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**THE ROLE OF TECHNOLOGY IN ENHANCING ALTERNATE
DISPUTE RESOLUTION PROCESS**- Chahat Aggarwal¹**Abstract**

This paper specifically examines a way through which the adoption of technology has improved the ADR process especially in issues of efficiency, accessibility, and cost reduction. Thus, such tools as ODR platforms, artificial intelligence, and digital case management systems are depicted in the study to show how technology makes the process of dispute resolution less time-consuming and easier. It also looks into issues like, privacy and inability, making a point that the application of ADR should be balanced so that everyone has equal access to such services in today's computerized world.

Keywords: - Arbitration, AI technology, Privacy, Virtual Tools

Introduction

In general terms, ADR means a number of processes other than the courtroom solution of a dispute. ADR can be defined as procedures that are used in solving disputes without going to the court for civil trial. They are more flexible, cheaper and protracted as compared to the traditional methods of solving conflicts. ADR normally includes mediation, arbitration, conciliation, and negotiation. Mediation focuses on the facilitation of an open discussion between two disputing parties which are mediated by a third party. While mediation is a process in which the disputing parties are assisted by a neutral person who helps them to come to an agreement. Negotiation on the other hand involves a third person who listens to arguments from both or either party and makes a decision.

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Conciliation is much like mediation with one major difference: eschewing neutrality, the selected conciliator is permitted to put forward possible resolutions to the conflict. Last of them is negotiation which means direct communication of the parties involved without outside interference.

Technology has also influenced the ADR in a way that has brought out efficiency of the process, availability of the process and the reduction in the cost of the process. This paper will look at how ODR, AI, and digital case management systems have transformed ADR to becoming more efficient in the ever-increasing digital world.

Background

Evolution of ADR

ADR has for a long time been appreciated as a good substitute to the conventional projection of the time-consuming and expensive litigation type. In the past, ADR was considered to be an outside judicial system method of a specific taking of disagreements by individuals or companies. It has in the course of time transformed and is now recognized as standard conduct in domestic and international relations and law. The conventional ADR practices such as mediation and arbitration provided such advantages as flexibility, confidentiality and relatively shorter time for completion as compared to the court trial. Such methods were widely used in practice in matters sub areas like commercial law, family related issues and international trade as these approaches gave more control to the parties involved in the acrimonious dispute.

In this research, traditional ways of managing conflict are also referred to as traditional practices of conflict management or traditional systems of conflict solving or traditional methods of resolving disputes.

Traditionally, the process of resolving conflicts was mainly affiliated with the judicial method, which in most of the cases incorporated compulsory legal actions, increased legal expenses and long periods of time. ADR developed as a reaction to the inefficiency of the litigation process as well as providing the parties involved with an opportunity to engage in quicker, private, and less polarized processes. ADR has evolved in the recent past decades and is now one of the most important assets accepted and incorporated in the legal systems

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worldwide to ease the load of the courts and introduce further forms of resolving disputes.

Development of Technology to be used in ADR

The use of technology in ADR process started with the advancement of technology in use of online communications and with the application of computerized case management systems. The first major advance was the appearance of Online Dispute Resolution (ODR) platforms in the first half of the nineties as an efficient tool to solve consumer disputes that appeared in connection with the unsettled growth of electronic market giants such as eBay. So, as the technology progressed, people began to incorporate technology in the other fields of ADR too and video conferencing, electronic document management and even artificial intelligence to assess the cases. Major events in this process are the use of videoconferencing for the conduct of virtual mediation especially during the COVID-19 pandemic and the advancement of complex e-discovery solutions that can rapidly collect and analyse digital materials used in arbitration.

Role of Technology in Enhancing ADR

Online Dispute Resolution (ODR)

Online Dispute Resolution (ODR) is the newly developed space for ADR it refers to the use to digital platforms for the purpose of mediation, arbitration or negotiating the disputes. During the resolution of the disputes this method requires the physical presence of parties but it does reduce the cost and times involved in the regular arbitration method.

Earlier only companies like eBay and PayPal were using platforms like Modira for their dispute resolution virtually but with time these platforms have increased their reach to other companies as well. Not only this but some other platforms have also emerged like Cybersettle and Rechwijzer. These platforms are not only useful for dispute resolution of a company but also, they are helpful in family disputes matter. From international to domestic to commercial disputes there are matters which have been solved using these platforms around the world. This system allows the parties to submit their case only communicate virtually engaged the process of arbitration and find their solutions. Some of the benefits of ODR includes:-

- Convenience
- Cost-efficiency
- Speed

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Some of the landmark judgement that illustrate the power of ODR are:-

eBay Inc. v. Bidder's Edge, Inc.²

The case was solved through ODR system. The disputes involve the auction platform malfunctioning.

AT&T Mobility LLC v. Concepcion³ 563 U.S. 333 (2011),

The question raised in this case was regarding whether such platforms are useful in the matters of consumer contracts or not. The US supreme court upheld its validity.

Videoconferencing & Virtual Mediation

Platforms like Zoom, Microsoft teams have raised their reach in Covid 19 pandemic be it a student attending a class or a corporate employee attending his meeting we all were using these platforms. Similar to this use the arbitration process also starts to resolve through these videoconferencing tools and come to known as virtual arbitration. You can be at different location and at different time zone still one can connect through these platforms and resolve their matter. Some of the key advantages of using these virtual arbitration tools are they are more accessible to use, they provide the user with flexibility of time and even has a global reach.

Moreover, one can record and securely store these virtual hearing as evidence for as a when required. This offers a transparent and accountable method for resolving the dispute. For example, during a virtual mediation in a commercial dispute, the mediator can share screens, display digital evidence, and allow for real-time discussions without physical document exchange. This not only increases efficiency but also reduces environmental impact by minimizing paper usage.

Blockchain Technology

Blockchain is a technology which has an advance database mechanism which allows a transparent environment for the purpose of sharing things within a business network. It is just like a decentralized digital ledger that stores data in a block which are connected and linked together in chain of same business, it is sometimes also known as distributed ledger technology. Earlier it was only used for the purpose of sharing data but now the technology

²100 F. Supp 2d 1058(N.D. Cal. 2000)

³U.S. 333 (2011)

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has emerged so much that this application is also been used for resolving disputes of arbitration, mediation and negotiation. This system has revolved the process of ADR though it is not mostly used around the world but there are percentage of people who are using these platforms. This application is very helpful in cross-border commercial dispute resolution.

One example of such blockchain technology application is the use of smart contracts. These contracts are self-executing contracts in which the terms and conditions of a contract are already written into the codes of the application. In this contract if any dispute arises the application will automatically trigger the dispute resolution mechanism decided by the parties and enforce the outcomes of it based on the rules and regulations decided by the parties. This method does not involve any human intervention. Although there are several criticisms regarding this method, and it is subject to a lot of improvement but we cannot deny the fact that it does have some advantages and is taking us towards an advanced society.

Key advantages of blockchain in ADR include:

- Transparency
- Security
- Efficiency

Blockchain has mostly been applied in international trade disputes, where parties across jurisdictions require a trusted and efficient mechanism to resolve contract breaches.

In **Paciocco v. Australia and New Zealand Banking Group Limited**⁴, the case was decided by High Court of Australia. They recognized the increasing relevance of technology in managing financial disputes, including blockchain in smart contracts and other automated systems. This case highlighted the court's acknowledgment of the potential for technology-driven contract enforcement, including within arbitration agreements.

Advantages of Technology in ADR

Increased Efficiency

Possibly the biggest benefit that technology brings to the table when it comes to ADR is the factor of speed. Technology-driven platforms including the ODR systems have a capacity to

⁴HCA 28 [2016]

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complete the case much faster since they provided an opportunity to automate most of the steps of the case including communication, case management, and even the submission of documents. For example, weekly assignment of the Hearings, exchange of documents, and monitoring of cases' statuses significantly decrease administrative work time, and all connected with it.

In addition, through the use of other forms of artificial intelligence like the predictive algorithm, the prospects of any disputes can be evaluated at the preliminary stages of the case and thus can lead to quick and efficient settlements. This is especially so in categories of cases heard in volume or for repetitively as the consumer or small claims categories where timeliness is critical. The ppm can be seen from the technological platform shown in the **eBay Inc. v. Bidder's Edge**⁵, Inc case where a number of cases can be resolved without straining the conventional courts or any ADR bodies.

Cost Reduction

It has also brought about significant cost saving in organization through use of technology in ADR. The same way that physical hearings and mediations require travel means, venue, and other overhead costs, remote hearings and virtual mediations make it possible for the parties to cut on such costs. The mediation and arbitration are conducted online using the Zoom or Microsoft Teams, and since participants can attend from any place, overhead costs are less. For example, in the case of **Sutcliffe v. Thales Transport & Security Ltd**⁶, all virtual hearings were conducted during the pandemic period thus neutralising the aspect of travelling internationally, which would have been very costly.

Also, document assembly and e-discovery application cuts on legal costs incurred while manually searching and sorting data. With the help of the sophisticated e-discovery tools, such as Relativity, complex arbitrations and mediations, become less costly in terms of money and time.

Accessibility

More participants, particularly those from rural or disadvantaged locations, may now use ADR thanks to the development of online dispute resolution (ODR) and virtual mediation. Participation in previous ADR proceedings was sometimes hampered by geographic distance,

⁵ 100 F. Supp. 2d 1058

⁶498 F. Supp. 3d 1138

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especially in cases involving cross-border conflicts. Parties to a disagreement can resolve it remotely, utilising technology to enable participation from any place. By permitting virtual arbitration, for instance, **A v. B**⁷ established a significant precedent and demonstrated how technology may bring parties from several countries together on a single digital platform, democratising access to alternative dispute resolution (ADR) services. This is especially helpful in situations involving small companies or private parties who might lack the funds for pricey, geographically-based arbitrations or mediations.

Transparency and Fairness

When it comes to accountability and openness in alternative dispute resolution procedures, blockchain technology has a lot to offer. Blockchain makes guarantee that every step performed during the dispute resolution process is documented and unchangeable by utilising distributed ledgers and smart contracts. This degree of openness fosters mutual trust between the parties and lessens the possibility of disagreements over procedural justice.

Blockchain's immutability guaranteed that the evidence in the Ethereum **DAO Hack case's** Smart Contract Dispute remained safe and unchangeable, improving the process's transparency. This openness also applies to AI-based alternative dispute resolution (ADR) systems, where decision-making algorithms may be checked for bias and legal compliance.

Challenges and Risks

Privacy and Security Concerns

While technology in ADR offers many benefits, it also poses serious privacy and security risks. Sensitive information, including financial and personal information, is frequently sent via online platforms for ODR, videoconferencing, and digital case management. These systems are susceptible to hacking, cyberattacks, and unauthorised access if they are not adequately protected, which might jeopardise the ADR process's secrecy. For example, platforms like Teams and Zoom have come under fire for possible security vulnerabilities in virtual mediations and arbitrations, such as the possibility of unauthorised users accessing meetings (a practice known as "Zoom-bombing"). This calls into question whether the security precautions in place are sufficient to safeguard sensitive data that is transferred via virtual ADR procedures.

⁷ 2 All ER 545 [2002]

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Digital Divide

Although many people find technology to be more accessible, it also causes a digital gap since not everyone has equal access to the internet or the requisite gadgets. Parties from rural or economically disadvantaged regions, where access to dependable internet connections and digital tools may be restricted, should take particular note of this. Due to potential biases resulting from one side having greater resources and technology assistance than the other, the digital gap may make inequality in the ADR process worse.

Legal and Ethical Issues

Issues regarding the objectivity and transparency of decisions made by computers is one of the major legal and ethical dilemmas that arise from the implementation of AI and algorithms in ADR. Risk includes algorithmic bias, where AI-based prediction tools and automated negotiating platforms may impact marginalised or under-represented groups unfairly.

Cases such as **Loomis V. Wisconsin**⁸ raise questions about the accountability and transparency of AI in decision-making. In the context of ADR, if an AI-driven tool offers a settlement or predicts a resolution based on biased data, it could affect the process in ways that are not in keeping with values of justice and equity. To guarantee that AI is utilised appropriately in ADR, regulatory frameworks and ethical criteria are required.

Resistance to Change

And last, one further difficulty experienced by ADR practitioners is opposition to implementing new technologies. Due to uncertainty or cynicism, many legal sector professionals—especially those with established practices—may be hesitant to adopt technology. This opposition may limit the potential advantages of efficiency and cost-effectiveness by delaying the implementation of technology-driven ADR solutions.

Examples of Technology in ADR: Data and Trends

ODR in E-commerce Disputes

Online dispute resolution, or ODR for short, is one of the most indispensable tools for resources resulting from online purchases and deals since a lot of conflicts arise out of there. **eBay**, for instance, resolves most of its buyer-seller disagreements internally without having to engage in arbitration or turn to the courts — etsy.com uses the same ODR platform

⁸Ct. 2290 [2017]

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involved here. Likewise, Alibaba's online dispute resolution platform handles more than **300,000 claims** per day with the use of AI technologies to accelerate their decision-making

Amazon, one of the largest online retailers around the globe belongs to those platforms, which have implemented Online Dispute Resolution (ODR) for handling merchant and consumer complaints. Automated processes or mediation handle **over 90% of disputes**. These stats reveal the extent to which e-commerce companies turn toward ODR in order to retain consumer trust and reduce the burden on conventional legal pathways. ODR will allow businesses to expand their online dispute resolution capabilities and save money

Virtual Mediation and Arbitration in the Corporate Sector

Virtual mediation and arbitration have become mandatory for many large organizations to resolve both internal and external disputes. A **2022** survey by **PwC** found that, following the COVID-19 pandemic, virtual arbitration has been incorporated into the dispute resolution framework of **70% of companies**. This is especially common in time-sensitive and international disputes like banking, finance, and insurance.

In fact, more than **80 percent** of the cases that the **International Chamber of Commerce (ICC)** administered in arbitration last year had virtual hearings — either wholly or in part. Remote and hybrid arbitrations will account for **over 65 per cent** of all arbitrations by 2023, with businesses increasingly seeking the convenience and cost savings that remote ADR features. The danger of one-upmanship continued even in the aftermath of the pandemic.

Technology in Consumer Financial Disputes

Financial firms have also adopted ODR as a means of effectively handling customer complaints. For instance, since its launch in 2016, the ODR platform of **the European Union** has resolved more than **450,000 disputes** pertaining to banking, payment services, and internet sales.

In the United States, the **Consumer Financial Protection Bureau (CFPB)** has advocated ODR methods to help customers resolve issues with financial institutions. According to data from 2021, ODR or comparable online mediation systems were used to settle over **85%** of consumer financial issues, significantly lowering the need for litigation or judicial interventions. This pattern demonstrates how the financial industry is using technology to expedite the settlement of customer complaints.

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Blockchain Technology in Smart Contract Disputes

In industries where trust and transparency are essential, such international commerce and banking, blockchain technology and smart contracts are becoming more popular. Smart contracts based on blockchain technology have been included by businesses **like IBM and Maersk** into their supply chain procedures. This helps to automatically settle disputes when terms of the contracts are fulfilled or broken. In fact, IBM stated that since 2021, its blockchain-enabled trade platform has settled close to **200** shipping and logistics-related issues, eliminating the need for arbitration or judicial intervention.

Furthermore, smart contracts have been integrated into **We. Trade**, a blockchain platform utilised by prominent European banks, to handle issues pertaining to cross-border commerce. In 2023, **95% of conflicts**, resolved to the usage of blockchain, with little to no human monitoring. These instances show how blockchain technology is changing alternative dispute resolution (ADR) practices, especially in sectors where safe, vetted transactions are essential.

Growth of ODR in the Public Sector

Technology is also being used by public sector organisations to settle conflicts. For instance, the National **Internet Exchange of India (NIXI)** in India has successfully settled over **25,000 cases** since the program's inception by using ODR to handle domain name disputes. Comparably, Singapore's Ministry of Law initiated an ODR pilot program to settle employment and rental disputes, and it was successful in resolving **70% of cases** in less than 30 days.

With **almost 450,000 cases** completed since its establishment, **the European ODR Platform** for cross-border consumer disputes in the EU offers an alternative to traditional litigation for resolving issues pertaining to online purchases and services. These illustrations show how public sector organisations are implementing ODR to improve justice access and lessen the burden on legal systems.

Conclusion

The conflict settlement through ADR process has undergone a major transformation with the use of technology, rendering it more expedient, attainable, and transparent. Technology has expedited the settlement of conflicts while cutting costs and increasing access to justice, from blockchain and artificial intelligence to online dispute resolution platforms and virtual mediation tools. These advantages are not without drawbacks, though, such as worries about

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security, privacy, the digital divide, and moral issues with AI. Looking ahead, it seems probable that ADR will witness additional technological developments, with blockchain becoming more common in contract enforcement and AI playing a bigger part in decision-making. But, in order to guarantee that technology advances rather than compromises the justice and integrity of society, these advancements must be weighed against the requirement for ethical supervision and legal protections.

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