of the arbitral tribunal's discretion, which can be found in the UNCITRAL Rules<sup>4</sup>, the ICSID Convention,<sup>5</sup> the ICSID Arbitration Rules,<sup>6</sup> and the ICC Rules<sup>7</sup>, is that the tribunal may at any time require the parties to produce (additional) documents.<sup>8</sup> According to Art. 27 of the UNCITRAL Rules, it is for the tribunal to determine the admissibility of the documents submitted.

In 2016, the ICC published an ICC Commission Report on Managing E-Document Production<sup>9</sup> which notes that 'the advent of electronic documents should not lead to any expansion of the traditional and prevailing approach to document production'.<sup>10</sup> Nevertheless, the report stipulates several techniques for arbitrators to manage any issues regarding the production of electronic documents, and, 'to ensure that international arbitration does not fall prey to the inefficiencies of electronic document production that have plagued litigation in certain national court jurisdictions like the United States.'<sup>11</sup>

The ICDR also published the ICDR Procedures<sup>12</sup> which allow tribunals to manage the scope of electronic document requests and to manage, limit, or avoid US litigation-style discovery practices.<sup>13</sup> Additionally, the ICDR Guidelines for Arbitrators Concerning

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<sup>4</sup> Arbitration Rules established by the United Nations Commission on International Trade Law (2021) ['UNCITRAL Rules'].

<sup>5</sup> Convention on the Settlement of Investment Disputes between States and Nationals of Other States established by the International Centre for Settlement of Investment Disputes (2021) ['ICSID Convention'].

<sup>6</sup> Arbitration Rules established by the International Centre for Settlement of Investment Disputes (2022) ['ICSID Arbitration Rules'].

<sup>7</sup> Arbitration Rules established by the International Chamber of Commerce (2021) ['ICC Rules'].

<sup>8</sup> *Cf.* Art 27(3) UNCITRAL Rules; Art. 43(a) ICSID Convention; Art. 36(3) ICSID Arbitration Rules; Art. 25(4) ICC Rules.

<sup>9</sup> International Chamber of Commerce, 'Techniques for Managing Electronic Document Production When it is Permitted or Required in International Arbitration Report of the ICC Commission on Arbitration and ADR Task Force on the Production of Electronic Documents in International Arbitration' (2016) ['ICC Report'].

<sup>10</sup> *Ibid* p. 2.

<sup>11</sup> *Ibid.*

<sup>12</sup> International Dispute Resolution Procedures established by the International Centre for Dispute Resolution ['ICDR Procedures'].

<sup>13</sup> ICDR Procedures, p. 8; *cf.* Art. 24(6) ICDR Procedures.



Exchanges of Information of 2008 regulate several aspects of electronic information exchanges and e-discovery in arbitration, primarily in Sections 3, 4 and 8.

The Prague Rules<sup>14</sup> also set out guidelines for the use of electronically stored information and e-disclosure, and provide under Art. 4 that generally, arbitrators should avoid any form document production including e-disclosure.

In 2020, the LCIA revised its Arbitration Rules<sup>15</sup>, promoting technological assistance in arbitral proceedings, especially by prioritising electronic communications (*cf.* Art. 4).

The CIETAC has recently introduced the 2024 CIETAC Arbitration Rules<sup>16</sup> which include various provisions, aiming at a technological development and assistance in arbitration.

Other arbitral institutions (PCA, SCC, SCAI, SIAC) have left the use of e-discovery in the wide procedural discretion of the arbitral tribunal.<sup>17</sup>

### 3. Recommendation

#### 3.1 Recommendation to Parties

Given the existing uncertainties surrounding the use of technology in e-discovery, the parties should, whenever possible, discuss how evidence will be handled, thus, agree on how to collect, review, and produce documents in advance with both the tribunal and the opposing party. The parties should agree on techniques that are applied and provide referable additional guidance for tribunals and their counter parts. They should adopt a practical solution to raise awareness for the technology used, e.g., via standard checklists.

#### 3.2 Recommendation to Arbitrators

Arbitrators should be aware of the fact that discovery is in large part technology driven and should establish realistic expectations and guidance in accordance with the technological advances and existing shortcomings when confronted with these issues.

#### 3.3 Recommendation to the DIS

Considering the rapid advances in technology and the fact that e-discovery has not yet raised any considerable disputes between the parties the working group sees no need for guidelines or rules changes in respect to the use of technology in discovery.

The issue appears to be – at least for the moment – best left within the arbitral tribunal's procedural discretion.

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<sup>14</sup> The Rules on the Efficient Conduct of Proceedings in International Arbitration (2018) ['Prague Rules'].

<sup>15</sup> London Court of International Arbitration ['LCIA'], Arbitration Rules (2020).

<sup>16</sup> China International Economic and Trade Arbitration Commission ['CIETAC'], Arbitration Rules (2024).

<sup>17</sup> [Using Technology and e-Disclosure - Global Arbitration Review](#).

**ROUND TABLE 2 OF THE PRACTICE GROUP TECHNOLOGY  
TOPIC: DATA SECURITY AND DATA PROTECTION**

**1. Results**

On 17 March 2023, the Practice Group Technology convened to deliberate on the protection of personal data in arbitration proceedings. The Round Table hereby also addressed the areas of encryption standards and related reliability and confidentiality aspects, as well as the use of illegally obtained evidence.

**1.1 Data Processing and Protection in International Arbitration**

In order to assess the various aspects of data protection in arbitration, it is first necessary to examine its significance in international arbitration, the different categories of data, the methods of collecting personal data, and the legal requirements for handling the data.

**1.1.1 Significance of Data Protection in International Arbitration**

The fundamental core of data protection is personal data. Personal data is any information relating to identified or identifiable individuals, *ergo*, data subjects. This includes first and surnames, ID numbers, location data, IP addresses, and vehicle identification numbers and must be distinguished from sensitive personal data, such as ethnic origin, health data, or religious beliefs. However, personal data protection only refers to individuals, not to legal entities.

Due to the variety of (personal) information arising in international arbitration proceedings, data protection has become indispensable. This is already reflected in the e-mails used as evidence in arbitral proceedings, which naturally contain personal data. The same applies to the vast and inevitable amount of data sharing regarding testimonies, disclosures, document productions, fact findings etc. Lastly, the significance is evidenced by the cross-border nature of arbitration, whereas multinational dissemination of data protection rules is an effective mechanism to raise awareness that arbitral proceedings are fundamentally involving the processing of data.

All personal data of a data subject is processed by the controller, who is considered to be the data processor, which in arbitration cases can include an e-discovery provider or a translation agency. From the perspective of international arbitration, the concept of data processing is very broad and essentially entails everything possible by means of data processing. Thus, searching for an e-mail, sending the e-mail as an exhibit to an arbitration institution, or even the destruction of a hard disk amount to data processing.

Conclusively, particularly with regard to the emerging trend towards virtual hearings, the significance of data protection in international proceedings must not be overlooked.

**1.1.2 Identification Methods of Leading Companies**

For the collection of personal data, identification procedures and verification programmes are becoming increasingly indispensable. Most people are familiar

with these systems when they are deployed in transactions by and with banks, for example in the opening of bank accounts or the conclusion of credit contracts, all of which carry a very personal dimension. However, identity verification is also vital in arbitration proceedings, for example to confirm the identity of a witness in virtual hearings.

Among the current European market leaders is KYC – the *Know Your Customer* identification program, while many identification programmes offer similar methods of 'vertical' verification. The complexity and security standard of the verification depends on the demands of the requesting company.

Less sophisticated methods of identification include, for example, NFC-based identification, uploading an electronic signature, combinations of video and signature procedures, or simply uploading photographs of the front and back of an ID card and a selfie.

One fairly reliable identification programme starts with a video chat between the customer and an ID expert. The ID expert hereby verifies the validity and authenticity of the customer's provided ID documents and determines whether the person on the documents matches the person facing the expert in the video chat. Additionally, the expert will monitor the customer for any signs of suspicious or fraudulent behaviour. After verifying and gathering all necessary information, a data sheet is created containing the collected information and images taken during the ID test. The user is then notified whether the tested individual has passed the test or whether there is a suspicion of fraud.

Suspicious or fraudulent behaviour might be observed when a third person is present and gives instructions to the interviewee, which can be indicated, for example, by the interviewee looking to the other side of the room. Another indication can also be how the questioned interviewee responds to questions.

As soon as suspicious behaviour is detected, the ID companies will not disclose this to the person being questioned but will forward the identity request to a supervisor or even a senior supervisor who will cross-check the identity. The result of the evaluation will be forwarded to the requesting company, which can then decide whether to take any further steps with the individual. This detection of suspicious behaviour can eventually enable arbitrators to assess the value of witness interviews and marks only the beginning of technical innovation.

The personnel performing the identity verification may vary from case to case: they may be employed by the company providing the ID service or, as some ID companies provide special training for personnel, they may be the user company's own employees. In the latter scenario, most ID companies provide the necessary software and cloud environments to enable the user to carry out identity verification themselves.

Verification/ID companies are often not considered 'data processors' under data protection guidelines, meaning they may only collect order-related data. Additionally, collected data may only be retained for a maximum of 60 days, although most ID companies are flexible regarding earlier deletion.

In remote arbitration hearings, a common procedure is for the tribunal to ask the witness to use the 360-degree view camera to confirm that the witness is the only one in the room. Alternatively, two cameras can be used, one at the front and one at the back, to reveal the entire room. Verification of individuals' identities abroad is also frequently carried out by visiting the respective embassy.

### 1.1.3 Legal Frameworks for Data Protection

In view of the international nature of arbitration proceedings, it is often difficult to determine which data protection rules apply. The varying approaches of these regulations are also by no means irrelevant and may ultimately be decisive in determining whether data protection rights have been infringed.

#### (a) General Data Protection Regulation – GDPR

The GDPR can be considered a comprehensive and absolute set of data protection regulations, uniformly applicable to various situations and thus offering great facilitation and guidance in data protection issues.

Generally, under Art. 3(1) GDPR, the Regulation applies to the processing of personal data by a controller or processor with an establishment in the European Union, regardless of whether the processing occurs within the EU. However, the scope of application is extended with the particular exceptions of Art. 3(2) lit. a., b., and Art. 3(3) of the GDPR to controllers or processors which are not established in the European Union.

Art. 6 GDPR implemented a basic mechanism for the process of personal data, according to which data processing is initially prohibited and always requires justification (more on the justification below).

With the introduction, recognition, and effectiveness of the GDPR in 2018, the perception of data protection also changed globally. Potential fines for violations increased significantly, as demonstrated for example by the UK. Additionally, Art. 3 of the GDPR and its exceptions provide for a wide scope of application, rendering the regulation highly pertinent in arbitration proceedings.

#### (b) Other International Frameworks

Naturally, the applicable regulations are dependable on the jurisdiction of the pending case. They can be national, federal, or even supranational. Germany, for instance, applies the German Federal Data Protection Act, which partly differs from the GDPR as it implemented specific provisions relevant for the data processing in contentious proceedings.

Data protection regulation also widely differ in the US. Contrary to the uniform rules of the GDPR, in the US, data protection laws are very segmented and sector-specific. At the state level, there are 50 states with 50 different data regulations, with most states focusing on data breach

laws. Despite the existence of federal data protection laws, they are simply not comprehensive. These data protection laws could relate to a variety of industries, such as higher education or health care. For instance, in the case of a data breach where a retailer's customer's credit card information is compromised, there are specific obligations that the retailer must adhere to. However, outside of such breaches, retailers have limited data obligations to their customers. Furthermore, the definition of personal data in the US differs from that used in the GDPR, creating yet another barrier to resorting to the GDPR.

In terms of maximum penalties for data breaches, the differences between US states themselves as well as other countries are striking. California imposes a maximum fine of USD 2.500, while Virginia imposes a maximum fine of USD 7.500. In contrast, the maximum fine in the UK is GBP 20 million.

(c) Common and Characteristic Requirements in Data Protection

Some characteristics and requirements for data processing and protection can be found in different jurisdictions all around the world. For instance, the GDPR codifies essential principles relating to the processing of personal data in its articles 5 and 6. Under Art. 5(1) lit. a GDPR, personal data must be processed "lawfully, fairly, and in a transparent manner". Generally, three important standards crystallized: transparency, justification, and the minimization principle.

(i) Transparency

Alongside the other principles, data processors must adhere to the principle of transparency. This principle stipulates that the data subject is informed about the processing of their data as well as the purpose of the processing.

This obligation can lead to complications in contentious cases. One example would be that the data processing party, in order to comply with its transparency obligations, notifies the opposing party of its plans to process the data; the opposing party might do everything in its power to prevent the processing party from using the data for the purposes of the proceedings, leading to significant skirmishes.

(ii) Justification

As touched upon before, generally, any data processing is prohibited until justified.

All parties involved in the arbitration – claimants, respondents, Council, and the tribunal itself – are independently acting data collectors, as each is individually responsible for complying with legal regulations governing the transfer and processing of data.

Thus, whatever processing of data law firms or individual participants in arbitral proceedings do, requires a justification.

The GDPR outlines six conditions under which personal data may be processed. The primary justification for data processing is consent. Besides being the most common justification for data processing, it is also the most tenuous, as consent can be initially given and then withdrawn at any time, even seconds later. In that case, further processing of personal data would be prohibited. Thus, reliance on consent alone in arbitration proceedings, for example in the examination of witnesses, can be fatal.

The remaining five justifications are based on a requirement of necessity. Therefore, data processing is permissible if necessary for the performance of a contract, the compliance with a legal obligation, or the protection of an individual vital, public, or legitimate interest.

In arbitration proceedings, parties are frequently concerned not only with the processing of data, but also with its transfer to a third country. Such transfers require additional justification (see below for more details).

(iii) Minimization

The principle of minimization prescribes that the processing of data shall be limited to that which is strictly necessary for the pursuit of the claims. The objective of this principle is to limit 'fishing expeditions' and impose the redaction/blackening of personal data.

(d) Cross-border Transfer of Data

Just as is the case for processing of data, the transfer of data to a third country is generally prohibited and requires a justification.

In general, the EU justifies the transfer of data if the recipient country offers an adequate level of data protection. Countries classified include the UK, Argentina, Uruguay, Canada, and Switzerland. The US is not classified. Other adequate safeguards are ensured by standard contractual clauses with binding corporate rules.

Frequently globally recognized exceptions apply when the transfer is *necessary*. Naturally, this term is debated and interpreted differently, depending on which jurisdiction or tribunal has to define it.

(i) Necessary in EU

The main exception for cross-border data transfer in GDPR-applying arbitration proceedings is Art. 49(1) lit. e GDPR. According to this provision, the fallback exception applies when

the transfer is necessary for the establishment, exercise, or defence of legal claims.

From a European perspective, the term *necessary* is interpreted very narrowly. The GDPR requires a close and substantial connection between the transfer of personal data and the other party's request in order to authorize it.

The EU hereby suggests a layered approach. In the first step, only documents without personal data or with redacted personal data will be exchanged. In the next step, the parties will have to assess the necessity of certain personal data in the documents already exchanged (the so-called necessity test) and, if justified, invoke it.

In practice, however, the layered approach is very rarely applied, and parties tend to demand full disclosure at the risk of breaching data protection rules.

(ii) Necessary in US

Whereas the term *necessary* is understood very narrowly in the EU, it is applied and understood much more broadly in the US. Bearing this in mind, as well as the inconsistency of privacy laws at the federal level in the US, it can be said that data is somewhat less valued in the US compared to the EU.

Regarding cooperation between the US and the EU, there have been repeated difficulties in enabling transfers between the two regions, starting with the International Safe Harbor Privacy Principles, and continuing with the EU-US Privacy Shield until 2020. Although the next data transfer pact, the Trans-Atlantic Data Privacy Framework, is already in development, it is not possible to say exactly what further data transfers between the US and the EU will look like in the future.

## 1.2 Risks and Dangers Associated with the Absence or Insufficient Protection of Personal Data

In arbitral proceedings, the handling of data protection comes with a variety of challenges. First of all, each party to the arbitration has the relevant data, which leads to difficulties in data distribution, overall uncertainty, and instability in terms of compliance. Moreover, the diverse systems of data processing and protection pose technological, legal, and professional challenges. Technological complexity results from the variety of operating systems, synchronisation options, storage locations and the overall responsibility for administering all of these. Legal complexity is rooted in the different legal frameworks and their applicability, as discussed above. Professional duties and challenges arise from the extent of individual discussions and agreements within the company, the client and in the actual course of proceedings.

Concrete dangers that could arise in arbitration proceedings if the protection of personal data is not guaranteed are the redirection of the burden of proof in the opposite direction, the barring of evidence and particular arguments, or a negative influence of the jury. This is particularly concerning given that presiding judges have an incredible amount of discretion in their decisions.

A further concern in data protection law is the technical implementation of e-mail encrypting and decrypting programmes such as *Pretty Good Privacy* (PGP) for the purpose of data security. The security standards might differ from party to party and technical implementations often require time and skills.

One solution could be that the encryption of data is required as a part of the professional conduct rules. Transport layer encryption could be a first step towards improving security, perhaps later on followed by device encryption and finally even encryption of communication as a whole. The latter seems to be primarily a technological challenge, already tackled by communication platforms like Signal or WhatsApp, as the implementation of an absolute end-to-end encryption in communication would have to work for different devices, operation systems and software. For WhatsApp and Signal, end-to-end encryption works because the platforms are closed ecospheres. Thus, to ensure the encryption of data, the final destination should be a technical implementation of a secure platform for arbitral proceedings which could ultimately be used to safeguard information such as the identification of the counterparty or the secure exchange of keys.

From today's perspective, following safeguards are available and should also be implemented:

1. Two-Factor Authentication
2. Encryption of Data with a private key before it is leaving the device
3. Reasonable encryption on the server level
4. Back-Up mechanisms.

Another controversial practice is the centralisation of data. Although it is a common setup in law firms, the data's very centrality carries the risk of being more attractive to hackers. On the other hand, however, decentralized systems have their own vulnerabilities. Each party is responsible for their own technical solutions, resulting in multiple e-mail providers and cloud services being involved. As a result, data is stored redundantly across these spaces, increasing the risk of exposure. This risk could be mitigated by end-to-end encryption becoming a prerequisite for storing data on such centralized systems.

Generally, the following three steps can help to avoid data protection infringements in arbitration:

- Firstly, the parties should identify the applicable data protection laws for each participant.



- Secondly, the parties should identify how and where to data will flow (i.e., where is it located, where will it be processed) and what would potentially be the legal basis.
- Thirdly, the parties should agree on a common data protocol for the proceedings. This protocol should define the categories of data and data subjects, the legal basis, and the extent of informing the data subjects as well as techniques for data minimization, i.e., the scope of blackening personal data.

Data protection law is becoming increasingly important and should also be kept in mind during arbitration proceedings. Although there is no perfect solution so far, and it is questionable whether there will ever be a perfect solution, many problems can be mitigated if the parties seek as much consensus and uniformity as possible. This can be tackled via both, a technological approach, and the individual compliance duties of each party involved.

## 2. Best Practices

Regarding best practices it is best to distinguish those that address data protection and cyber security.

### 2.1 Data Protection

Beyond national legislation, the GDPR is the most referred to standard in data protection globally, and many states rely on the GDPR and apply its provisions almost universally, see above.

The DIS established a privacy policy for arbitrations and other ADR proceedings.<sup>18</sup> It also provides an FAQ<sup>19</sup> regarding data protection for arbitral proceedings that enables all participants to navigate the pitfalls of data protection in the arbitral proceedings. The DIS has also published a practice notice on information technology in arbitral proceedings pursuant to the 2018 DIS arbitration rules – notes on Art. 27.4(i) and annex 3 lit. G 2018 DIS arbitration rules that guides the parties through some of the intricacies of the use of information technologies and contains a checklist with the most important practical questions.<sup>20</sup>

While the International Chamber of Commerce ['ICC'] relies on the GDPR, it also established own guidelines and a Data Privacy Notice for Dispute Resolution Proceedings<sup>21</sup>. The ICC hereby regulates its own processing of personal data, for such purposes as facilitating its communications and providing services to neutrals, members

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<sup>18</sup> German Arbitration Institute ['DIS'], 'Privacy Policy for Arbitrations and other Alternative Dispute Resolution Proceedings' (2021) [DIS Datenschutrichtlinie Schiedsverfahren Fassung 2021-06.pdf \(disarb.org\)](#).

<sup>19</sup> DIS, 'FAQ Datenschutz für DIS-Schiedsverfahren' (2019) [FAQ Datenschutz fuer DIS-Schiedsverfahren\\_DE.pdf \(disarb.org\)](#).

<sup>20</sup> DIS, 'Informationstechnologie in Schiedsverfahren nach 2018 DIS-Schiedsgerichtsordnung Hinweise zu Art. 27.4(i) und Anlage 3 lit. G 2018 DIS-Schiedsgerichtsordnung' [Informationstechnologie in Schiedsverfahren nach 2018 DIS-Schiedsgerichtsordnung – Hinweise zu Art. 27.4\(i\) und Anlage 3 lit. G 2018 DIS-Schiedsgerichtsordnung \(disarb.org\)](#).

<sup>21</sup> ICC, 'ICC Data Privacy Notice for ICC Dispute Resolution Proceedings' (2022) <https://iccwbo.org/icc-data-privacy-notice-for-icc-dispute-resolution-proceedings/>.

of the ICC Court or the Standing Committee, parties, legal representatives, witnesses, etc. These self-regulatory rules and guidelines can be found in almost all arbitral institutions.<sup>22</sup>

Additionally, the ICC added new rules concerning the Protection of Personal Data in its Note to Parties and Arbitral Tribunals<sup>23</sup>. The note emphasises the significance of complying with personal data protection regulations such as the GDPR and urges arbitral parties to comply with applicable data protection regulations, including the GDPR. This reference to the GDPR can be found furthermore in the Data Privacy Note of the London Court of International Arbitration ['LCIA']<sup>24</sup> and in the Privacy Policy for the Stockholm Chamber of Commerce ['SCC']<sup>25</sup>.

The LCIA has additionally incorporated data protection considerations into its updated Arbitration Rules, requiring tribunals to consult with the parties and take appropriate measures in Article 30.5.<sup>26</sup> It further specifically granted the arbitral tribunal to issue binding directions relating to information security and data protection in Article 30.6.

The Chartered Institute of Arbitrators ['CIArb'] is an international centre of excellence that has published a guideline setting out general principles for the use of technology and data in arbitration, including the principles of proportionality, fairness, and transparency.<sup>27</sup>

A very welcome alternative to the GDPR has emerged from the International Council for Commercial Arbitration ['ICCA'] and the International Bar Association ['IBA'], that jointly established the 'ICCA-IBA Roadmap to Data Protection in International Arbitration' ['ICCA-IBA Roadmap']<sup>28</sup> as a tool to assist arbitration professionals regarding the application of data protection and privacy laws during international arbitration proceedings. While these guidelines also heavily focus on the GDPR, they, *inter alia*, provide checklists of data protection considerations, samples of standard contractual clauses, data protection protocols, and data privacy notices. The

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<sup>22</sup> Cf. London Court of International Arbitration ['LCIA'], 'Data Privacy Note for LCIA Proceedings' (2021) [Data Privacy Notice for LCIA Proceedings](#); Stockholm Chamber of Commerce ['SCC'], 'Privacy policy for the Stockholm Chamber of Commerce' [Privacy Policy - Stockholms Handelskammare](#); Swiss Arbitration Centre Ltd. ['SAC'], 'Swiss Arbitration Privacy Policy' [Privacy Policy - Swiss Arbitration Association](#); Singapore International Arbitration Centre ['SIAC'], 'Privacy Policy' (2014) [Privacy Policy - Singapore International Arbitration Centre \(siac.org.sg\)](#); Hong Kong International Arbitration Centre ['HKIAC'], 'Privacy Policy' (2023) [Privacy Policy | HKIAC](#).

<sup>23</sup> ICC, 'Note to Parties and Arbitral Tribunals on the Conduct of the Arbitration under the ICC Rules of Arbitration' (2021) [Note to Parties and Arbitral Tribunals on the Conduct of the Arbitration - 01-01-2021 - ICC - International Chamber of Commerce \(iccwbo.org\)](#), para. 15 et seq .

<sup>24</sup> LCIA, 'Data Privacy Note for LCIA Proceedings' (2021) [Data Privacy Notice for LCIA Proceedings](#), para. 4.1.

<sup>25</sup> SCC, 'Privacy policy for the Stockholm Chamber of Commerce' [Privacy Policy - Stockholms Handelskammare](#).

<sup>26</sup> LCIA Arbitration Rules 2020, [LCIA Arbitration Rules 2020](#), Article 30A.

<sup>27</sup> CIArb, 'Framework Guideline on the Use of Technology in International Arbitration' (2021) [ciarb-framework-guideline-on-the-use-of-technology-in-international-arbitration.pdf](#), Part I.

<sup>28</sup> ICCA, 'The ICCA-IBA Roadmap to Data Protection in International Arbitration' ICCA Rep 7 (2020) [ICCA Reports No 7 ICCA-IBA Joint Task Force on Data Protection in International Arbitration.pdf \(arbitration-icca.org\)](#).

resemblance to EU-style data protection is particularly evident in the nine principles of the ICCA-IBA Roadmap, including: fair and lawful processing, proportionality, data minimization, purpose limitation, data subject rights, accuracy, data security, transparency, and accountability. In terms of the GDPR, there are seven almost identical principles outlined in Article 5: lawfulness, fairness and transparency, purpose limitation, data minimisation, accuracy, storage limitation, integrity and confidentiality, and accountability. This once again demonstrates that many arbitration institutions strongly uphold the EU's pioneering standards.

According to Art. 19 (2) of the Swiss Rules of International Arbitration of the Swiss Arbitration Centre Ltd. ['SAC']<sup>29</sup> the parties and the arbitral tribunal alone shall determine and select the data protection rules. This is reinforced in its 2023 Practice Note.<sup>30</sup>

The PCA, SCC, and the SIAC do not provide any additional guidelines or regulations on data protection for parties to arbitration.

## 2.2 Cyber Security

In 2018, the IBA's Presidential Task Force on Cybersecurity adopted cybersecurity guidelines<sup>31</sup> to protect individual law firms from data security breaches and to provide assistance in the event of a ransom attack or other infringements of data security.

The ICCA together with the New York City Bar ['NYC BAR'] and the International Institute for Conflict Prevention & Resolution ['CPR'] issued a joint cybersecurity protocol.<sup>32</sup> The protocol comprises 14 principles on cybersecurity practices and preventive measures, and even provides for the possibility of sanctioning violations of information security measures.

The CIArb offers guidance on cybersecurity in international arbitration in the second part of its guidelines.<sup>33</sup> Its recommendations include standard security measures, an analysis of the assets and data that need to be protected, and secure data management.

CyberArb is an international legal and tech initiative that explores the intersection of cybersecurity and international arbitration as well as alternative dispute resolution. In 2021, it published a 'Toolkit' for cybersecurity in arbitration, including a roadmap for cybersecurity in arbitration proceedings, which advises the parties to, *inter alia*, set up cybersecurity protocols, designate a cybersecurity contact person, and issue procedural

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<sup>29</sup> SAC, 'Swiss Rules of International Arbitration' (2021) [Swiss-Arbitration-Centre\\_International-Swiss-Rules-2021-EN.pdf \(swissarbitration.org\)](#).

<sup>30</sup> SAC, 'Swiss Rules of International Arbitration Practice Note' (27th March 2023) [Swiss-Rules-of-International-Arbitration-Practice-Note-27.03.2023.pdf \(swissarbitration.org\)](#), para. 122.

<sup>31</sup> IBA, 'Cybersecurity Guidelines' (2018) [MediaHandler \(ibanet.org\)](#).

<sup>32</sup> ICCA, 'ICCA-NYC Bar-CPR Protocol on Cybersecurity in International Arbitration' ICC Rep 6 (2022) [ICCA-reports-no-6-icca-nyc-bar-cpr-protocol-cybersecurity-international-arbitration-2022-edition.pdf \(arbitration-icca.org\)](#).

<sup>33</sup> CIArb, 'Framework Guideline on the Use of Technology in International Arbitration' (2021) [ciarb-framework-guideline-on-the-use-of-technology-in-international-arbitration.pdf](#), Part II.

orders on cybersecurity.<sup>34</sup> The Toolkit additionally provided a template for such a procedural order.<sup>35</sup>

### 3. Recommendations

Securing and safeguarding personal data becomes a greater concern every day. Notwithstanding a number of attempts and new developments to emulate the GDPR milestone, complement it, specify it, and apply it or their own regulations regionally, it is noticeable that some institutions still hardly regulate data protection, leaving decisions and regulations largely to the discretion of the parties.

All parties, arbitrators, and the respective institutions should agree on the data rules they wish to apply, be aware of the arising rights and obligations, and ensure compliance by implementing the necessary safeguards and systematic precautionary measures.

#### 3.1 Recommendations for Parties

The parties should be discreet when submitting personal and confidential data in proceedings and limit the use of such data to the absolute minimum necessary. To this end, the parties should ascertain that the processing of data is justified or consented to. This may be achieved, for example, by redacting personal data. Finally, personal data should not be retained for an unreasonably long period of time and should be completely disposed of in accordance with applicable regulations as soon as possible.

#### 3.2 Recommendations for Arbitrators

Arbitrators and tribunals should be aware of the rights and obligations arising in the processing of data. Furthermore, before large volumes of digital evidence are assessed, arbitral tribunals should adopt privacy compliance mechanisms and provide appropriate instructions as early as possible. Where appropriate, arbitrators should sanction infringements and report breaches to the other parties.

#### 3.3 Recommendations for Arbitral Institutions

Arbitrational institutions should incorporate up-to-date privacy notices for their own processing of personal data and either issue their own privacy guidelines for arbitration or refer the parties to existing guidelines in order to develop consistent practice. Additionally, arbitral institutions should provide end-to-end encrypted services and secure digital platforms for communication and file sharing.

In our view the existing DIS data protection guidelines are sufficient and are well supplemented by the FAQ and the guidance note, however, an update might be beneficial for the parties. An update on the arbitration rules appears not to be needed. In particular, the rule amendments by the LCIA are of a merely declaratory nature as

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<sup>34</sup> CyberArb, 'The CyberArb Roadmap' (2021) [The CyberArb Roadmap | CyberArb](#).

<sup>35</sup> CyberArb, 'Template for Procedural Order on Cybersecurity for Arbitral Tribunal' (2021) [Template for Procedural Order on Cybersecurity for Arbitral Tribunal | CyberArb](#).

the arbitral tribunal's power to regulate these issues is derived from its power to regulate the proceedings.

However, it may be helpful to include English translations of the data protection guidelines, since these are currently only available in German. Furthermore, it would be desirable for the DIS to examine the possibilities and problems of electronic identification with regard to virtual proceedings and, if necessary, to provide for appropriate regulations. One approach could be the implementation of access-controlled platforms or software with an authentication process and assured encryption of data.

**FINAL REPORT FOR ROUND TABLE 3 OF THE PRACTICE GROUP OF  
TECHNOLOGY  
TOPIC: USE OF TECHNOLOGY DURING THE HEARING**

**1. Results**

With the increasing availability and use of digital technology in all stages of arbitral proceedings, digital tools are omnipresent also at the hearing. Such tools may be used by the tribunal to conduct the hearing itself and reproduce the comfort of an in-person hearing in a remote setting. It may also be used by the parties to enhance the persuasiveness of their pleadings with digital media. The third Round Table focused on possible ways of how both the parties and the tribunal itself can profit from the use of technology during the hearing; the discussion focused on two major technologies for helping the parties involved in an arbitration case as well as insights from an arbitrator.

**1.1 Conducting remote or in-person hearings with *Opus2***

**1.1.1 Overview**

*Opus2* exists since 2008 and is a service provider for the planning, preparation and organization of hearings in arbitral proceedings. In 2021 it was used in more than 400 arbitrations worldwide, helping 29 of the top 30 law firms worldwide.

Typically, the software is used by the parties involved in an arbitration, but it's also meant to be helpful for the tribunal. It's a flexible, tailor-made solution and can be used for in-person, virtual and hybrid hearings. The solution consists of four different key-elements.

**1.1.2 Key elements**

The first key element is a shared electronic bundle: Within an online workspace, all documents relevant for the case are uploaded; this allows the teams to work on the same material to prepare the hearing from a neutral source. The folder structure is fully adjustable, with shared as well as private folders which then guarantee a high security level. Lawyers can easily write notes, highlight, or tag important phrases directly within documents. Also, two-way-links are automatically set where text refers to another document, reference, or piece of evidence; this minimizes the need for complicated searches across many documents. Furthermore, users can add bookmarks and group facts that are important for one specific aspect throughout all the data relevant to the case. For a better overview, all notes can be displayed on a big screen, they can be filtered, and the chronology of all notes is kept throughout the whole process, as well as the people working on it. There is also a tab showing all the entities involved in the case; within this profile book, again, all documents are directly linked to the persons they belong to.

Another key aspect is the real-time transcription of the hearing. Within the generated text, the parties can highlight and mark important sections and take notes directly to the relevant phrases. Also, secret chatting or sharing of notes is possible between the colleagues working on the case during the hearing.

Furthermore, there is the end-of-day transcription: At the end of a hearing day, a more advanced finalized transcription will be provided, where the exact timeline corresponds with the transcript and – if permitted by the tribunal and the parties – the real audio is synchronized and linked to the transcript.

The last main part is the electronic presentation of evidence (EPE): As soon as evidence is uploaded in the electronic bundle, it is shared within seconds between the parties who can automatically follow the evidence presented. But since lawyers might want to influence the tribunal by showing the most important element of evidence clearly on a piece of paper, there is hesitation to completely step back of using the established paper sheets among practicing lawyers.

#### 1.1.3 Use in arbitration

The system is optimized for a multiscreen display during the hearings, having three screens that show the transcript, the evidence and the own thoughts and tactics.

It is most effective to use the system on a multi-party basis, to make sure everyone benefits from the shared documents, and all the data shared is directly distributed to all parties involved. Still, an export of normal PDFs for law firms with own in-house-systems or tribunals is possible as some sort of hard copy bundle. But normally, especially the arbitrators will be keen on using the system for a better and easier way of factfinding.

Normally, Opus2 as the neutral third party is showing all facts and is in charge of the interactive parts, in order to avoid one party getting control of the evidence presentation and showing biased data.

#### 1.1.4 Data security

Opus2 takes ownership of all the data shared and provided by the party. This is necessary to equally provide everyone with all data shared, as Opus2 is a neutral third party. It hosts the data on AWS-servers in London and complies to the GDPR; also, there is some flexibility about where to store the data to meet customers' requirements. Opus2 claims to make a huge investment of time and effort in cyber-security.

On the other hand, sharing and duplicating data always leads to a higher risk for the data to be insecure and exposed to hackers. Also, since US-providers are never able to securely prohibit any governmental access to the data stored on their servers, the European Court of Justice annulled all agreements for "shipping" data to the US, because they just cannot meet the requirements of the GDPR. Since American technology is indispensable for arbitration in Europe and there is no real way to guarantee compliance with European law, it is a simple "Don't talk, don't ask, don't complain"-policy.

Normally, the tribunal does not need to provide a cyber security agreement but leaves this topic to the parties. Anyway, apart from some complications due to different jurisdictions, this isn't quite a controversial topic since the parties have

similar interests. Although the tribunal definitely is a data processor that must show to some extent it has done enough to meet the GDPR rules, the tribunal will always be very hesitant to sign any specific agreement with the parties; these agreements are a loss of flexibility and might even – especially in Germany – endanger the enforceability of the award . Therefore, normally the parties agree upon certain rules.

#### 1.1.5 Cost

There are shared costs for parts of the program both parties profit from as well as single party costs. Costs are calculated on a per document rate in combination with how many links make the program how difficult. Special rates account for smaller cases.

### 1.2 Visualizing and presenting complex facts using *Z-Axis*

#### 1.2.1 Overview

Z-Axis has been a consulting firm for 38 years and offers unique presentation options for court rooms and arbitrations. They especially focus on extremely advanced timelines showing many different layers and presenting lots of difficult information in a structured way to make complex sets of facts easier to understand. It can either be used for presentations in the trial or as a first step for the parties simply to understand the whole case. The key issue is to present complex information, either on the party's own or with a presentation service by Z-Axis.

#### 1.2.2 Visualization

Z-Axis provides users with an interactive timeline adding various relevant groups of information to that timeline on a case-by-case basis. The timelines can be displayed in many different options and can show any period of time; also, i.e. economic graphs can be linked to the timeline to show certain impacts of happenings to another value.

The program can be used for many different stages: starting at the investigation up to the hearing, and for arbitrations as well as for mediation.

All relevant information is connected to the timeline at the right position, so the documents refer to the right timestamp and photos can be attached to the specific content. It can also be used to show complex formulas for disputed money, to then calculate certain damages for different scenarios. In these cases, to guarantee the right to be heard and to a fair trial, the formula used must be scientifically right and not manipulated.

In order to build the timeline, the firm reaches out to experts and finds out what the most crucial aspects for a certain scenario are and how they must be shown to successfully submit this information to everyone involved.



### 1.2.3 Cost

Z-Axis is also affordable and useful for "smaller" cases, usually starting at a disputed amount of 10 million Euro and above. The first conversation is always free and will come up with a suggestion of what might be a good approach to bring across the points the party was struggling with so far. After that, costs depend on which options really get chosen and how many follow-up rounds are necessary. Generally, cost tend to be less than 1% of the litigation, which normally leads to 30,000 to 50,000 USD per case; but there were also cases going down to around 5,000 to 10,000 USD.

### 1.2.4 Awareness level

Seen from an international perspective, Z-Axis is predominantly used in arbitration, but generally it can be used in any case, also in mediations. Also, a tribunal could for example ask the parties to use Z-Axis to neutrally present undisputed facts for a better understanding.

### 1.2.5 Gamechanger

When it comes to analyzing the most effective tool of the solutions, a clear differentiation between the design and the interactive way to present the information cannot really be made. In general, the fact of understanding complex cases in a simple way is the key selling point, to which both the design and the interactivity of the program contribute.

## 1.3 Users' view

These huge technical innovations and steps can help a lot for conducting cases more effectively, but they also need to meet requirements to overcome the hesitation to use sophisticated technology, so the question always is: Why shouldn't we use paper anymore? Simply summarizing the same main aspects of what was already submitted in a written form before normally isn't profitable. In general, the tribunal wants to be helped and informed, but not convinced, so there is a different approach between tribunal and parties.

### 1.3.1 Demonstrative exhibits

Using technology is crucial, especially for technical topics which seem extremely difficult at first but can easily be explained with videos and pictures. Everyone will be open to new techniques, as long as they are better than the established way (MS Excel) and simple and "playful" to use. The use of technology must add color to the story that is going to be told, so demonstrative exhibits should be submitted that are of use for everyone. It should only be used when there is a clear plan and intention *why* it is really better to use it, since a party wants to convince the tribunal, but the other side can also use it. The exhibits really need to advance the arguments.

### 1.3.2 Hearing support

The technical hearing support took a great step forward during the covid pandemic and is now very good for online meetings. A good transcript is very

useful, but counsels hesitate to use electronic presentation of evidence (EPE, see above), since absolute control over what exactly is shown at what time is crucial.

The technology used *must* work: it must run stable and normally, three screens are typically necessary to have access to all the information relevant during the hearing (see above). It is important not to overdo technical use but rather to use it in a way that makes dealing with the topics in question easier and not more complicated. There should not be too much time invested into something that will not really be used sufficiently intense.

#### 1.4 Legal background

Each party's right to be heard might be endangered, since with these new options there are many different possibilities how the data will be presented and used; this makes preparation difficult and surprises during the hearing likely. But since the raw data gets shared, the way of presentation is comparable to normal hearings where order and manner of details are also part of each party's strategy and capability. As long as the information presented is already fully known to all participants, there is no problem with the right to be heard, but using the technologies is just a new way of presenting. Normally, before a hearing, screenshots are disclosed; but there are many options, including disclosing the whole program before the hearing. Usually there are deadlines for submitting the evidence. For quantum calculation cases, the formulas must be scientifically correct (see above).

The requirement of equal treatment of the parties does not allow the tribunal to forbid the use of the technical options just because one party does not have enough money to afford the same options; instead, forbidding the use would be unfair, since the parties freely choose each other and the tribunal has no need to strike a balance in financial means.

#### 1.5 Summary

The technologies presented can offer great advantages for hearings as long as they are used with a sound judgement. If used the right way, arbitration can get to better decisions more effectively.

### 2. **Best Practices**

The use of technology during arbitral hearings can significantly enhance their efficiency and effectiveness, and the way in which parties present their submissions. Here are some best practices for using software in arbitral hearings:

- **Early Consideration:** It's crucial to consider how technology should be leveraged during the hearing early on. This includes deciding on the appropriate software and tools to use, for both the tribunal and the parties (or their counsels).
- **Virtual Hearings:** The use of video conferencing for hearings should be standard for mere procedural hearings such as case management conferences. For substantive hearings, virtual hearings are an important tool to reduce costs

and the carbon footprint of arbitral hearings wherever this seems appropriate given the circumstances of the individual case.

- **Document Management:** Digital platforms for document management can greatly enhance the efficiency of arbitral hearings. Their use should be decided early in the proceedings in order to avoid the duplication of data storage on two different document platforms for the written procedure and the hearing.
- **Training and Familiarity:** It is important to ensure that all participants are familiar with the chosen technology and provide necessary training if needed. Before a virtual hearing, participants should have the opportunity to do „test runs" with the actual hardware and software configuration to be used during the hearing.
- **Support:** Neither the tribunal nor the parties should be tasked with technical support duties during the hearing. The use of an external service provider can help the participants of virtual hearings to focus on the case instead of technological issues.
- **Neutrality and Impartiality of Operators:** If documents need to be presented during virtual hearings (especially during cross examinations), it is important that a neutral operator shares the document to witnesses in order to ensure neutral and complete presentation of the original documents from the agreed virtual hearing bundle.
- **Visualization is Key:** Complex facts can often be conveyed more convincingly if they are visualized. Visualization is often not a key competence of arbitration lawyers and can often better be done by specialized service providers.

### 3. Recommendations

#### 3.1 Recommendations for tribunals

Tribunals should address the choice of software and/or service providers for potential virtual hearings early on in the proceedings, preferably during the first case management conference (see also Section G. of Annex 3 to the DIS Rules). They should be aware of potential risks and chances of virtual hearings and of the possibilities offered and the cost caused by specialized service providers in order to make an informed decision on their use.

Tribunals should also be aware of the complexity of potential technical issues that may arise during virtual hearings, and should ensure that technical support is available to their members during the hearings in order for them to be able to fully concentrate on the hearing itself without being distracted by technical questions.

Tribunals should make sure that parties and their counsel are offered the possibility of test-runs of the virtual hearing software with the actual hardware and software configuration to be used during the hearing.

### 3.2 Recommendations for parties and counsel

Parties and counsel should equally be aware of potential risks and chances of virtual hearings and of the possibilities offered and the cost caused by specialized service providers in order to make an informed decision on their use.

In case of virtual hearings, counsel should prepare thoroughly not only on the substance of the hearing, but also on the technical questions, in order for them to not be distracted by technical issues during their pleadings. They should also organize the availability of technical support throughout the hearing in case of technical issues. The same holds true for the preparation and the technical support of witnesses.

Counsel should be aware of the contemporary possibilities for the visualization of complex facts in order to use them where appropriate to better convey the facts and help the tribunal understand them.

### 3.3 Recommendations for the DIS

The DIS should offer guidelines for tribunals on how to use virtual hearings effectively in arbitration proceedings, and perhaps offer a model protocol and a list of potential service providers for virtual hearings, if not provide these services itself together with the document management services in an integrated platform.

The DIS Rules should explicitly offer tribunals discretion to order a virtual hearing if the parties disagree on whether a hearing shall be held in person or virtually (as will probably be provided by the new German arbitration law).

**FINAL REPORT FOR ROUND TABLE 4 OF THE PRACTICE GROUP OF  
TECHNOLOGY DIS RULES LAB:  
TOPIC: VIRTUAL HEARINGS**

**1. Status Quo**

Arbitration has witnessed significant evolution over time, particularly in the realm of conducting oral hearings. Traditionally, arbitration hearings have been conducted in person, with individual stakeholders participating remotely only rarely and under exceptional circumstances. However, the unprecedented COVID-19 pandemic from 2020 onwards forced practitioners to test relatively new waters with (fully) remote hearings. In the course of this, technical solutions have become available to conduct remote hearings in a manner as similar as possible to real in-person hearings.

During its fourth Round Table, the Practice Group of Technology of the German Institution for Arbitration discussed whether virtual hearings are here to stay and how they can be improved. Arbitrators, lawyers, and legal technology experts discussed how technology has evolved since the pandemic and has become an important tool in dispute resolution and litigation.

The technology for remote hearings already existed in principle prior to the outbreak of the pandemic, but COVID-19 catalyzed the use of virtual hearings in arbitration. Irrespective of a pandemic, it can be a more efficient and cost-effective way to resolve disputes by way of remote hearings and to clear the backlog. Virtual hearings come without the logistical challenges presented by in-person hearings, reducing the need for travel and accommodation expenses for participants, including arbitrators, parties, witnesses, and legal representatives, thereby reducing the overall costs associated with conducting arbitration proceedings. In the current environment, such developments can contribute to achieving more sustainable proceedings via lower production costs, improved resource efficiencies, and reduced emissions. Participants can attend hearings from different locations, avoiding the need for travel time and overcoming visa regulations. Surmounting the initial reluctance, many leading arbitration institutions have introduced new virtual hearing guidelines or protocols to facilitate virtual arbitration.<sup>36</sup>

However, there are some drawbacks to virtual hearings as well due to the highlighted concerns of cybersecurity and breach of confidentiality in arbitration. Scheduling a suitable time for practitioners in different time zones can also be a challenge in virtual

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<sup>36</sup> For some examples see: ICC Checklist for a Protocol on Virtual Hearings and Suggested Clauses for Cyber-Protocols and Procedural Orders Dealing with the Organisation of Virtual Hearings, available at <https://iccwbo.org/news-publications/arbitration-adr-rules-and-tools/icc-checklist-for-a-protocol-on-virtual-hearings-and-suggested-clauses-for-cyber-protocols-and-procedural-orders-dealing-with-the-organisation-of-virtual-hearings/>, ICC Rules 2021 Art. 26 (1), "... that any hearing will be conducted by physical attendance or remotely by videoconference, telephone or other appropriate means of communication."; Virtual hearings: A list of tips from SCC arbitrators on how to conduct a successful hearing online, available at <https://sccarbitrationinstitute.se/en/case-management/hearings/virtual-hearings>; SIAC Guides Taking Your Arbitration Remote available at <https://siac.org.sg/wp-content/uploads/2022/07/SIAC-Guides-Taking-Your-Arbitration-Remote-August-2020.pdf>; AAA-ICDR Virtual Hearing Guide for Arbitrators and Parties, available at [https://go.adr.org/rs/294-SFS-516/images/AAA268\\_AAA%20Virtual%20Hearing%20Guide%20for%20Arbitrators%20and%20Parties.pdf](https://go.adr.org/rs/294-SFS-516/images/AAA268_AAA%20Virtual%20Hearing%20Guide%20for%20Arbitrators%20and%20Parties.pdf).

hearings. The effectiveness of virtual hearings is contingent on reliable internet connectivity and access to suitable technology, which may pose challenges in certain jurisdictions or for parties with limited resources.

#### 1.1.1 The arbitrator's perspective

Arbitrators often prefer personal, physical interaction and communication with the parties and other stakeholders in the arbitration process. No platform could make up for the value of this interaction. Face-to-face encounters facilitate effective cross-examination and allow arbitrators to assess witness testimony more accurately. Moreover, the physical presence of parties and their legal representatives may enhance transparency and trust in the arbitration process.

The most important element to enable virtual hearings is the consent of the parties to the arbitration. In the past, some parties have argued that there is a right to a physical hearing and have argued against a virtual hearing on that basis. However, in the past few years it has been concluded that there is no absolute right to a physical hearing in the leading international soft law, such as the UNCITRAL Model Law on International Commercial Arbitration<sup>37</sup> and the International Bar Association Rules on the Taking of Evidence in International Arbitration.<sup>38</sup> Arbitration is a flexible and consensual process, and the parties can agree on the procedures governing their arbitration, including the format of the hearing.

Other important elements include reliable technology such as camera, microphone and a stable internet connection without which the hearing may end up being disrupted.

Initially, it was also important to brief participants on codes of conduct in a remote hearing. However, as virtual hearings become more mainstream the need for this has become less stringent.

Critical points of consideration for an arbitrator:

- (a) *Conclusively clarify facts needed for the decision through examination of witnesses and experts* - This starts with the entering of expert or witnesses into the virtual hearing room. Arbitrators expect experts and witnesses to understand the importance of testifying truthfully. In a physical hearing room, this is achieved by the formal setting when they step into the hearing room, but in a virtual hearing it requires formal instructions and briefing to achieve the same respect. It is important that virtual hearings instill the same sense of importance as a physical hearing room.

Assessing the reliability of a witness or expert testimony accurately can be more difficult in remote hearings compared to in-person scenarios. It

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<sup>37</sup> UNCITRAL Model Law on International Commercial Arbitration, available at [https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/19-09955\\_e\\_ebook.pdf](https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/19-09955_e_ebook.pdf).

<sup>38</sup> IBA Rules on the Taking of Evidence in International Arbitration, available at <https://www.ibanet.org/MediaHandler?id=def0807b-9fec-43ef-b624-f2cb2af7cf7b>.

may be a potential issue to ensure that witnesses testify what they actually remember, and that the witnesses have not been coached in an inappropriate way. In a virtual setting, it may be easier to influence a witness. In an in-person hearing, it is helpful to see the witness in person so that their body language and demeanor can also be assessed first-hand. However, this hurdle can be overcome as practitioners get used to virtual settings over time.

A clear advantage in this regard is the easier facilitation of the testimony as it can be arranged in a timely and cost-effective manner.

- (b) *Conclusively clarify the applicable law*- A primary function of the arbitral tribunal is to understand the legal arguments that need to be addressed by deliberating with the parties. This is done through opening statements, legal experts' testimony, legal discussion etc. Though all these elements can be achieved in a similar manner in both virtual and in-person hearings.
- (c) *Contribute to legal peace*- The right to an oral hearing is important. It is important that the right to be heard and the right to be treated equally is granted to all parties in the hearing and a virtual hearing, just because it is "virtual" is not a hinderance to this. The Austrian Supreme Court (Oberster Gerichtshof, OGH) ruling (Case No. 18 ONc 3/20s) held that the conduct of a virtual hearing does not as such infringe one party's right to be heard or treated equally. It is important to safeguard that parties have the opportunity to convey everything they want to say, through experts, counsel, witnesses etc. In remote hearings it can be challenging to reassure the parties that the arbitrators were listening closely and with the same intensity of discussion and interactions as in an in-person hearing. Even though arbitrators try their best to guarantee this, parties may sometimes not feel the same confidence as being present in court or in person. Another aspect that may be impacted is coming to an amicable solution of the dispute as best intention and efforts from the parties' is required. The intuition for a settlement comes from interacting in a room face-to-face and the moment technology has not evolved to that extent. It will, however, change over time as the definition of what is considered "normal" will also evolve.

#### 1.1.2 The counsels' perspective

For legal counsel/ party representatives it is critical to deliver factual and legal content to the arbitral tribunal, trying to convince the tribunal of their arguments. Working with dedicated hearing service providers such as Opus 2 has eased this process. Pre-Covid, nothing more than a big screen was usually used at in-person hearings to display exhibits; nowadays, dedicated remote hearing technology has put the quality of presentation at another level. By using such technology, the delivery of factual and legal content by lawyers works equally well in virtual hearings but a significant investment in good technology is required.

Counsel also rely on interaction within their own team during the hearing. In a virtual hearing it is often a massive problem if everyone is not in the same room. Being hidden behind a camera offers new ways of interaction within the team. In physical hearings little pieces of paper were often passed within the team to communicate. Nowadays, messaging within the platform is a possibility to communicate. Initially, a team had to be in the same room for a virtual hearing with lots of screens and technical support to facilitate this intra-team communication. However, with more efficient technology and with practitioners getting more used to new systems of communications, this is an issue that is not very hard to resolve.

Counsel often depend on witnesses and experts to get their case across. With virtual hearings, counsel now need to ensure that their witnesses and experts are well-equipped to testify in the virtual space. The in-person hearing atmosphere needs to be recreated in a virtual hearing and some of these influences cannot easily be transposed through a webcam. Sometimes a simple co-incidental interaction with the opposing party during a coffee-break during the hearing also has positive influences on the case. These short meetings could also potentially facilitate a settlement of the case. These dynamics do not exist in a virtual hearing.

In-person hearings and virtual hearings can provide for a quite similar experience if conducted properly. Dedicated service providers play an important role in closing that gap. Good quality, however, comes at a price. In small-value cases, parties may not be able to afford service providers, but a stable internet connection and a good microphone and camera can still facilitate a successful hearing.

#### 1.1.3 Hearing center and legal technology experts' perspective

Video conferencing has been used in oral hearings long before the COVID pandemic hit but was used only in rare and exceptional situations. Remote attendees often had trouble following the hearing and could not see or hear the visuals well. The pandemic served as a catalyst for the acceleration of embracing new technologies and virtual hearing products were developed rapidly to keep up with demands. Witness rooms and conference rooms on site now benefit from the additional technical support.

To ensure everyone has a smooth transition to virtual hearings, hearing centers and legal technology experts stress on carrying out test calls in advance of the hearing. This is supposed to familiarize all stakeholders with the technology involved. Enquires are made as to whether the hearing requires transcription and translation services so that this can be adequately set up.

Hearing center technicians sit throughout the hearing so that they are on hand to fix any technical issues. Technician duties normally involve admitting all participants to the virtual hearing, assisting with equipment, assigning parties to their respective breakout rooms, etc.



Witnesses and experts are also invited for test calls, training and tech support with advice provided if they require it. Assist witnesses with tech options, approach responsible party to see if they can help with alternative options.

Service providers also ensure security and confidentiality by circulating a random meeting link. All attendees are pre-announced by the providers in the hearing before they are allowed to enter, and an attendees list is prepared in advance so that security is maintained.

Service providers encourage a 2-camera set up- one in the room and one that shows individual faces. They generally ensure that a backup internet connection is available. Private information is handled confidentially, and the data is erased later. In case of technical issues, there is a possibility to join the hearing by a phone app or by dialing in.

Hybrid hearings are a combination of in-person hearing and virtual hearing. Some of the parties will be physically present in the hearing room whereas other can log in from remote locations as well. Any of the parties can attend from anywhere in the world and generally participate in a test call during which technicians check audio, video, and internet connection.

The main components of an in-person hearing are-people, venue, interactions between attendees, supporting records and services, bundle, transcription, work product. These are the main components service providers have tried to incorporate into virtual hearings to ensure they are seamless.

Service providers not only focus on the technology but also on the service layer around the technology for instance like testing remote locations set-up beforehand. Virtual hearing managers are appointed in the call itself to support the product and for the ability to ensure communication with the client or lawyer.

A single screen set up may not provide best experience, often a two-screen set up is important to facilitate easier switching between the live video feed and the exhibit manager. When the live video is focused on one entire screen, parties can better judge the body language of the speaker and others on the call, thereby replicating some semblance of an in-person hearing atmosphere. A rich and good sound system and audio set up also makes it easier to sit through an 8-hour hearing and attentively follow the hearing.

## 2. **Overview of best practices**

*Behaviour in a digital setting-* While extensive and stringent rules may not be required for maintaining basic decorum, it is crucial to prepare and to brief parties on the appropriate behaviour expected in a video hearing. Cultural differences in practices should also be taken into account. It is helpful to brief the participants in advance to the specifics to be followed for each particular hearing. One way of doing this are prep/ test calls. Additionally, virtual hearing guidelines can be provided, such as those introduced

by the Hong Kong International Arbitration Center (HKIAC).<sup>39</sup> Arbitrators can also brief the parties and other participants on this via procedural orders.

*Providing technology training-* Some participants may require and appreciate training to manage virtual hearings and technology that they may not be familiar with. Service providers usually provide training kits and assist in setting up computers by remotely controlling them.

*Perfectly working hybrid and hearing atmosphere/interaction-* Personal communication during a remote hearing for example, between members of the tribunal or among co-counsels is still complex. It can be overwhelming to read what someone is writing on personal messages while still following the hearing proceedings. This is also a matter of getting used to the new technology. Meanwhile service providers offer private chat options along with a live feed of the transcript being recorded so that participants do not miss what is being said in the hearing.

*Proper management during the virtual hearing-* It is often prudent to have an appointed hearing manager present to deal with issues like accidentally unmuting oneself or to control audio and video so that the presenter does not have to worry about these things. Hybrid hearings especially require a manager as some people are in the same room while others are attending remotely. It is also helpful to have neutral backgrounds in the video call. Some practitioners have commented that blurred backgrounds could give the impression that there is something to hide and especially with witnesses this impression could have a negative impact on the case.

*Keeping up to date with trends or developments in the hardware market and new technology-* Project Starline, for example, is an experimental video communication method currently in development by Google that allows the user to see a 3D model of the person they are communicating with. If successful, this technology could improve the quality of remote witnesses and bring virtual hearings even closer to in-person hearings than before. High quality webcam, headset, dedicated venues to give evidence like neutral law firms where the video conference can be controlled can all contribute to bringing about the hearing atmosphere.

In person-hearings should not be treated as gold standard to match virtual hearings to as some elements might actually be better and more efficient with virtual hearings. The focus should instead be on what elements are required for a successful hearing and the best way to implement these elements be it an in-person hearing or a virtual one.

### 3. **Recommendations to the DIS**

*Recommendation I:* Guidelines for virtual hearings similar to the one issued by the HKIAC could be of assistance to parties with regard to decorum and management of the hearing. This could also save time for the tribunal from having to address this separately for each case.

*Recommendation II:* The DIS should consider amending Article 29 of the DIS Rules with a new provision specially allowing for remote hearings if the parties agree on those

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<sup>39</sup> HKIAC Guidelines for Virtual Hearings, available at [https://files.essexcourt.com/wp-content/uploads/2020/05/15150223/HKIAC-Guidelines-for-Virtual-Hearings\\_0.pdf](https://files.essexcourt.com/wp-content/uploads/2020/05/15150223/HKIAC-Guidelines-for-Virtual-Hearings_0.pdf).

or if the Tribunal considers a remote hearing to be appropriate. If Article 29 is amended as such, a new Annex 7 could be implemented providing for remote hearing guidelines (see recommendation 1), including a "bucket list" of critical aspects such as test/prep calls, hearing managers, etc.

**FINAL REPORT FOR ROUND TABLE 5 OF THE PRACTICE GROUP OF  
TECHNOLOGY  
TOPIC: RISK ANALYSIS TOOLS IN ARBITRATION**

**1. Results**

Risk analysis tools can help a lot in advance and during an arbitration. Any party involved in the procedure can profit from the technology. The discussion focused on different approaches as well as different perspectives, figuring out what each position's demands are.

**1.1 Client's perspective: in-house counselling at Bosch**

**1.1.1 Practice**

Practice showed that especially the economic/business side of a company and their decision-makers tend to follow unrealistic claims. To achieve a better communication between the lawyers and economists of a firm, jurisdictional speech does not help, but cases need to be translated into numbers.

**1.1.2 Bryter tool**

Bosch is using a Bryter tool called "Settle or Litigate" with which they follow the approach "What you can calculate you can manage". Using this tool makes discussions about possible claims much easier since calculating with numbers fits better into the normal proceedings of the company. The tool is used for in-house counsels to be guided and taken by their hands, so it is optimized for an easy use due to the wide range of users.

Using the Bryter module, the aim is to enhance the robustness of decisions by rating claims on how realistic they are. As the method is using mathematic analysis (decision tree), the tool allows to graphically display claims and the cost and risk involved.

Within the process, the first step is to select the role in the process, either plaintiff or defendant. After that, there are certain text boxes and adapted descriptions take the user through the whole claim, with specific guidance and explanations. As a result, an Excel spread sheet shows the calculation and whether settling or litigating seems to be the better option; the numbers can be adjusted to show the influence of different values.

**1.2 Counsel's perspective: procedural risk analysis tool at Baker McKenzie's**

**1.2.1 Current situation**

The tools can be seen as translation tools from the legal language into an economic language. Counsels learn the language of their clients, who normally prefer talking about numbers rather than the legal details.

**1.2.2 Risk analysis tool**

The risk analysis tool again follows a normal decision tree.

First, the crucial aspects that might influence the outcome of the case must be found and analyzed. Second, the probabilities of each decision split are weighed; this is where legal knowledge and experience is necessary. After that, a simple calculation sums up the possible outcomes to generate a *risk adequate expected value*.

#### 1.2.3 Point of criticism

Most often, cases are so complicated that the value added by standard software such as Bryter is very limited. To really help lawyers with all their very difficult cases, risk calculation must be drastically improved.

### 1.3 Litigation funder perspective: Deminor recovery services

Generally, again based on using decision trees with applied probabilities, complex commercial arbitration or litigation cases are transferred into a few key numbers to rate any investment in terms of profitability. Easily described, the firm starts using normal Excel and then particularly adapts everything to the specific case.

As long as Big Data analysis is as difficult as nowadays, the lawyers' work will stay the same and they are needed for calculating the probabilities for the options in the decision tree and feed the whole mathematic process with high quality input.

Tools can have a good impact, but the evaluation of the data and "playing" with the data is the human lawyers' job.

### 1.4 Testifying expert's view: Ankura

#### 1.4.1 Key interest

The key interest normally is which overall outcome can be expected. To explore this, Ankura never uses a standard program or exercise, but always builds a custom-made solution for the case together with the client and their teams. They use the add-on *Crystal Ball* for the calculations which can be used together with Excel.

From their perspective, wrong assumptions are the riskiest part for calculations: "It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so."

#### 1.4.2 Ankura solution

Ankura runs simulations (i.e. the complicated *Monte Carlo Simulation*<sup>40</sup>) to really find out how probable certain outcomes are. The result is an S-curve for getting an informed opinion on what offers might be good to accept; the aim is to shift the S-curve further to the right, which means getting higher chances for bigger sums.

To build that S-curve, merits and quantum are analyzed and calculated. To avoid the risk of miscalculations, the first step is to address the weaknesses, because

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<sup>40</sup> [https://en.wikipedia.org/wiki/Monte\\_Carlo\\_method](https://en.wikipedia.org/wiki/Monte_Carlo_method).

knowing the weak points allows to handle them. As a result, a precise S-curve shows a certain probability referring to each amount of money.

#### 1.5 Standard tools

Even though all the options presented and discussed seem relatively similar in the way they analyze the procedural risks, a standard tool does not really exist. There are some standard smart calculators, but for complete tools, one cannot find a standard; nevertheless, Bryter seems to be quite a common base software. Excel is simple but powerful and allows to build many solutions upon it. Also, TreeAge is an alternative tool which is very powerful content wise and has a high usability threshold, but also poor visual results.

#### 1.6 The advantage of individualized tools

Normally, the mathematics behind decision trees are quite simple (i.e. Excel) – even for quite complicated structures (except the Monte Carlo simulation) – which is why the design and visualization of the end product makes the solution special, because it can easily be presented to customers. An exception is Deminor where due to their small size everyone knows what calculations are behind the surface.

For tools to be used on an everyday basis in-house, it is paramount to have information as digestible as possible, since management traditionally have little time; what matters is short and precise information, with in- and output bundled on one page.

Any solution always takes into account the value of time and the cost one needs to invest in more complex cases, since this has a major influence on the calculation.

#### 1.7 Adapted model use in course of a procedure

Primarily, the models are used in advance of an arbitration process to evaluate risks and chances. But also, during an ongoing case, the systems might be used for a doublecheck. Also, the models can be fed with new important events during the arbitration that potentially influence the risk assessment.

#### 1.8 Collaboration of both parties

Collaboration of both parties with risk assessment tools in order to get better calculations for both sides and help finding amicable solutions is unpopular, probably because by the time this becomes relevant, the conflict already reached a too difficult level of mistrust.

#### 1.9 Risk analysis by the tribunal

The tribunal should use risk calculations or at least decision trees and in fact they indeed do. This is especially useful for explaining the arbitrators' thoughts and communicating the tribunal's current and preliminary position to the parties. There is no need to really use the specific tools, but applying only the methods behind is also sufficient.

However, for arbitrators, it can be quite dangerous to disclose one's own calculation and thoughts; it is easier to use the techniques internally and share the thoughts if the parties ask for settlement proposals.

#### 1.10 Late settlements despite existing tools

Having these tools existing, settlements nevertheless often happen quite late, even though the parties invested a lot of money beforehand. Too many cases settle too late.

Primarily, this is assumed to be a psychological effect, since there is always a large amount of uncertainty and one does not know which arguments create traction with the tribunal and which do not. Also, the hearing cannot be foreseen, as it is a surprise which factors will be the ones where the biggest dispute arises. Another reason might be that there is a large complexity of motives behind the cases, which mostly are not rational thoughts, but might be influenced by personal aversions. Also, on the one hand lawyers do not make the most money with settling cases early; but on the other hand, one could argue that an early settlement in the first case will make the customer come back for later cases.

#### 1.11 Display of percentage ranges in the results

Within the tools presented, there is no possibility to add probabilities to get a certain range as an output, that better describes the "fuzziness" of the result. For getting a better feeling of the range, only manually comparing different scenarios and testing the models yourself is the only option.

Analyzing many different possible outcomes soon leads to the Monte Carlo simulation, but with a normal decision tree, the result cannot show a bandwidth.

Also, even though a result showing a wider range might be more true than one number, when calculating with ranges the result does not really help since the range of each probability multiplies again and again and leads to an immense width at the end – which perhaps shows that the tools are of limited value anyways.

#### 1.12 Different calculation models

Generally, the problem of different calculation models predominantly arises in economic questions, but since the providers for risk assessment are asked for an independent opinion, the firm is required to figure out the right model. Since there might be huge differences when using different models, customers need to be provided with different scenarios. This also shows that there is a huge uncertainty within the calculations.

#### 1.13 *Noise reduction* for better calculations

When adding probabilities to the different branches of the decision tree, these probabilities significantly influence the whole result in the end. This is the most uncertain action during the calculation, so this process should be as clean as possible, meaning to reduce the noise in defining the particular percentage.

Primarily, team discussions are the most chosen way to figure out the probabilities less subjectively. Also, really diving into each case deeply and understanding the case in its details helps to add better numbers but is also very complicated and time consuming. The accuracy is also enhanced by the experience of good lawyers and their education to narrow the gap as much as possible. Documentation can help to reproduce older

thoughts when looking at the calculation again. This also helps colleagues to follow specific calculations.

#### 1.14 New approach and vision

Aggregating data on arbitral awards to predict decisions of certain arbitrators in a certain case, i.e. based on which arbitrator chose which calculation model or contract interpretation in former cases, could be a huge step forward in risk assessment. This is already happening. One should not be sure of the real use of AI in this regard since this is only about some limited questions where the impact of AI is limited.

American firms come into the market and use as much Big Data as possible to enhance the quality of risk analysis of cases. Taking into account lawyers, judges, districts, cases and even more information is supposed to be very powerful, but still far away and will need a lot of time, since access to all the data is very hard even though there are more and more shared decisions. *ArbiLex* is using Machine Learning to build models and find out percentages to use the results for arbitrator selection. *Arbitrator Intelligence* is another American company which does in fact look at each arbitrator and collects information that might have led to some decisions to build special profiles for each arbitrator. A different approach used by *GARR* (arbitrator research tool) is to ask arbitrators about their decisions and what made them decide in a certain way, using forms that need to be filled by the arbitrators personally.

Complete automation of arbitration is far away since software can only be as good as the data we feed it with and technology is always lacking intuition as a core element of human intelligence. There might be a chance to automate certain mass claims which often show a similar structure, but for complex claims this will take long time. On the other hand, AI is very complex and hardly tangible.

Also, AI can be fed with a huge amount of data, but over-mathematizing can lead to a false feeling of security, since lawyers might change their minds and the human factor must not be cut out.

Since again, all these platforms need huge amounts of data to learn, a big step might be new algorithms which need way less data to become sufficiently trained.

## 2. **Best Practices**

Technological risk analysis tools help overcome the inert human inability to intuitively assess the mathematically correct combination of different probabilities of future events. The tools itself are not very complex and can easily be adapted to individual cases. However, it is even more important to precisely evaluate the single points of risk and attach the correct percentages to the branches, especially using noise reduction techniques. As long as the added percentages are bad, technology also does not help.

Furthermore, future developments in analyzing arbitral awards might let arbitrators become predictable, which can be used to predict their future decisions, and influence the selection of arbitrators.



### 3. **Recommendations**

It is recommended for the parties resp. their counsel, and, where relevant, third party funders, to use some form of computer-based risk assessment in order to avoid misjudgment of combined risks based on human intuition. It remains however crucial (and no question of technology) to correctly identify the relevant risks in a given dispute and assign estimated probabilities to the different possible outcomes. Neither clients nor risk analyzers should be trapped by a wrong feeling of security, since there is a huge range of possible percentages that could be added to the decision trees.

**FINAL REPORT - ROUNDTABLE 6 OF THE PRACTICE GROUP OF  
TECHNOLOGY - E-FILING, DOCUMENT MANAGEMENT PLATFORMS,  
PROCEDURAL COMMUNICATION  
TOPIC: USE OF ELECTRONIC PLATFORMS**

1. **Status Quo**

1.1 Summary

In Continental Europe, many arbitration practitioners have gained experience with the benefits and challenges of using platforms such as the ICC Case Connect, the SCC Platform, and the VIAC Portal. The features and functions of these platforms include security, calendar functions, notifications, and chat.

Overall, users seem to be satisfied with such platforms in arbitration because they bring efficiency, security, and convenience to the arbitration process, especially in complex and large cases.

Platforms are used, *inter alia*, for the management of the procedural calendar and deadlines, communication between the parties, the secretariat, and the tribunal, as well as accessing case related documents on the platforms.

Regarding legal issues, in some instances concerns have been raised regarding the electronic format of awards and the compliance with the New York Convention, as well as the guarantees of a secured access to the platform and the preservation of case related documents.

1.2 Different perspectives

Both counsel and arbitrators generally praise the efforts of arbitral institutes to provide such document management platforms.

From a counsel's/party representative's perspective, document management platforms have been one of the major evolutions seen by dispute resolution lawyers, as they bring huge efficiency wins. Filing of written submissions in complex arbitrations was, is and will always be a burdensome process, but allowing the upload of documentation into a platform system has been a major step forward.

From an arbitrator perspective, the document management platforms stand out as a very efficient tool to communicate with the parties. They allow to keep track that everyone gets the same information, documents, requests, or decisions at the same time. The platforms providing an integrated calendar feature also allow to have all procedural deadlines in one place.

From the institutional perspective, representatives from institutions such as SCC and VIAC have explained that facilitating the filing and accessibility of case related documents and the communication between all participants in an arbitration, as well as guaranteeing the secured storage of case related documents were the driving factors behind launching such platforms. One of the main concerns for the institutes was to develop and provide a "user-friendly" platform, that everyone, even non-tech savvy persons could use.

Two questions were considered by the arbitration centres when launching their respective platforms: whether the use of such document management platforms should be imposed on the parties or not; and who should be supporting the costs of operating the platforms. SCC opted for a forced use of the platform for two main reasons. First, giving the option could lead the parties to argue about the use of the platform at very early stages in the proceedings. Second, for the SCC, such platform was seen as way to guarantee secured communications (e.g., reference to arbitrators having gmail e-mail addresses). The institutes integrated the costs of such platforms within the overall case management fee.

SCC launched its document management platform in 2019, and its *ad hoc* platform in 2020. VIAC launched its platform in 2021.

Both SCC's and VIAC's platforms have been built and specifically designed for the participants to an arbitration proceeding, and continuous feedback is essential for developing these platforms going forward.

## 2. **Different features and best practices**

Some of the specific features provided by the SCC and VIAC document management platforms include chat functions and folder customization. Key aspects of electronic platforms include the following considerations:

### 2.1 Accessibility and security

One main issue is the ability to guarantee that only persons working on the case should have access to the case file and the documents contained on the platform.

Both SCC and VIAC have put in place similar systems for accessing a case file: one e-mail address associated to a user, combined with a two-factor authentication process. All participants seemed to be satisfied with this solution security wise.

If additional persons want to have access to the case file on the platform, they need to request access from the secretariat, who might, if the tribunal is already constituted, also consult the chair of the tribunal before granting access to the case file.

### 2.2 Integrated calendar function

The integrated calendar function is offered by the SCC and VIAC platforms. Arbitrators find it useful as it guarantees that all procedural steps are registered in one place. Especially, any changes to the procedural calendar can easily be made in the calendar on the platforms and the changes will be shared with all parties simultaneously. Parties, arbitrators and the institution are "on the same page" regarding the procedural steps.

### 2.3 Notifications and document "version history"

All platforms provide an "automatic notification" feature: the option to active notifications regarding changes in the case file. For instance, a party can opt for notifications when the other party uploads a document, or when the tribunal uploads a decision, or any amendments to the procedural calendar. The options for customizing the notifications vary depending on the case management platform.

VIAC representative also highlighted a useful feature for the institution: the possibility to access the "version history" of a document, allowing the administrator of the case file to have an advanced view of the document history. This allows the institution to monitor who has added the document, when, and who has accessed it. The parties and the tribunal do not have access to the version history of documents.

#### 2.4 Folder structure: default and customizable

Both institutes have put in place a default folder structure for storing the case related documents. The SCC had a long test phase before deciding on a folder structure. From the arbitrator perspective, a similar structure for each case file saves time and makes it easy to locate documents. The institutes also allow for the option to customize the folder structure, at the parties' or the tribunal's request.

For platforms featuring an "award folder", it was argued that the common approach is that once the award has been uploaded on the platform, it is assumed that it has been circulated. However, this can be discussed and decided by the parties when setting their procedural rules, especially if the parties wish to receive awards in hard copies and are worried about compliance with the New York Convention.

#### 2.5 Communication options on the platform: chat or no chat?

From the arbitrator perspective, the "tribunal notices" feature/folder provided on the SCC platform facilitates the communication with the parties and reduces the number of e-mails exchanged as it allows the tribunal to inform the parties that a decision has been made, to communicate any changes to the procedural calendar or any other communication. On such "channel" the parties can respond but cannot start a conversation on their own initiative.

The SCC at first, offered a chat function enabling to communicate between same members of a team, and between the parties and the secretariat, and the secretariat and the tribunal. However, the SCC deactivated most of the chat functions as the secretariat was worried about documents or information being shared in a wrong chat. On the VIAC platform, parties can communicate with each other and with the tribunal *via* the platform.

#### 2.6 Storage of data

The place where data is stored is important for the institutes and parties involved. SCC and VIAC opted for Germany, with data back-up by storing the data in two different locations to prevent any risk of losing data in case of damage to the data storage centres.

#### 2.7 Deletion and preservation of documents

Regarding deletion of documents on the platform, although the parties might consider the process to be burdensome, it is important that only a few persons such as the case administrator has permission to delete documents.

Regarding preservation of documents, after the award is rendered, the SCC allows access for one year with the case file being "locked", meaning that no one can add or remove documents. In the secretariat's opinion this one-year period is needed to help

arbitrators, especially those working solo, to comply with their duty to preserve the case file (mandated by the rules).

VIAC on the other hand closes the case file about two months after the award is rendered. All participants in the case file receive an e-mail notification before closure.

### 3. Next steps and recommendations

In the last 15 years, counsel have started to increasingly use legal technological product, such as Exhibit Manager, to support in the drafting and production of submissions. 70 percent of the leading arbitration practices are now using Exhibit Manager,<sup>41</sup> which amongst other features, allows to manage case related documents, and link those documents to an electronic submission, a fully hyperlinked eBrief.

The question regarding the possibility to upload eBriefs on the different case management platforms came up many times. None of the arbitration institutes has so far been able to provide a clear answer on whether this is possible or not without breaking the hyperlinks.

German state courts nowadays allow for a fully electronic filing of a claim through the besonderes elektronisches Anwaltspostfach (beA); Lawyers are even obliged to use this electronic format and are not allowed to file claims in hardcopy. The DIS Rules (Article 4.2) still require submission of a hardcopy Request for Arbitration.

*Recommendation No. 1:* The ideal platform would allow all users of the platform to make use of a hyperlinked eBrief once it has been uploaded on that platform. Given that most leading arbitration practices are using Exhibit Manager and eBriefs, we recommend integrating Exhibit Manager within the DIS eFile platform.

*Recommendation No. 2:* Using platforms reduces the paper consumption and carbon footprint of arbitration, and thus contributes to the promotion of green arbitration. However, storing and processing data on cloud platforms can also consume a lot of energy and resources, and certain functions on platforms may not be very energy efficient. Energy efficiency should be considered when adding new components to the DIS eFile platform.

*Recommendation No. 3:* DIS should aim to offer a fully electronic filing system, to match at least what state courts are offering. One step to achieve this could be to integrate DIS into the beA system. Another way would be to allow for fully electronic filings via DIS efile and then print the Statement of Claim for hardcopy service to the respondent.

*Recommendation No. 4:* DIS could further promote the use of DIS efile by explicitly referring to it in the Rules, for example in Article 4. Another option would be to amend Article 27.4 DIS Rules and Annex 3 in a sense that the use of the DIS efile would have to be discussed during the CMC. Additionally, the DIS could encourage arbitrators to proactively encourage the use of DIS efile.

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<sup>41</sup> Figures from the Exhibit Manager website (last accessed 09.04.2024) : <https://www.exhibitmanager.com/>

*Recommendation No. 5:* DIS should continuously improve DIS efile, specifically as regards using the platform in the oral hearing. The ideal platform for the purposes of a hearing would make other electronic (or hardcopy) hearing bundles redundant and would at the same time be the go-to-platform for EPE operators presenting the file and relevant exhibits to the Tribunal and the parties. Another step would be reached if DIS were to integrate AI solutions into DIS efile, for example to structure, order and display exhibits in chronological or any other logical order, creation of timelines, etc. There are multiple vendors and developments already offering such solutions, and DIS would clearly be a first-mover because to the best of this practice group's knowledge, no arbitral institution offers such services so far.

**FINAL REPORT FOR ROUND TABLE 7 OF THE PRACTICE GROUP OF  
TECHNOLOGY  
TOPIC: FUTURE USES**

**1. Results**

The development of technology to be used in arbitration is far from accomplished. As some have put it, the technology currently in use is always the worst and least capable technology we will ever have in the future. With all reservations regarding the predictability of the future, the participants of Round Table 7 took a look into the crystal ball and discussed potential future developments of technology to be used in arbitration from the perspectives of arbitrators, users and experts.

**1.1 The future use of AI tools in arbitration**

AI supported tools will be used more frequently in arbitration in the future. These tools will evolve in order to further improve the effectiveness of arbitration. This might have consequences for all parties of an arbitration process and what changes need to be made.

**1.1.1 How can arbitration processes become more effective with the use of AI supported tools?**

Today, AI supported programs can already partially predict the legal outcome of some cases. By using tools like video conferences, electronic evidence, electronic submission and electronic case management systems, arbitration will most probably become simpler, faster and better. Even though the pandemic has already "kicked-off" the automation process years ago, the automation process is still not accessible for a broader audience. That could be changed if dispute resolution institutions, seen as service providers, invest in offering those tools to their respective participants.

- AI supported tools will be used in every stage of the arbitration process:
  - In the pre-arbitration phase, new software will be able to help simplify the collaboration of the parties by e.g. generating clear and compliant agreements or by allowing early case assessment and decision-tree analysis.
  - During the arbitration phase, the process can become more time efficient as programs based on AI can automatically appoint the arbitrators and the chairperson. In this phase, it is also conceivable to combine artificial and human intelligence by appointing AI as one arbitrator by itself; still, in practice nobody will do so as long as the other party appoints human intelligence.
  - Additionally, filing can be automated when contract lifecycle software is used.
  - In the last phase of decision-making and enforcing, the use of AI supported software will not make the process more efficient, but it can help making the process more transparent. A good

example for that is a scenario in which all arbitration institutions around the world share their data, and the data become some sort of library; AI than can help solving procedural problems.

#### 1.1.2 Consequences of the future use of AI supported tools

Although the use of these new tools can make arbitration much more efficient, possible consequences should be considered.

The right to be heard requires transparency towards the parties if the award itself was generated by AI. In contrast to that, it is controversial whether using new tools to get a first draft of the procedural history also needs to be disclosed to the parties.

Using the new software during the arbitration process also bears the risk of creating an uneven level-playing field between the parties. While bigger and established parties and/or counsel are the first ones who can afford to buy those software, smaller parties will not be able to do so. For them the only opportunity is to create new software.

Last but not least using tech tools will never fully replace the work from human intelligence. As AI supported tools can always be manipulated by using certain prompts in a certain way or by using dark patterns, which only can be recognized by humans, it is always necessary to review the results. By carefully looking into the outcome of the use of AI tools and by consulting an expert whether the tools were used in an ethical way, the risk of manipulation can be reduced. Nevertheless, the responsibility for an AI generated award should always be borne by the user of the software.

#### 1.1.3 What changes need to be adopted

While software can predict the legal outcome of a case, it also needs to offer an adequate legal reasoning which is understandable to the addressee. As the outcome is based on possibilities and statistics, the reasoning also refers to those statistics. For the addressee, a human being, this is not satisfactory. To predict the legal outcome and to offer an intelligible reasoning at the same time, predictive justice needs to be combined with Large Language Models (LLM) such as ChatGPT in the future.

Even though tech tools can already be used today and will be used even more in future, there is still a considerable part of the arbitration community fighting the use of those applications. In order to overcome these concerns, trust in this kind of software must be built, which can be supported by using security provisions in the service itself.

Lastly, people and their education need to adapt. In the future it will not be necessary for young lawyers to know how to draft arbitral awards from scratch (that can and will be done by AI) but it will be necessary for them to know how to use tech tools, to know their limitations, and how to use, adapt and oversee their output. By becoming more "technically" fluent, technical problems can be solved internally without the help of technical assistants.



## 1.2 Summary

There already are tools which can be integrated in all phases of arbitration processes to make them more time and cost efficient. Nonetheless, the consequences of the use, such as possible infringements of the right to be heard or the creation of an uneven level-playing field need to be avoided. Beyond that, people need to build trust and become more familiar with the new technologies.

## 2. **Best Practices**

N.a.

## 3. **Recommendations**

Parties need to build their trust in AI programs; that can be supported by integrating some security provisions. The skillset required for future arbitration practitioners (counsel and tribunal) will include more technical skills than today. Arbitral institutions should watch the developments closely and continue to develop their rules and procedures according to technological progress, and also inform their arbitrators and users of emerging technological opportunities on a regular basis.

**ROUND TABLE 8 OF THE PRACTICE GROUP TECHNOLOGY  
TOPIC: LARGE LANGUAGE MODELS IN ARBITRATION SPEAKERS**

**1. Results**

The eighth and final Roundtable of the DIS Practice Group Technology on 21 December 2023 discussed the potentials and risks of large language models ['LLMs'] in legal arbitration. The discussion hereby especially focused on the possibilities and various functionalities of AI innovations like LLMs as well as the legitimate concerns such as confidentiality and disclosure of data in arbitration and regulation of AI assistance in legal practice.

**1.1 AI Usage in Legal Practice**

Technological developments such as ChatGPT have certainly not gone unnoticed in legal practice. In fact, new developments are increasingly entering the market, offering technical support for protracted proceedings involving large numbers of documents to assist practitioners in the handling of documents with the help of AI.

Generally, AI *informed* decision-making – the gathering, collecting, and aggregating of information by AI based tools – must be differentiated from AI *rooted* decision-making by the arbitrators, thus, AI's function to act like a "co-pilot" that makes suggestions. However, despite some AI models already helping legal practitioners to sort and process substantial amounts of data in the form of AI-informed decisions, AI-rooted decision faces obstacles (see 1.3 below).

Nevertheless, AI informed decision-making, particularly in the form of LLMs, is becoming increasingly prevalent, sophisticated, and popular, even within law firms.

**1.1.1 Functionality of LLM providing platforms**

LLMs are AI models that have been trained on vast amounts of data, enabling them to understand and generate natural language and other types of content to perform a variety of tasks. Perhaps the most well-known example of a LLM is ChatGPT.

Another notorious example of such a new development are platforms such as *Harvey* that offer LLMs for law firms. *Harvey* is based on the ChatGPT programme, while adding an additional layer for legal practice. It is not only of interest to practising lawyers, but also for compliance and data protection personnel. As the present market leader, the wait list for *Harvey* currently counts around 19,000 companies. To gain an understanding of how such AI models operate, it may be helpful to take a closer look at the actual functions of an LLM platform such as *Harvey*.

Currently, *Harvey* offers various methods of technical support to its users, which are continuously updated. These functions include, for example, an 'open-ended' questionnaire for general questions; single or multi-document Q&A, where the user can ask the AI questions about the document; outlining and structuring presentations; a "redline" feature commonly used by M&A lawyers to analyse what changes have been and can be made in a document, and

what strategy may be behind the changes being made where; a translation and summary tool, whereas both functions can be executed simultaneously.

In addition, users can submit a wide range of materials to the platform and then consult the tool for an assessment of the strengths and weaknesses inherent in their case. Furthermore, the platform is capable of generating potential queries that an expert from the opposing side might raise. By leveraging the platform, users can quickly procure a variety of ideas, thereby expediting the process. However, it is crucial to bear in mind that these insights will necessitate additional evaluation eventually.

While some of these functions are already very accurate, others, such as the 'open-ended' questionnaire, require close and thorough review and verification by the user. To give more substance to the input on legal issues, it would be helpful for the platform to collaborate with official and reliable online legal research services (such as BeckOnline or Juris in Germany) at some point in the future.<sup>42</sup>

#### 1.1.2 Possibilities and Functions in Different Stages of Arbitration

The benefits and possibilities of AI use vary from the stage of the arbitration.

##### (a) Prior to the Hearing

The use of AI prior to an arbitration hearing offers significant benefits regarding the management of information. Arbitrators will benefit from the AI's ability to aggregate information and function as case chat bots, especially when dealing with thousands of diverse documents and evidence. AI tools can generate tree diagrams for specific documents containing a keyword or date, providing a more organised view of information. Furthermore, the AI can sort and compile documents related to a specific event, and identify contradictions in the submitted documents, thereby enhancing the efficiency and accuracy of the arbitration process.

##### (b) During the Hearing

During the hearing, arbitrators can benefit from swift document processing and fact checking, which is currently achieved via simple questionnaires and keyword searches of entire files. However, problems arise when entire documents or parts of them are not yet machine-readable, making the desired answer unattainable. It is expected that this issue could be addressed and potentially resolved within the next 5 to 10 years with the assistance of AI.

##### (c) Post Hearing

Post-hearing benefits include facilitating the documentation of the arbitrators' findings, aided by the use of language models, for example.

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<sup>42</sup> BeckOnline is currently testing an LLM based AI tool that has access to its entire database.

These models can prompt the drafting of facts and their summarisation, thereby saving a considerable amount of time and costs. One example might be that since the system already has all the relevant submissions from the parties, a lawyer, who agrees with a particular line of reasoning, may request the system to prompt a certain argument in accordance with their line of reasoning.

## 1.2 Potentials and Advantages

As repeatedly touched upon before, the use of AI in arbitral proceedings can be beneficial in several ways.

In the context of lawyer-client communication, AI can be instrumental in summarizing, translating, and explaining legal, often complex, matters to the client. Throughout all phases of an arbitration – prior, during, and afterwards – AI can efficiently expedite the different processes. Particularly in urgent matters such as maritime trade, a significant acceleration of procedures is a great advantage.

The use of AI may not only conserve cognitive effort but also significantly reduces costs. It might be possible that the tribunal fees associated with an AI arbitrator could be lower than those of a human arbitrator, or even minimal. This is a significant point as it could potentially broaden access to justice, even for the most minor cases that would otherwise not have been pursued through arbitration or court due to excessive costs.

AI models are also more capable of successfully exploiting all the information provided without omitting important content. Moreover, the omnipresent nature of AI, which allows flexible and unrestricted working – apart from occasional system shutdowns – is also a distinct advantage.

## 1.3 Limitations and Concerns

Despite AI-assisted practice's advantages and potential, it is not without its limitations and concerns.

The first of these constraints pertains to the legal framework within which AI operates. The lack of a comprehensive and robust legal structure to govern the use of AI in legal practice can pose significant challenges. Additionally, there is a dearth of sufficient data to effectively power an AI-driven arbitration 'co-pilot'. This scarcity of data can hinder the full realisation of the benefits that AI can bring to the arbitration process. Moreover, there is a palpable sense of mistrust among many legal practitioners towards AI models. The inherent nature of a lawyer is to be meticulous and thorough, a trait that is at odds with the 'black box' problem of AI. This term refers to the lack of transparency in how AI makes its decisions, which breeds uncertainty – a discomfiting prospect for most lawyers. This lack of trust is accompanied by concerns and risks regarding the presence and handling of potential hallucinations (see 1.3.1 below).

Secondly, the use of AI raises serious concerns about confidentiality and data disclosure. This issue is particularly pertinent in arbitration cases, where one of the primary advantages is the preservation of confidentiality in the proceedings and the

arbitral award. Hence, the potential threat to this confidentiality posed by AI is a significant concern (see 1.3.2 below).

### 1.3.1 Current Legislation, Trust Issues, and General Uncertainty

The limitations of AI's use are already evident in its absence from current legislation. Firstly, existing laws still anticipate human arbitrators, as can be inferred from the language used (he, she, etc.). There are no regulations for AI decision-making in either arbitral or domestic procedural codes as of yet. The New York Convention, the main instrument for international enforcement, was established in an era before computers even came into existence. Hence, at present, the only feasible method may be to rely on decision-making based on fairness and good conscience (*ex aequo et bono*). Still, arguments formulated with the help or based on AI could potentially result in an unenforceable award under the New York Convention, especially if parties have previously stated that they will not accept any legal decision involving AI.

Furthermore, there is the issue known as the 'Blackbox' problem, which refers to the opaque and often incomprehensible decision-making processes of AI systems, particularly those employing machine learning algorithms, potentially leading to decisions that are not easily understandable or predictable by human standards. This problem is further exacerbated by the current scarcity of accessible data related to legal matters. With a mere 1-2% of judgments in Germany being published, it becomes increasingly challenging to build a comprehensive and effective database that AI systems can draw upon to make well-informed decisions. For instance, an AI system, when consistently exposed to cases involving Turkish basketball teams that historically resulted in loss because Turkish basketball teams do not participate in those arbitrations, may perpetually base its decisions on these decisions, leading to a continual losing streak for all subsequent Turkish basketball teams even when they participated in the arbitration. Such a scenario illustrates how AI, when persistently making decisions based on a single fact due to consistent exposure to similar cases, can potentially lead to biased or skewed outcomes.

Following the 'black box' issue, there is also the risk of AI hallucinations. Hallucinations in AI occur when the system generates or interprets data that is not reflective of reality, often due to biases in the training data or limitations in its programming. This can also occur when there is a lack of adequate knowledge in correctly guiding the AI tool, recognizing the most opportune moments to utilise AI, or providing accurate prompts. A prime example of such a hallucination triggered by a lawyer is the recent *Mata v. Avianca, Inc.* case,<sup>43</sup> where a New York attorney used ChatGPT to defend his client and ended up citing and defending numerous fictitious and incorrect cases that ChatGPT created.<sup>44</sup> Consequently, AI hallucinations can lead to flawed legal advice, inaccurate case outcome predictions, or misinterpretations of laws or regulations. These inaccuracies can result in severe consequences, potentially

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<sup>43</sup> United States District Court, S.D. New York, '*Roberto Mata v. Avianca, Inc.*' (Opinion by Kevin Castel US District Judge) (22 June 2023) <https://casetext.com/case/mata-v-avianca-inc-2>.

<sup>44</sup> Cf. <https://www.nytimes.com/2023/05/27/nyregion/avianca-airline-lawsuit-chatgpt.html>.

causing miscarriages of justice, breaches of professional duty, and a loss of faith in legal professionals and the legal system overall.

### 1.3.2 Risks in AI Disclosure and Confidentiality in Legal Practice

The main concerns regarding the use of AI in arbitration centre on the ability of AI to maintain privacy and confidentiality, key elements and objectives in every arbitration process. This is coupled with the question of AI's potential to provide thorough legal responses or make future decisions, as its growth is largely dependent on the data it receives. The convergence of these confidentiality concerns and the limitations on AI's development due to a lack of data presents a significant dilemma that appears difficult to resolve.

Upon examining *Harvey's* LLM, it is apparent that while the platform may offer a comprehensive overview and references for the documents submitted by the user, as well as simple overviews of certain legal features or systems, it does not provide quotes or detailed information beyond the submitted documents. In order to enhance the platform and provide more robust support to legal practitioners utilizing it, there is a need for more data and information extracted from judgments, exemplified by the 'blackbox' problem, and further illustrated by the Turkish basketball team's case (see above). This lack of data creates a significant challenge for the development and effectiveness of *Harvey* as well as AI in the legal field generally.

Addressing the issue of confidentiality and the private submission of documents, there are numerous scenarios that raise concerns. For instance, situations where an arbitrator wishes to input confidential elements into the system, which they received from the parties without their consent, can pose a problem. Similarly, the fact that information entered into an open-source system like ChatGPT remains there indefinitely could essentially violate the national confidentiality obligations of lawyers.

However, the advancement of AI does not always have to come at the expense of compromising confidentiality. Alternative solutions could be found in the use of closed systems and additional secure servers, as opposed to open-source projects like ChatGPT, or through the use of pseudonymised versions (see in detail below). These approaches could potentially maintain the balance between the progression of AI and the preservation of confidentiality in legal matters.

### 1.3.3 Outlook and Remedies

While the realm of AI may still appear uncharted to many, substantial research has already uncovered a wealth of knowledge, shifting the question from what AI is capable of doing to what we want it to do. The real change is not so much in the technology itself but in the vast amount of available data, leading to what can be described as a data quake, which inevitably comes with limitations.

Mitigation strategies should involve applying the same safety standards as before, not higher ones, just because of the introduction of newer AI systems – achieving 100% prevention is an unrealistic goal.

Proposed solutions include the use of a data host, such as a neutral institution already involved in the process, which can conduct thorough checks. Data cleaning through comprehensive pseudonymisation can help mitigate the risk of future information derivation from previous cases. Data diffusion can also be a viable strategy; with a sufficient amount of cases, specific information gets lost, much like a wave dispersing in the ocean. Larger firms could consider implementing an internal GPT, fed with their own information and compliant with data regulations such as the GDPR.

Additionally, AI can be programmed to set limits on prompting, declining to disclose certain types of questions for confidentiality reasons. In practical terms, this could manifest as a ChatGPT text stating: "I will not respond to this type of question due to confidentiality considerations", or "I cannot disclose the source of this information".

AI could also initially only be used internally by the arbitral institutions. AI could for example assist the DIS Council in their decision making as this has to be swift and concise. This would eliminate confidentiality concerns.

Technology has become an integral part of the legal process and should be seen as a fourth party at the table. The parties' ability to engage with and utilise this technology may significantly impact their ability to successfully resolve disputes. Thus, it is crucial for the legal profession to acknowledge and adapt to the importance of technology in dispute resolution. However, there remains a significant number of lawyers and AI users who lack the necessary skills to effectively manage it, resulting in cases such as the one in New York. This lack of skill in handling AI tools highlights the need for improved education and training in this area.

This education is even more essential considering the current foreseeable solution for AI usage in arbitration. For the time being, it seems inevitable that a human being will need to perform a final check, ensuring that the final draft is the product of an arbitrator, not the chatbot, again reinforcing the importance of human oversight in the process.

Whether AI-based models will ever make it into national legislation is very unclear. In contrast, however, it could be of great advantage in international arbitration tribunals – due to the nature of arbitration, which is based on the consent and will of the parties. If the parties consciously decide to allow AI-supported technologies in their proceedings and agree to deal with confidential documents in this context, there should be no objection to this.

In summary, AI can make significant contributions to simplifying what are already overly complex legal processes and matters, essentially turning weeks of work into a matter of seconds. Although it harbours many risks, many of these can be combated with good solutions and addressed in the coming years. AI should therefore not be feared, but utilised as an opportunity and combined with restrictions that allow arbitrators to eventually trust it.

## 2. Best Practices

Regulations on AI applications and models are globally still rare in national and international legislation.

Pioneering in this field is the latest regulation from the European Union, namely the Artificial Intelligence Act ['AI Act']<sup>45</sup>, which passed on March 13, 2024.

The Silicon Valley Arbitration and Mediation Center published draft guidelines on the use of AI in Arbitration in August 2023.<sup>46</sup> As of now, these Guidelines have been only published for the purpose of receiving feedback and comments and do not represent a usable version yet.

## 3. Recommendations

Whether parties, arbitrators or arbitral institutions should consider the use of AI depends on the particular circumstances. However, the general approach should always be that any use of AI is diligent and transparent.

This is emphasised by the recent EU draft on AI, which classifies the use of AI in decision-making, but also in AI assisted case analysis, namely 'researching and interpreting facts', as the highest risk category (high risk).<sup>47</sup> To this end, Art. 29 of the EU draft stipulates obligations for users of such high-risk AI systems which include obligations to monitor the operation of the system, retain automatically generated logs, and compliance with respective data protection regulations such as Art. 35 of the [EU Regulation 2016/679](#) and Art. 27 of the [EU Directive 2016/680](#) where applicable.

### 3.1 Recommendations for Parties

Parties to an arbitration can confidently consider AI-rooted assistance as long as care is applied. Thus, the parties should conduct a thorough and careful review of the platform they intend to use in order to ensure that it not only complies with relevant data regulations, but also that the use of AI will not compromise their obligations of confidentiality.

If parties choose to incorporate AI as a tool for informative assistance or even to aid in decision-making, it is important that they are aware of AI's limitations and potential risks. This includes understanding issues such as the 'black box' problem, where AI's decision-making process is non-transparent, as well as hallucinations, where AI can generate new data or interpret data inaccurately and incorrectly.

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<sup>45</sup> European Union, 'Artificial Intelligence Act' (adopted 13 March 2024, estimated entry into force May 2024) <https://artificialintelligenceact.com/>.

<sup>46</sup> Silicon Valley Arbitration and Mediation Center, 'Guidelines on the Use of Artificial Intelligence in Arbitration' (Draft of 31 August 2023) <https://www.iareporter.com/wp-content/uploads/2023/08/SVAMC-AI-Guidelines.pdf>.

<sup>47</sup> [Art. 6\(2\)](#) in conjunction with [Annex III nr. 8](#) of the EU AI Act.



In case, the parties desire a swift resolution of their disputes they may consider AI based decision making despite the existing shortcomings of AI.

### 3.2 Recommendations for Arbitrators

Arbitrators could make moderate use of AI but should avoid AI decision-making. Thus, arbitrators may use AI for organising and structuring data via timelines, summaries and translations. In any case, AI use should be considerate and restrained, with due regard to the anchoring effect when AI assists in the decision making.

### 3.3 Recommendations for Arbitral Institutions

Arbitral institutions should survey the market and stay updated with forthcoming advancements and developments in technology. It could also be beneficial for institutions to contemplate the development of an internal AI tool specifically designed for case analysis and prediction based on institutional awards.

Additionally, arbitral institutions might want to consider the possibility of offering AI decision-making. This could be a substantial step that requires careful consideration, for while AI decision-making could potentially increase efficiency and reduce costs, it is crucial to ensure fairness, transparency, and that the rights of all parties involved are maintained.