

Enhancing Information Security Management in Online Arbitration and Mediation

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Enhancing Information Security Management in Online Arbitration and Mediation

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Abstract

Digital transformation has permeated into the field of Alternative Dispute Resolution (ADR) leading to the widespread adoption of online arbitration and mediation. These processes have improved access to justice in the digital world by providing users with expeditious and cost effective dispute resolution services when compared to traditional ADR. However, online arbitration and mediation is associated with information security concerns. The systems supporting online arbitration and mediation may be subject to cyberattacks which threaten data security and privacy. This paper critically discusses the need to enhance information security management in online arbitration and mediation. It argues that enhancing information security management is vital for the effectiveness of online arbitration and mediation. The paper explores some of the information security concerns in online arbitration and mediation and their impacts on the viability of these processes. It further offers ideas towards enhancing information security management in online arbitration and mediation towards ensuring access to justice.

1.0 Introduction

Arbitration and mediation are key Alternative Dispute Resolution (ADR) processes¹. ADR is an umbrella term that covers a set of techniques that are applied to manage disputes without resort to adversarial litigation². These processes include negotiation, mediation, arbitration, conciliation, adjudication, expert determination, early neutral evaluation, and Traditional Dispute Resolution Mechanisms (TDRMs) among others³.

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¹ Muigua. K., 'Alternative Dispute Resolution and Access to Justice in Kenya.' Glenwood Publishers Limited, 2015

² Ibid

³ Ibid

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ADR techniques have been upheld at a global level under the *Charter of the United Nations*⁴ which urges parties to a dispute to first seek a solution by *negotiation, enquiry, mediation, conciliation, arbitration*, judicial settlement, resort to regional agencies or arrangements, or other *peaceful means* of their own choice (Emphasis added)⁵. At a national level, the *Constitution of Kenya*⁶ recognizes ADR mechanisms. It mandates courts and tribunals to promote ADR mechanisms including reconciliation, mediation, arbitration and TDRMs⁷. ADR techniques are viewed as ideal in fostering access to justice due to their key attributes which include privacy, confidentiality, flexibility, informality, efficiency, party autonomy and the ability to foster expeditious and cost effective management of disputes⁸.

Arbitration and mediation have for many years been conducted through physical meetings involving the arbitral and mediation tribunals, parties, parties' representatives and witnesses⁹. However, the growth of technology and digital transformation has changed the landscape of dispute resolution¹⁰. Technology has permeated into the field of ADR with practices such as online mediation, online arbitration, smart contracts and block chain arbitration being widely embraced¹¹. It has been noted that online arbitration

⁴ United Nations, Charter of the United Nations, 24 October 1945, 1 UNTS XVI

⁵ Ibid, article 33 (1)

⁶ Constitution of Kenya., 2010., Government Printer, Nairobi

⁷ Ibid, article 159 (2) (c)

⁸ Muigua. K & Kariuki. F., 'ADR, Access to Justice and Development in Kenya.' Available at <http://kmco.co.ke/wp-content/uploads/2018/08/ADR-access-to-justiceanddevelopmentinKenyaSTRATHMORE-CONFERENCE-PRESENTATION.pdf> (Accessed on 05/06/2024)

⁹ Muigua. K., 'Virtual Arbitration Amidst Covid19 : Efficacy and Checklist for Best Practices' Available at <https://kmco.co.ke/wp-content/uploads/2020/05/Virtual-Arbitration-Proceedings-Amidst-COVID-19-Efficacy-and-Checklist-for-Best-Practices69523-Revised.pdf> (Accessed on 05/06/2024)

¹⁰ Eidemuller. H., & Wagner. G., 'Digital Dispute Resolution.' Available at <https://blogs.law.ox.ac.uk/business-law-blog/blog/2021/09/digital-dispute-resolution> (Accessed on 05/06/2024)

¹¹ Yeoh. D., 'Is Online Dispute Resolution the future of Alternative Dispute Resolution.' Available at <https://arbitrationblog.kluwerarbitration.com/2018/03/29/online-dispute-resolution-future-alternativedispute-resolution/> (Accessed on 05/06/2024)

and mediation have been improved access to justice in the digital world¹². These techniques provide users with expeditious and cost effective dispute resolution services when compared to traditional ADR¹³.

However, online arbitration and mediation raises several concerns key among them being information security challenges¹⁴. The systems supporting online arbitration and mediation may be subject to cyberattacks threatening data security and privacy.¹⁵ As a result, it is vital to provide secure digital environments where the exchange of communications, storage of evidence and files, and virtual hearings can be conducted remotely and securely in order to enhance the viability of online arbitration and mediation¹⁶.

This paper critically discusses the need to enhance information security management in online arbitration and mediation. It argues that enhancing information security management is vital for the effectiveness of online arbitration and mediation. The paper explores some of the information security concerns in online arbitration and mediation and their impacts on the viability of these processes. It further offers ideas towards enhancing information security management in online arbitration and mediation towards ensuring access to justice.

¹² Abedi. F., Zeleznikow. J., & Brien. C., 'Developing Regulatory Standards for the Concept of Security in Online Dispute Resolution Systems' Available at https://www.researchgate.net/publication/334056927_Developing_regulatory_standards_for_the_concept_of_security_in_online_dispute_resolution_systems (Accessed on 05/06/2024)

¹³ Ibid

¹⁴ Muigua. K., 'Navigating the Digital Dispute Resolution Landscape: Challenges and Opportunities' Available at <https://kmco.co.ke/wp-content/uploads/2023/08/Navigating-the-Digital-Dispute-Resolution-Landscape-Challenges-and-Opportunities-.pdf> (Accessed on 05/06/2024)

¹⁵ Ibid

¹⁶ Gonzales. W., & Masumy. N., 'Online Dispute Resolution Platforms: Cybersecurity Champions in the COVID-19 Era? Time for Arbitral Institutions to Embrace ODRs' Available at <https://arbitrationblog.kluwerarbitration.com/2020/09/25/online-dispute-resolution-platforms-cybersecurity-champions-in-the-covid-19-era-time-for-arbitral-institutions-to-embrace-odrs/> (Accessed on 05/06/2024)

2.0 Information Security Concerns in Online Arbitration and Mediation

It has been noted that data and information powers much of the world economy¹⁷. Consequently, cyberattacks targeting personal and organizational information have become more common, damaging, and costly¹⁸. Information security relates to the protection of personal or an organization's important information including digital files and data, paper document, physical media, even human speech - against unauthorized access, disclosure, use or alteration¹⁹. Information security entails a set of policies, procedures and principles for safeguarding digital data and other kinds of information from unwarranted access²⁰.

It has been observed that organizations usually apply information security measures to guard digital information as part of an overall cybersecurity program²¹. The idea of cyber security involves the activity or process, ability or capability, or state whereby information and communications systems and the information contained therein are protected from and/or defended against damage, unauthorized use or modification, or exploitation²². Cybersecurity is the art of protecting networks, devices, and data from unauthorized access or criminal use and the practice of ensuring confidentiality, integrity, and availability of information²³. Cybersecurity comprises of any technology,

¹⁷ IBM., 'What is Information Security?' Available at <https://www.ibm.com/topics/information-security> (Accessed on 06/06/2024)

¹⁸ Ibid

¹⁹ Ibid

²⁰ Yasar. K., 'Information Security (infosec)' Available at <https://www.techtarget.com/searchsecurity/definition/information-security-infosec> (Accessed on 06/06/2024)

²¹ Ibid

²² Bay. M., 'What is Cybersecurity? In Search of an Encompassing Definition for the Post-Snowden Era' Available at https://www.researchgate.net/profile/MortenBay/publication/308609163_WHAT_IS_CYBERSECURITY_In_search_of_an_encompassing_definition_f_or_the_post-Snowden_era/links/57e8575608ae9e5e4558c7d9/WHAT-IS-CYBERSECURITY-In-search-of-an-encompassing-definition-for-the-post-Snowden-era.pdf (Accessed on 06/06/2024)

²³ Cyber Security and Infrastructure Security Agency., 'What is Cybersecurity?' Available at <https://www.cisa.gov/news-events/news/what-cybersecurity> (Accessed on 06/06/2024)

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measure or practice for preventing cyberattacks or mitigating their impact²⁴. It aims to protect individuals' and organizations' systems, applications, computing devices, sensitive data and financial assets against computer viruses, sophisticated and costly ransomware attacks, among other cyberattacks²⁵.

Cybersecurity is therefore a form of information security²⁶. It has been noted that information security is an umbrella term that includes all data, and not just data stored within the cyberspace²⁷. The concept of information security extends its protective umbrella not only cover digitally-stored data, but also other forms of data, such as paper-based information²⁸. Information security is premised on several principles including *confidentiality* which ensures that parties cannot access data they are not authorized to access²⁹; *integrity* which ensures that all information contained within an organization's database is complete and accurate, and has not been tampered with³⁰; and *availability* which ensures that users can access the information they are authorized to access, when they need it(Emphasis added)³¹.

Enhancing information security management is vital in online arbitration and mediation. It has been noted that the greater utilization of these online platforms and digitization has coincided with the growing frequency and sophistication of cyber-attacks³². Cyber security breaches are now an everyday reality, permeating all aspects of business and

²⁴ IBM., 'What is Cybersecurity?' Available at <https://www.ibm.com/topics/cybersecurity> (Accessed on 06/06/2024)

²⁵ Ibid

²⁶ Galarita. B., & Swanston. B., 'Information Security vs Cybersecurity: What's The Difference?' Available at <https://www.forbes.com/advisor/education/it-and-tech/information-security-vs-cybersecurity/> (Accessed on 06/06/2024)

²⁷ Ibid

²⁸ Ibid

²⁹ IBM., 'What is Information Security?' Op Cit

³⁰ Ibid

³¹ Ibid

³² Gonzales. W., & Masumy. N., 'Online Dispute Resolution Platforms: Cybersecurity Champions in the COVID-19 Era? Time for Arbitral Institutions to Embrace ODRs' Op Cit

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private life, including the world of online arbitration and mediation³³. Some of the disputes submitted to international arbitration and international mediation generally require evidence of facts which are not in the public domain and which may have the potential to influence politics and financial markets therefore being a target for cyberattacks³⁴. Further, it has been noted that the size and scope of proceedings in international arbitration and mediation may require a large number of professionals, including in-house lawyers, counsels, arbitrators and mediators and others to travel and work remotely in locations which may not have adequate security protocols therefore being exposed to cyberattacks³⁵.

Enhancing information security management creates trust in the technology used for online arbitration and mediation³⁶. These processes often utilize technologies such as email communication and videoconferencing to facilitate exchange of information between parties, parties' representatives, arbitral and mediation tribunals, and witnesses³⁷. These technologies may be subject to cyberattacks³⁸. In such cases, unauthorized persons may access the systems supporting online arbitration and mediation and engage in unwarranted practices including stealing of information, deleting information or sending unwanted information to the detriment of some parties³⁹. Therefore, in online arbitration and mediation, the privacy and security of the user is susceptible to being compromised since technology can be hacked or exploited to steal

³³ Corporate Disputes., 'Cyber Security Concerns in International Arbitration' Available at <https://www.corporatedisputemagazine.com/cyber-security-concerns-in-international-arbitration> (Accessed on 06/06/2024)

³⁴ Ibid

³⁵ Ibid

³⁶ Abedi. F., Zeleznikow. J., & Brien. C., 'Developing Regulatory Standards for the Concept of Security in Online Dispute Resolution Systems' Op Cit

³⁷ Ibid

³⁸ Muigua. K., 'Legal Practice and New Frontiers: Embracing Technology for Enhanced Efficiency and Access to Justice' available at <http://kmco.co.ke/wp-content/uploads/2020/06/Legal-Practice-and-New-Frontiers-Embracing-Technology-for-Enhanced-Efficiency-and-Access-to-Justice-Kariuki-MuiguaPh.D-June-2020.pdf> (Accessed on 06/06/2024)

³⁹ Ibid

information and spy on people among other malpractices⁴⁰. Enhancing information security management is therefore key for the success of online arbitration and mediation.

3.0 Enhancing Information Security Management in Online Arbitration and Mediation

One of the key measures towards enhancing the success of online arbitration and mediation is ensuring that information is kept secure and confidential⁴¹. There is threat of unauthorized access to information or interception of data during transmission in online arbitration and mediation⁴². This can result in disclosure of information and loss of confidentiality⁴³. It is therefore imperative to enhance information security management for the devices and systems supporting online arbitration and mediation including computers and web-servers⁴⁴. Information security management is essential in online arbitration and mediation in order to prevent unauthorized people from accessing the technologies and systems supporting these processes and obtaining information especially where such information relates to the dispute at hand⁴⁵.

Enhancing information security management in online arbitration and mediation aims to prevent third parties from hacking the systems and technologies supporting these processes and obtaining non-public information, whether such information directly relates to a dispute (such as pictures uploaded as evidence in an online arbitration or mediation case) or whether it relates to personal information (such as addresses and phone numbers)⁴⁶. It also entails setting in place internal limitations to ensure that parties to a dispute or their neutrals cannot access areas or information they are not allowed to

⁴⁰ Ibid

⁴¹ Abedi. F., Zeleznikow. J., & Brien. C., 'Developing Regulatory Standards for the Concept of Security in Online Dispute Resolution Systems' Op Cit

⁴² Ibid

⁴³ Ibid

⁴⁴ Ibid

⁴⁵ Ebner. N., & Zeleznikow. J., 'Fairness, Trust and Security in Online Dispute Resolution.' Journal of Public Law and Policy, Volume 36, Issue 2 (2015)

⁴⁶ Ibid

view (such as protecting a conversation held in a private caucus chat room between one party and a mediator from being viewable by the other party)⁴⁷.

The *Protocol on Cybersecurity in International Arbitration*⁴⁸ provides a framework to determine reasonable information security measures for individual arbitration matters⁴⁹. It includes procedural and practical guidance to assess security risks and identify available measures that may be implemented towards enhancing information security management in online arbitration⁵⁰. According to the Protocol, effective information security management in a particular arbitration requires all custodians of arbitration-related information including tribunals, parties, and administering institutions to adopt reasonable information security practices⁵¹. The Protocol requires parties, arbitrators, and administering institutions to ensure that all persons directly or indirectly involved in an arbitration on their behalf are aware of, and follow, any information security measures adopted in a proceeding, as well as the potential impact of any security incident⁵².

The Protocol sets out the criteria for determining the specific information security measures for a particular arbitration. This criteria includes: the risk profile of the arbitration; the existing information security practices, infrastructure, and capabilities of the parties, arbitrators, and any administering institution; the burden, costs, and the relative resources of the parties, arbitrators, and any administering institution; proportionality relative to the size, value, and risk profile of the dispute; and the efficiency of the arbitral process⁵³. Further, the Protocol provides that in considering the

⁴⁷ Ibid

⁴⁸ ICCA-NYC Bar-CPR Protocol on Cybersecurity in International Arbitration, 2020 Edition., Available at <https://documents.nycbar.org/files/ICCA-NYC-Bar-CPR-Cybersecurity-Protocol-for-International-Arbitration-Electronic-Version.pdf> (Accessed on 07/06/2024)

⁴⁹ Ibid

⁵⁰ Ibid

⁵¹ Ibid

⁵² Ibid

⁵³ Ibid

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specific information security measures to be applied in an arbitration, consideration should be given to: asset management, access controls, encryption, communications security, physical and environmental security, operations security, and information security incident management⁵⁴.

In order to enhance information security management in online arbitration, the Protocol requires information security issues to be raised as early as practicable in the arbitration, which ideally should not be later than the first case management conference⁵⁵. Further, in the event of a breach of the information security measures adopted for an arbitration proceeding or the occurrence of an information security incident, the Protocol gives power to an arbitral tribunal may, in its discretion: to allocate related costs among the parties; and/or impose sanctions on the parties⁵⁶. Implementing this Protocol can enhance information security management in both online arbitration and mediation.

One of the key measures that can be embraced towards enhancing information security management in online arbitration and mediation is enhancing multi-factor authentication⁵⁷. It has been noted that two-step verification is a salient feature of cybersecurity that limits the potential for data exposure⁵⁸. This feature provides an additional layer of security that ensures that only authorized individuals are accessing sensitive information⁵⁹. It allows participants in online arbitration and mediation to obtain a unique identification that can be utilized to access proceedings or information which has to be validated by a second factor or device upon login on a phone or via e-

⁵⁴ Ibid

⁵⁵ Ibid

⁵⁶ Ibid

⁵⁷ Gonzales. W., & Masumy. N., 'Online Dispute Resolution Platforms: Cybersecurity Champions in the COVID-19 Era? Time for Arbitral Institutions to Embrace ODRs' Op Cit

⁵⁸ Ibid

⁵⁹ Ibid

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mail⁶⁰. Multi-factor authentication is therefore a key feature in enhancing information security management in online arbitration and mediation⁶¹.

Encryption of data is also vital in enhancing information security management in online arbitration and mediation⁶². This is a cybersecurity feature that protects information by using extremely complex and unique codes that mix up data and prevents unauthorized users from deciphering sensitive information⁶³. Encryption plays an important part in ensuring confidentiality and data security⁶⁴. Encryption makes it possible for the arbitral and mediation tribunal and the parties to communicate without the risk of unauthorized third parties having access to their communication, thus creating secure data communication⁶⁵.

It is also necessary to embrace good practices in collecting and storing information through identifying, classifying, and controlling of information during online arbitration and mediation⁶⁶. Under this feature, information generated or utilized during online arbitration or mediation proceedings is initially stored securely and then later destroyed at the conclusion of the proceedings⁶⁷. Managing data breaches is also vital in enhancing information security management in online arbitration and mediation⁶⁸. In cases of data breaches, it is imperative to act promptly to mitigate a data breach and recover lost or

⁶⁰ Ibid

⁶¹ American Arbitration Association., 'Multi Factor Authentication' Available at https://www.adr.org/sites/default/files/document_repository/Multi-Factor_Authentication_FAQ_0.pdf (Accessed on 07/06/2024)

⁶² Gonzales. W., & Masumy. N., 'Online Dispute Resolution Platforms: Cybersecurity Champions in the COVID-19 Era? Time for Arbitral Institutions to Embrace ODRs' Op Cit

⁶³ Ibid

⁶⁴ Organisation for Economic Co-operation and Development., 'Online Dispute Resolution as a Solution to Cross-Border E-Disputes' Available at <https://web-archiv.eocd.org/2012-06-15/168889-1878940.pdf> (Accessed on 07/06/2024)

⁶⁵ Ibid

⁶⁶ Gonzales. W., & Masumy. N., 'Online Dispute Resolution Platforms: Cybersecurity Champions in the COVID-19 Era? Time for Arbitral Institutions to Embrace ODRs' Op Cit

⁶⁷ Ibid

⁶⁸ Ibid

stolen information⁶⁹. Arbitral and mediation centres also have a key role to play in enhancing information security management in online arbitration and mediation by offering guidance on cybersecurity and investing in secure devices, technologies, and systems that can enhance the viability of online arbitration and mediation.

Finally, it is important for arbitral and mediation tribunals to ensure that all communication to the parties especially notification of the arbitral award by the arbitral tribunal is carried out by a secure email that is automatically timed and dated and is accompanied by secured electronic signatures of the arbitrator(s)⁷⁰.

4.0 Conclusion

Enhancing information security management is vital in online arbitration and mediation. The technologies and systems supporting online arbitration and mediation may be subject to cyberattacks where unauthorized persons may access them and engage in unwarranted practices including stealing of information, deleting information or sending unwanted information to the detriment of some parties⁷¹. Enhancing information security management creates trust in the technology used for online arbitration and mediation and ensures the effectiveness of the proceedings and outcomes in online arbitration and mediation⁷². Information security management in online arbitration and mediation can be enhanced through embracing multi-factor authentication⁷³; encryption of data⁷⁴;

⁶⁹ Ibid

⁷⁰ Wolff. R., 'E-Arbitration Agreements and E-Awards - Arbitration Agreements Concluded in an Electronic Environment and Digital Arbitral Awards' Available at <https://www.cambridge.org/core/books/abs/arbitration-in-the-digital-age/earbitration-agreements-and-eawards-arbitration-agreements-concluded-in-an-electronic-environment-and-digital-arbitral-awards/4B7766BE1DD4D34ED44F1D9821028BF2> (Accessed on 07/06/2024)

⁷¹ ⁷¹ Muigua. K., 'Legal Practice and New Frontiers: Embracing Technology for Enhanced Efficiency and Access to Justice' Op Cit

⁷² Abedi. F., Zeleznikow. J., & Brien. C., 'Developing Regulatory Standards for the Concept of Security in Online Dispute Resolution Systems' Op Cit

⁷³ Gonzales. W., & Masumy. N., 'Online Dispute Resolution Platforms: Cybersecurity Champions in the COVID-19 Era? Time for Arbitral Institutions to Embrace ODRs' Op Cit

⁷⁴ Organisation for Economic Co-operation and Development., 'Online Dispute Resolution as a Solution to Cross-Border E-Disputes' Op Cit

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enhancing the collection and storage of information⁷⁵; managing data breaches⁷⁶; investing in information security management by arbitral and mediation centres⁷⁷; and ensuring secure communication from arbitral and mediation tribunals⁷⁸. It is imperative to enhance Information Security Management in order to ensure the success of online arbitration and mediation.

⁷⁵ Gonzales. W., & Masumy. N., 'Online Dispute Resolution Platforms: Cybersecurity Champions in the COVID-19 Era? Time for Arbitral Institutions to Embrace ODRs' Op Cit

⁷⁶ Ibid

⁷⁷ Ibid

⁷⁸ Wolff. R., 'E-Arbitration Agreements and E-Awards - Arbitration Agreements Concluded in an Electronic Environment and Digital Arbitral Awards' Op Cit

References

Abedi. F., Zeleznikow. J., & Brien. C., 'Developing Regulatory Standards for the Concept of Security in Online Dispute Resolution Systems' Available at https://www.researchgate.net/publication/334056927_Developing_regulatory_standards_for_the_concept_of_security_in_online_dispute_resolution_systems

American Arbitration Association., 'Multi Factor Authentication' Available at https://www.adr.org/sites/default/files/document_repository/Multi-Factor_Authentication_FAQ_0.pdf

Bay. M., 'What is Cybersecurity? In Search of an Encompassing Definition for the Post-Snowden Era' Available at https://www.researchgate.net/profile/MortenBay/publication/308609163_WHAT_IS_CYBERSECURITY_In_search_of_an_encompassing_definition_for_the_post-Snowden_era/links/57e8575608ae9e5e4558c7d9/WHAT-IS-CYBERSECURITY-In-search-ofan-encompassing-definition-for-the-post-Snowden-era.pdf

Constitution of Kenya., 2010., Government Printer, Nairobi

Corporate Disputes., 'Cyber Security Concerns in International Arbitration' Available at <https://www.corporatedisputesmagazine.com/cyber-security-concerns-in-international-arbitration>

Cyber Security and Infrastructure Security Agency., 'What is Cybersecurity?' Available at <https://www.cisa.gov/news-events/news/what-cybersecurity>

Ebner. N., & Zeleznikow. J., 'Fairness, Trust and Security in Online Dispute Resolution.' Journal of Public Law and Policy, Volume 36, Issue 2 (2015)

Eidemuller. H., & Wagner. G., 'Digital Dispute Resolution.' Available at <https://blogs.law.ox.ac.uk/business-law-blog/blog/2021/09/digital-dispute-resolution>

Galarita. B., & Swanston. B., 'Information Security vs Cybersecurity: What's The Difference?' Available at <https://www.forbes.com/advisor/education/it-and-tech/information-security-vs-cybersecurity/>

Gonzales. W., & Masumy. N., 'Online Dispute Resolution Platforms: Cybersecurity Champions in the COVID-19 Era? Time for Arbitral Institutions to Embrace ODRs' Available at <https://arbitrationblog.kluwerarbitration.com/2020/09/25/online-dispute-resolution-platforms-cybersecurity-champions-in-the-covid-19-era-time-for-arbitral-institutions-to-embrace-odrs/>

Enhancing Information Security Management in Online Arbitration and Mediation

IBM., 'What is Cybersecurity?' Available at <https://www.ibm.com/topics/cybersecurity>

IBM., 'What is Information Security?' Available at <https://www.ibm.com/topics/information-security>

ICCA-NYC Bar-CPR Protocol on Cybersecurity in International Arbitration, 2020 Edition., Available at <https://documents.nycbar.org/files/ICCA-NYC-Bar-CPR-Cybersecurity-Protocol-for-International-Arbitration-Electronic-Version.pdf>

Muigua. K & Kariuki. F., 'ADR, Access to Justice and Development in Kenya.' Available at <http://kmco.co.ke/wp-content/uploads/2018/08/ADR-access-to-justiceanddevelopmentinKenyaSTRATHMORE-CONFERENCE-PRESENTATION.pdf>

Muigua. K., 'Alternative Dispute Resolution and Access to Justice in Kenya.' Glenwood Publishers Limited, 2015

Muigua. K., 'Legal Practice and New Frontiers: Embracing Technology for Enhanced Efficiency and Access to Justice' available at <http://kmco.co.ke/wp-content/uploads/2020/06/Legal-Practice-andNew-Frontiers-EmbracingTechnology-for-Enhanced-Efficiency-and-Access-to-Justice-Kariuki-MuiguaPh.D-June-2020.pdf>

Muigua. K., 'Navigating the Digital Dispute Resolution Landscape: Challenges and Opportunities' Available at <https://kmco.co.ke/wp-content/uploads/2023/08/Navigating-the-Digital-Dispute-Resolution-Landscape-Challenges-and-Opportunities-.pdf>

Muigua. K., 'Virtual Arbitration Amidst Covid19 : Efficacy and Checklist for Best Practices' Available at <https://kmco.co.ke/wp-content/uploads/2020/05/Virtual-Arbitration-Proceedings-Amidst-COVID-19-Efficacy-and-Checklist-for-Best-Practices69523-Revised.pdf>

Organisation for Economic Co-operation and Development., 'Online Dispute Resolution as a Solution to Cross-Border E-Disputes' Available at <https://web.archive.org/2012-06-15/168889-1878940.pdf>

United Nations, Charter of the United Nations, 24 October 1945, 1 UNTS XVI

Wolff. R., 'E-Arbitration Agreements and E-Awards - Arbitration Agreements Concluded in an Electronic Environment and Digital Arbitral Awards' Available at <https://www.cambridge.org/core/books/abs/arbitration-in-the-digital-age/earbitration-agreements-and-eawards-arbitration-agreements-concluded-in-an-electronic-environment-and-digital-arbitral-awards/4B7766BE1DD4D34ED44F1D9821028BF2>

Enhancing Information Security Management in Online Arbitration and Mediation

Yasar. K., 'Information Security (infosec)' Available at <https://www.techtarget.com/searchsecurity/definition/information-security-infosec>

Yeoh. D., 'Is Online Dispute Resolution the future of Alternative Dispute Resolution.' Available at <https://arbitrationblog.kluwerarbitration.com/2018/03/29/online-dispute-resolution-future-alternativedispute-resolution/>