

**Vilnius University Faculty of Law**

**Department of Private Law**

Tanvi Sharma

2<sup>nd</sup> Study year, International and European Law

**Master's Thesis**

**Access to Justice in The Digital Age: The Effectiveness of E-courts and Virtual Hearings**

**Prieiga prie teisingumo skaitmeniniame amžiuje: elektroninių teismų ir virtualių posėdžių veiksmingumas**

Supervisor: Assist. Dr. Victor Terekhov

Reviewer: Goda Strikaitė-Latušinskaya

Vilnius

2025

## ABSTRACT AND KEYWORDS

This thesis focuses into the impact that e-courts and virtual hearings have on access to justice in the modern world. It poses the question whether online courts can help deliver faster and easier justice to all people or it opens new issues. The paper examines the post COVID-19 transformations following its promotion of a court online. The study is based on legal examination of the fair trial regulations making comparisons between e-courts in India, Europe (Lithuania), UK, Canada, USA and Global South nations and user studies on authentic experience.

**Keywords:** E-courts, Virtual hearings, Access to justice, Fair trial, Post-COVID-19 legal reforms, Comparative legal study, User experience in online courts.

## SANTRAUKA IR RAKTAŽODŽIAI

Šiame darbe daugiausia dėmesio skiriama elektroninių teismų ir virtualių posėdžių poveikiui teisingumo prieinamumui šiuolaikiniame pasaulyje. Jame keliamas klausimas, ar internetiniai teismai gali padėti užtikrinti greitesnę ir lengvesnę teisingumą visiems žmonėms, ar tai atveria naujų problemų. Straipsnyje nagrinėjami pokyčiai po COVID-19 pandemijos, atsiradę dėl internetinių teismų propagavimo. Tyrimas pagrįstas teisingo teismo reglamentavimo teisiniu nagrinėjimu, lyginant elektroninius teismus Indijoje, Europoje (Lietuvoje), Jungtinėje Karalystėje, Kanadoje, JAV ir Pietų pusrutulio šalyse, bei vartotojų tyrimais, pagrįstais autentiška patirtimi.

Raktiniai žodžiai: elektroniniai teismai, virtualūs posėdžiai, teisė į teisingumą, teisingas teismas, teisinės reformos po COVID-19 pandemijos, lyginamoji teisinė studija, vartotojų patirtis internetiniuose teismuose.

## Table of Contents

Introduction.....	6
1.1. Background of the study .....	8
1.2. Statement of the Problem .....	9
1.3. Research Objectives.....	9
1.4. Research Question.....	9
1.5. Relevance of the Study .....	9
1.6. Scope and Limitations.....	10
2. Concept of Access to Justice.....	10
2.2. Digitalisation of Judicial Systems .....	13
2.6. E-justice Trends Worldwide During COVID-19 .....	21
2.7. Virtual proceedings concern.....	22
3. E-Courts: Operations, Benefits and Challenges.....	23
3.1. Electronic Filing (E- Filing) Systems.....	24
3.1.1. Functioning of E-Courts.....	24
3.1.2. Electronic Case Management Software.....	25
3.1.3 Virtual Hearings Platforms.....	25
3.1.4. Electronic Allowance and Communications. ....	25
3.1.5. Digital Evidence Systems .....	25
3.2. Advantages of E-Courts .....	26
3.2.1 Increased Availability to everyone.....	26
3.2.3. Less Expensive to litigate and courts. ....	26
3.2.4. Better Transparency and Accountability.....	26
3.2.5. Higher Quality Record Keeper and Long-term preservation or Integrity of Justice in Times of Emergency.....	27
3.3. Challenges of E-Courts.....	27
3.3.2. Malfunctioning of Technology and inadequate infrastructure.....	27
3.3.3. Cyber risk and Privacy threats. ....	27
3.3.4. Lack of Training of the Judges, Lawyers and Staffs. ....	28
3.3.5. Objections to Procedural Fairness and Reliance on Government Finance or Policy Stability. ....	28
4. The Virtual Hearing Revolution in the Current Justice System.....	29
4.1. Definitions and Significance of Virtual Hearings. ....	29
4.2 Virtual Hearings Practical Working Step by Step .....	30
4.2.1. Online Listing and Case Scheduling .....	30
4.2.2. Organisation of Online Documents. ....	31
4.2.3. Introduction to the Virtual Court Courtroom.....	31

4.2.4. The Hearing’s Procedure. ....	31
4.2.5. Reading of Orders and Judgements.....	31
4.3. Larger Benefits and Effective functionality or Virtual Hearings.....	31
4.3.1 Greater Physical Courts Access.....	32
4.3.2. Increase in Speed and Case Disposal.....	32
4.3.3. Financial Aid to Litigants.....	32
4.3.4. Administrative Efficiency to the Judiciary. ....	32
4.3.5. Hearing Procedure: Maintaining Justice in Emergency Situations. ....	32
4.4. Significant and Profound Disadvantages of Virtual Hearings. ....	33
4.4.1. Digital Divide and Social Inequality.....	34
4.4.2. Technical Issues and Lack of Infrastructure. ....	35
4.4.3. Information Security and Hacking. ....	36
4.4.4. Issues with witness Examination and Evaluation of Evidence. ....	36
4.4.5. Undermining of Courtrooms Discipline and Judicial Authority. ....	38
4.5. Problems with Lawyer- Client Communication. ....	39
4.6. European Union and India compared in These Challenges. ....	40
5. Literature Law Standard of Digital Law.....	41
5.1 Europe: Digital Justice with a Heavy Human Rights Oversight. ....	42
5.1.1. Germany Innovative Technology and profound judicial reservation.....	43
5.1.2. France Digital Emergency Justice and the Protection of the Vulnerable.....	43
5.1.3. United Kingdom Digital Growth and The Digital Divide Reality.....	44
5.2. United States: Constitutional Rights as the Ultimate shield to full Digital Trials. ....	44
5.3. Canada and Australia as a Geographically Inclusive Tool in Digital Courts.....	45
5.4. India Large scale Digital Consumption and Gravelly poor Structural Inequality.....	45
5.5. China High speed Digital Courts and the Danger of State Control. ....	46
5.6. Singapore: The Most Disciplined Digital Judiciary in the World. ....	46
5.7. Japan and South Korea: well Developed Infrastructure That us emotionally and personally sensitive.....	47
5.8. Conclusion of International Judicial systems.....	47
6. How Effective are E-courts and Virtual Hearings in Improving Access to Justice? ....	47
7. Access to Digital Justice in The Future and Key Findings.....	49
8. Recommendations to Increase access to Digital Justice.....	53
8.1. Creating a Good and Solid Legal Foundation of Digital Justice.....	53
8.2. Bridging the Digital Divide and Technological Equality.....	54
8.3. Increasing Quality, Reliability and Standardization of Court Technology. ....	55
8.4. Enhancing Cybersecurity and Courts Data Protection.....	55
8.5. Securing Procedural Fairness and Right to a Fair Trial.....	56

8.6. Ongoing Digital Training and Capacity Building.....	56
8.7. Implementing Powerful Monitoring, Accountability and Impact Evaluation systems. ....	57
8.8. The Hybrid Model of Justice as a Permanent System.....	57
Conclusion. ....	58
Summary.....	60
Reference.....	<b>Error! Bookmark not defined.</b>

## **Introduction**

The right to access justice is an essential aspect of any democratic society. It guarantees that any person irrespective of his or her social, economic and geographical status can seek legal redress and defend his or her rights. Historically, the justice systems in various regions of the world have been characterized by great problem which include continue delays, complicated procedures, prohibitive prices and inaccessibility. India is one of the example, where many millions of cases go unresolved because of court jams, whereas in countries such as the United States and in Europe, the physical appearance in court and formalities may pose on obstacle even to someone in a far-flung area or a person with a physical disability.

Today, our lives happen in video conferences. The big events we used to share in person with friends and family-graduations, weddings and birthdays-now take place in small boxes on a screen. While increasing our ability to be in multiple places at once, video conference has come with hair pulling frustrations: the garbled connection, people taking over each other, the family members that can't unmute themselves or start their camera.

The past year have seen the digital technology beginning to transform the process of delivering justice. Virtual hearings, e-courts and online case managements systems are meant to bring judicial processes closer, faster and more transparent. The E-Courts Project has also been adopted in India, whereby digital case filing online scheduling and real time tracking has been implemented and therefore, physical visits to the courts have been minimized. Courts in India, the European Union and the United State embraced virtual hearings during the COVID-19 pandemic, placing reliance on such platform as Zoom and Microsoft Teams, which allowed conducting judicial procedures even with lockdowns. The European Union has also initiated digital justice in other countries like Germany and the Netherlands where online submission of documents electronics notifications and virtual hearings is available. Systems such as PACER and virtual courtrooms have enabled litigants, lawyers and judges to access information about cases access information about the cases and attend to hearings remotely in the United States, which saves time and resources<sup>1</sup>.

---

<sup>1</sup> Author Jason Tashea: The legal and technical danger in moving criminal courts online  
[https://www.brookings.edu/articles/the-legal-and-technical-danger-in-moving-criminal-courts-online/?utm\\_source](https://www.brookings.edu/articles/the-legal-and-technical-danger-in-moving-criminal-courts-online/?utm_source)

While the stakes are low for personal calls, these same issues gain far greater magnitude in virtual court hearings in which judges decide on the fate of defendants. This new reality of virtual hearings around the country has created problems ranging from the embarrassing to the potentially unconstitutional. While we should make efforts to keep the justice system running during the pandemic, we must assess the impact of these changes and guarantee that new technologies and processes comply with the constitution and provide equal access. If we don't these developments will exacerbate existing power dynamics that favor the prosecution and punish those with the most to lose defendants.

These technological advances have their potential but also some challenges. Digital justice can overlook the citizens who cannot access internet, contemporary devices and not digital literate. The privacy of data, cybersecurity and procedural fairness issues are also a concern when transmitting to sorting the sensitive legal information online. Moreover, judges, lawyers and court staff require adequate training to manage virtual hearings effectively and technical difficulties can sometimes cause delays or procedural issues.<sup>2</sup>

In the light of such developments and challenges and essential questions of cultur examined in this research. How effective are e courts and virtual hearings in enhancing access to justice? It does not just look at the advantages and drawback of digital justice but also looks at the experience of the individuals, legal practitioners and judiciary in India, the European Union and the United States. Through the analysis of such systems this research struggle to know whether technology is indeed closing the access to justice gaps or whether it is introducing new forms of barriers to accessing justice by some groups of people.

Finally, this thesis is expected to offer some insights into how technology can be used in the current legal systems to improve efficiency, equity and inclusivity. Technology can enhance justice by making it more affordable quicker and more convenient though this should be used as an instrument to justice rather than a barrier. Knowledge on the effectiveness of r courts and virtual hearings will assist policy makers, judiciary and legal partners to come up with a digital justice system that is effective to all.

---

<sup>2</sup> Technological Requirements for Videoconferencing Judicial Hearings: Enhancing the Credibility and Reliability of remote Testimonies by Author Jorge Alberto Aaujo in Cornell University  
[https://arxiv.org/abs/2507.19496?utm\\_source](https://arxiv.org/abs/2507.19496?utm_source)

### **1.1. Background of the study**

The rule of law and social equity are only achievable by access to justice. Courts have traditionally been the ones to arbitrate over conflicts defend the rights and the laws. Nevertheless, the rising caseloads and inefficiency in the court systems have overburdened court systems in most countries. In India there are years of backlogs cases in the civil, criminal and family courts which have led to a situation of no timely justice being served. Equally in America the number of cases and formalities of the procedures can occasionally be expensive and time consuming to achieve justice. However, in Europe even though most of the nations have a modern legal system geographic and logistical factors may complicate access to courts on the citizens who are located a long distance away from the urban areas.

Digital technology can be one of the solutions to these issues. The use of e-courts virtual hearings and online case managements systems enables the parties to submit their cases, monitor their cases and take part in hearings remotely. The E-Courts projects have launched the E-Courts in India which has implemented digital case filing and management in most districts allowing litigants and lawyers real time updates and notification. Covid-19 pandemic increased the applications of digital justice tools around the world. In Europe (in Germany and the Netherlands, where they performed virtual hearings), courts continued to be operated and deliver verdicts despite lockdowns. The courts in the United States embraced the use of platform such as Zoom and PACER to facilitate end to end continuity in both civil and criminal processes and prove that online solutions can create efficiency and cut cost and travel expenses<sup>3</sup>.

Even with such development's obstacles are still there, digital technology is not available to everyone. The lower middle-class population (or rural population or with low economic ability) might not have access to internet services or gadgets forming a digital divide in access to justice. Also, the problems of data security, cyber security and legal aspects are now more sensitive court information is sorted on the internet. Judges, lawyers and court staff also need to be trained and have their capacity building to guarantee the successful operations of the digital courts. It is essential to know about such challenges to determine if digital tools positively or negatively impact access to justice

---

<sup>3</sup> International Covenant on Civil and Political Rights: General Assembly Resolution 2200A(XXI)  
<https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights>

## **1.2. Statement of the Problem**

Even though digital justice systems have the benefit of faster cheaper and more transparent proceedings there are still barriers that might slow down that effectiveness of this system.

Key problems include-

Digital Divide – Citizens without gadgets, internet connections or digital literacy may not be able to participate in virtual hearings.

Infrastructure Restrictions- Proceedings may be hampered by inadequate internet connectivity a lack of technical support and a lack of digital tools.

Security and Privacy Issues- Lawful and sensitive data can be attacked or abused.

Judicial Readiness- The judge's lawyers and court personnel might need to be trained on how to handle virtual proceedings.

Equity Issues- Digital Justice can harm marginalized people by favouring city or technologically advanced populations.

This study will be looking to find out whether e-courts and remote hearings truly enhance access to justice or whether they accidentally impose new barriers to some groups of populations.

## **1.3. Research Objectives**

The key aims of the study are:

To explore the advantages of e-courts and online hearings to litigants, lawyers and judiciary.

To find out the difficulties and barriers in the successful introduction of the digital systems.

To examine case examples of digital courts in India, the European Union, and the United States.

To offer evidence-based solutions to enhance the effectiveness, equity and efficiency of digital justice systems.

## **1.4. Research Question**

How effective are e-courts and virtual hearings in improving access to justice?

## **1.5. Relevance of the Study**

The digital transformation could go a long way in improving access to justice because court processes can be become quicker, less costly and more open. The study is relevant since it

will investigate:

How technology can be used to achieve efficiency of judicial process and decrease delays. Hurdles that impact fair access to electronics justice especially among the disadvantage's groups.

User, lawyer and judges experience in growing to a virtual hearing.

Policies and practical suggestions regarding the merging of online and offline court proceedings.

This research will provide an insight into the way in which digital justice will enhance the rule of law and make it inclusive and equitable.

## **1.6.Scope and Limitations**

Scope – (i) Concentrates on e-courts, online hearings and case management in India, the EU and the USA. (ii) Discusses legal systems, judicial operations and experience of users. (iii) The civil criminal courts are the focus; subsidiary tribunals are incorporated where necessary.

Limitations – (i) Single lack of available comprehensive comparative data on user satisfaction. (ii) The research period may not be spared by rapid changes in technology that may change the practices. (iii) Difference between regions in digital literacy and infrastructure may limit the ability to apply of results.

## **2.Concept of Access to Justice-**

The right to access to justice is a universal value that is considered to be the key a democratic legal system. It is the capacity of each individual to pursue safeguarding of his or her rights, settle disputes and engages fruitfully in legal procedure without discrimination or unreasonable interference. Historically the access of justice has been guided using variables like affordability, availability of a legal aid, efficient of the court, geographical coverage and procedural fairness. Courts were aimed to guarantee that conflicts may be overturned using formal procedures, yet as tie has progressed most people have become frustrated as the conventional court proceedings prove to be sluggish, costly, unfair or even threatening. Physical courts have remained remote or distant to the marginalised groups of people, like the poor rural community's women, elderly groups or disabled people. Contemporary concept of access to justice is more than just provisions of access to courts

or judges. It incorporates the concept of legal systems being friendly, transparent, efficient and able to meet the demands of a multicultural population. Justice is a right that obliges individuals to have a perfect understanding of their legal rights, effective access to legal redress and get through legal system without any delays, backlog, insufficient legal literacy and excessive litigation expenses.

The definition of access to justice in the digital age has even grown larger. Technology has changed the manner people relate to the institutions of the nation, businesses and even with one another courts are also expected to shift out of the old paper-based systems to embrace the use of modern tool that will enhance quicker and efficient operations. Technology has been the key to communicate and life in general hence it has taken a central role in the administration of the court. Hence, access to justice online submission, electronic communication and hearings of the case on electronic platform

E-access to justice presents challenges and opportunities. On the other hand, digital application can help decrease delays, remove geographical obstacles, decrease the expenditure of the administration and empower people who used to find it hard to address the brick-and-mortar courts. Digital exclusion in turn is a significant issue. Digital courts might not be effective to those who do not have internet access technological devices and lack digital literacy. This begs the question on whether digital reforms are actually encouraging equality or not.

The safeguarding of access to justice is being realised as an important matter in legal systems across the world. International treaties like the International Covenant on civil and political rights (ICCPR) provide the right to a fair hearing<sup>4</sup>. In Article 6, the European Convention on Human Rights (ECHR), guarantees fair trial rights<sup>5</sup>. All persons shall be equal before the courts and tribunals. In the determination of any criminal charges against him or of his rights and obligations in a suit at law, everyone shall be entitled to a fair and public hearings by a competent, independent and impartial tribunals established by law. The press and the public may be excluded from all or part of a trial for reasons of morals, public order or national security in a democratic society or when the interest of the private lives of the parties so requires or to the extent strictly necessary in the opinion of the court in special circumstances where publicly would prejudice the interest of justice; but any judgement rendered in a criminal case or in a suit at law shall be made public except where

---

<sup>5</sup> European Convention on Human Rights Cour Europeenne Des Droits De L;Homme: Council of Europe: [European Convention on Human Rights](#)

the interest of juvenile persons otherwise requires of the proceedings concern matrimonial disputes or the guardianship of children. Article (14)<sup>6</sup>, 21 and 39A of the Indian Constitution safeguard access to justice. These precepts lead to the fact that justice has to be administered impartially in a transparent manner and non-discriminatory both in the physical courts and the online counterparts.

Therefore, the right of access to justice is a procedural necessity but it is also a premises. This is one of the principles that should be preserved as courts shift to online platforms. Only an inclusive, secure and user centred technology can improve the delivery of justice. This is why the connection between access to justice and digital transformation is the main part of this thesis.

The digitalization of justice systems has become one of the crucial changes of the 21<sup>st</sup> century. With growing interconnection of societies, courts are held to have services that are as accessible and efficient as current digital platforms. Nevertheless, even when e-courts and virtual hearings are quickly growing scholarly sources indicates that the technologies create a confusing blend of beneficial effects organizational issues and unanswered legal issues. This literature review is a synthesis of international scholarly discourses, policy considerations theories empirical research and comparison findings to estimate the efficiency of digital justice systems in enhancing access to justice.

The reviewed scholarship belongs to the field of several different disciplines: legal theory, public administration, digital governance, technology studies, sociology and international law. The combination of these works allows developing the requires ground to examine the impact of digital courts on the achievements of fairness, inclusivity, transparency and general justice. They also point out the gaps in the available research which will be filled in this thesis.

## **2.1. Bases of the access to justice (History and Theoretical Approaches)**

Access to justice is an idea that has been of central focus in the legal world decades before digitalisation emerged as a mainstream concern. In their landmark study Access to Justice:

---

<sup>6</sup> International Covenant on Civil and Political Rights by General Assembly resolution 2200A (XXI)  
<https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights#article-14>

A World Survey, Mauro Cappelletti and Bryant Garth have defined access to justice as the most fundamental need of a contemporary legal system<sup>7</sup>.

Their theory has offered the so-called waves of reforms of access to justice: The expansion of legal aid, Public-interest litigation, Modernized of court proceedings, mediation and alternative dispute resolution.

Currently many scholars have maintained that digitalisation is a fourth wave, which is re-defining the position of courts and how people interact with legal institutions. As far as this opinion goes technology is not simply a case of administrative improvement rather, a systematic reformation with extensive consequences of equity, equality and public involvement<sup>8</sup>.

The practical studies conducted by Hazel Genn in the book paths to justice showed that there are other conditions to meaning access besides actual physical access to a courtroom. It requires the capacity to learn legal rights or engage in legal processes and have trust in the justice system. This implies that not just convenience but also the ability to maintain procedural justice user understanding and impartiality must be determined in relation to the effectiveness of courts and virtual hearings<sup>9</sup>.

## **2.2. Digitalisation of Judicial Systems:**

Judicial digitalisation can be understood as the introduction of the electronic tools, digital infrastructure and online facilities into the operations of courts. This change is not probably about using computers or scanning the documents. It entails re-evaluating the conventional procedures in the courts and putting forward new digital tools of registering cases, record management, hearings and communication with parties. The idea of judicial digitalisation is to ensure the shortness of delays enhance transparency lessen the physical paper and make the justice system more efficient and easier to use. Digital justice has been developing over the last decades and over time courts have been changing to use low tech computer systems to carry out administrative functioning. The necessity to automate, improve case

---

<sup>7</sup> Access to Justice by Mauro Cappelletti, Harvard Law Review by Austin Sarat [Review: \[Untitled\] on JSTOR](#)

<sup>8</sup> Access to justice: The newest wave in the worldwide movement to make rights effective by Author Bryant Garth [\(PDF\) Access to justice: The newest wave in the worldwide movement to make rights effective](#)

<sup>9</sup> The Hamlyn Lectures, 2008 (Judging Civil Justice) by Author Hazen Genn <https://www.thebritishacademy.ac.uk/documents/812/BAR23-08-Genn.pdf>

management and communicate with greater speed gradually resulted in the courts having more digital tools. The initial measures were the online access to judgements, the creation of electronic registers and the provisions of email communication between the lawyers and the court staff. With the maturity of technology, the courts started to contemplate higher technologic tools, including electronic filing (e-filing) system and digital case managements database as well as automated scheduling systems<sup>10</sup>.

The e-courts idea was developed as a holistic approach of digital justice. An e-court is not a physical court but is a system that involves the legal processes electronically. This involves filing of cases online, electronic payment, showing of evidence digitally, automated designation of cases, order publication electronically and virtual hearings. Other nations like Singapore, Estonia and Sout Korea took the initiative to set up the highly efficient e court systems and proved that technology can revolutionize the way justice is delivered.

Digitalisation in India was in the form of the E-courts Mision Mode Project that was done to modernize the courts in all the states. The project was aimed at computerisation of the complexes of courts, creating digital filing portals, setting up video conferencing system, creating a national case database and developing mobile litigant apps. In India, the digital transformation has been among the biggest around the world with thousands of courts and Millions of cases<sup>11</sup>.

Digitalisation in the Europea Union has taken place on national and EU levels. Legal frameworks the EU came up with like this EIDAS Regulation standardised electronic identification and signature among member states. The European e justice portal was developed to facilitate cross border legal cooperation and give information to citizens. Natural persons can also use certificates for electronic signatures and express consent. Similar to electronic seals, these certificates serve to verify data integrity and origin, making them usable for automated transaction. Additionally, electronic Time Stamping provides trusted timestamps, which can be beneficial for legal purpose, archiving and maintaining data integrity. Website Authentication Certificates further verify the origin of websites and ensure

---

<sup>10</sup>The OCED Digital Government Index (DGI) survey on Open Govt data 5.0: <https://www.oecd.org/en/topics/digital-government.html>

<sup>11</sup> Ministry of law and justice, GOI, Department of Justice: <https://doj.gov.in/>

secure communication between the browser and the website. The notion of qualified trust services is also introduced in the Cidas regulation. This service must comply with legal requirements and be recognized across EU Member States. In 2021, the Commission proposed new qualified trust services for electronic archiving, electronic ledgers and the management of remote signatures and seals. Simultaneously, eIDAS established a European internet market for these qualified trust services, ensuring that they function seamlessly across borders and hold the same legal status as their traditional paper-based equivalents. More EU states created their own digital platform of justice, where it is possible to file an e-mail, access case documents online and have a hearing through the use of video<sup>12</sup>.

Judicial digitalisation has similar goals in terms of countries. The courts are trying to ensure that they make processes more rapid, minimize backlogs, enhance transparency and establish trustworthy electronic records. Digitalisation is also considered to be in reaction to the complexity of the legal system and the swelling of the number of cases. Courts can automate the administration of cases to ensure that judges and legal persons are left with more serious cases to consider.

Nonetheless, digitalisation also implies some new challenges, in particular terms of security and equality. By adopting an online court system and courts have to have its sensitive data safe against cyber-attacks address cyber risks related to the usage of the electronic evidence and provide all the digital systems with access to all the users. Hence, digitalisation is not solely reliant on technology but equally on legal protection, policy framework, training and trust among the population.

The recent researchers as Margaret Hagan (Stanford Legal Design Lab) focus on the concept of user centred justice claim that digital innovations should be made initiative, formally friendly and user friendly (not all users should possess the same level of technological expertise)<sup>13</sup>. Likewise, Rebecca Sandefur in her research points out that technology can enhance access only in situations when it is implemented in a sensitive manner to social inequality. Legal technology is a rapidly developing field and includes tools targeted at a

---

<sup>12</sup> Shaping Europe's digital future, managed by Directorate-General for communications network, content and technology: <https://digital-strategy.ec.europa.eu/en/policies/eidas-regulation>

<sup>13</sup> Stanford Law School, Expanding Access to Justice in Eviction and Family Law (809L): <https://law.stanford.edu/education/only-at-sls/law-policy-lab/practicums-2023-2024/expanding-access-to-justice-in-eviction-and-family-law-809l/>

range of different user groups, including lawyers, law firms, corporations, in-house legal departments, court systems, community organization and individual users who are not trained as attorneys. Some of these tools do legal work, while others track and manage legal work and still others are under the hood allowing tool developers to more easily produce legal technologies. The focus of the present project is on tools that non-lawyers may use to diagnose, understand or take action on legal problems, whether those non-lawyers are using the tools to work on their own problems or are working to assist others with justice problems, for example in their works as staff of community organisations, courts or social services providers. All these pieces of evidence demonstrate that technology is not the answer to the barriers of access; it should be supported by the institution and legal protection<sup>14</sup>.

### **2.3. E-Courts in International Analysis of E-Courts**

There has been a considerable amount of scholarly literature that is done to explore the efficiency of e-courts in enhancing administrative efficiency and decreasing procedural delays. Richard Susskind, in *Tomorrow's lawyers and online courts and the future of justice*, states that the digital systems will radically change the way disputes will be solved. He anticipates a time when courts will stop being largely physical spaces but digital spaces but digital spaces that are operational 24/7 and allow the user to access the justice system in a flexible manner that is also approachable. He predicts a world of online courts, AI-based global legal businesses, liberalized markets, commoditization and alternative sourcing, disruptive start-ups, legal training in virtual reality and a new range of law jobs. This book is a definitive and updated introduction to this future-for aspiring lawyers and for all who want to modernize and upgrade our legal justice systems. It offers practical guidance for everyone intending to build careers and businesses in law<sup>15</sup>.

Transparency, speed and case management have been the subject of empirical research by organisations like the world bank, UNDP, OECD and the international justice mission where it has been noted that there is an improvement in these areas in countries where e-courts systems are implemented. The OECD recommendations calls on adherents to establish a people centred purpose and the culture in the justice system by securing commitment at the highest levels of governments to promote people centred justice, based on empirical

---

<sup>14</sup> Author: Rebecca L.Sandefur, *Legal Tech for Non-Lawyers: Report of the Survey of US Legal Technologies*: [https://www.americanbarfoundation.org/wp-content/uploads/2023/04/report\\_us\\_digital\\_legal\\_tech\\_for\\_nonlawyers.pdf](https://www.americanbarfoundation.org/wp-content/uploads/2023/04/report_us_digital_legal_tech_for_nonlawyers.pdf)

<sup>15</sup> How to Think About AI by Author Richard Susskind: <https://www.susskind.com/>

data and evidence, through whole of state and whole of society approaches. This chapter seek to operationalise these elements, firstly by providing guidance and examples of how collaboration and joint leadership can be organized. This is particularly relevant because of the nature of the justice system, which includes many actors of which the independence is not only guaranteed by the constitution but also a critical requirement of the rule of law. Secondly it discusses using data and evidence for learning and improvement, which is required to ensure that policies and reforms are based on empirical data and evidence. The third finally addresses key elements that are needed to establish a people centred purpose and culture in the justice system, including by ensuring the justice workforce is representative and able it to meet the needs of diverse groups and humanizes the justice system to enable it to respond not only to rational communications and interests but also to peoples emotions, perceptions and experiences<sup>16</sup>. Indicatively, World Bank evaluations reveal electronic filing saves time in terms of cases initiated, obviated documents and enhances the predictability of legal proceedings. Digital tools can improve justice sector efficiency, transparency and access to justice. When employed strategically, e-justice can advance the rule of law and protect human rights, while also improving the effectiveness of justice systems and institutions. But technology can also be used in ways that exacerbate injustice, negatively impact rights and freedoms, fuel violence and enable criminality. Identifying and understanding both the opportunities and the risk of technology is critical for fully realising its role in advancing justice, human rights and the rule of law<sup>17</sup>.

Nonetheless, researchers also mention problems. According to research conducted by Graham Greenleaf of Asian e-justice systems, most nations are facing cybersecurity vulnerability, unequal development among the regions and poor training of court organization. Research in Africa and some Latin American regions show that e-courts tend to Favor urban communities over rural ones, which creates the question of the inclusivity of digital reforms<sup>18</sup>.

---

<sup>16</sup> Mkinf Justice systems more effective and people centred by OECD: [https://www.oecd.org/en/publications/making-justice-systems-more-effective-and-people-centred\\_e02fd90b-en/full-report/leading-the-transformation-of-the-justice-system\\_d7121065.html](https://www.oecd.org/en/publications/making-justice-systems-more-effective-and-people-centred_e02fd90b-en/full-report/leading-the-transformation-of-the-justice-system_d7121065.html)

<sup>17</sup> Digitilization and E-Justice by Rule of Law and Human Rights (UNDP):<https://www.undp.org/rolhr/justice/digitalization-and-e-justice>

<sup>18</sup> Article: Asian data privacy laws: trade and human rights, Author Graham Green leaf: [https://scholar.google.com/citations?view\\_op=view\\_citation&hl=en&user=03FXwQcAAAAJ&citation\\_for\\_view=03FXwQcAAAAJ:q3CdL3IzO\\_QC](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=03FXwQcAAAAJ&citation_for_view=03FXwQcAAAAJ:q3CdL3IzO_QC)

## 2.4. E-Court Project in India

India has a strong legal framework in the area of digital justice. These laws are most significant, and the most important law is the information technology act, 2000 that officially understands electronic records and digital signatures<sup>19</sup>. This is a statute that permits the use of electronic documents in courts and makes formal communication possible via digital signature medium. The admissibility of electronic evidence in the Indian Evidence Act is also backed up by Section 65B<sup>20</sup>, which outlines the way the digital records should be certified. One of the greatest digital judicial reforms in the world is the E-Courts Mission Mode Project in India. Moreover, India has introduced the E-Courts Mission Mode Project that functions under the National e-Governance Plan. The project offers technical infrastructure, digital platform and laws that defines how to modernise thousands of courts in the country. Courts leadership has contributed a lot to digital justice. The Supreme Court has come up with a number of rules and guidelines that permit virtual hearings, online filings and remote appearances. State of Maharashtra v. The fact that the evidence can be recorded during video conferencing has been acknowledged by Praful Desai (2003), which gave birth to the virtual hearings many years before the pandemic<sup>21</sup>.

Constitutional principles also have a role in the digital justice system in India. Article 14, 21 and 39A highlight equality, fairness and legal assistance, which forms a powerful normative foundation towards ensuring that digital reforms benefit and not restrict access to justice.

A significant progress is reported in academic literature by Nandan Kamath, Arghya Sengupta, the Vidhi Centre of Legal Policy and many national law schools subsequent to this research Vidhi was engaged by the Ministry of Electronics and Information Technology, Government of India to assist the committee of Experts headed by Justice BN Srikrishna to draft a data protection law of India. After more than a year of high-level deliberations and public consultations, with Vidhi drafting expertise, the committee submitted a report and a draft Bill to the Ministry of Electronics and Information Technology<sup>22</sup>:

---

<sup>19</sup> The information Technology Act,2000, Ministry of Information Technology, (GOI): [https://www.meit.gov.in/static/uploads/2024/03/IT-Act-Rules\\_2000\\_0.pdf](https://www.meit.gov.in/static/uploads/2024/03/IT-Act-Rules_2000_0.pdf)

<sup>20</sup> Section 65B of Admissibility of electronic records of Information Technology Act,2000: [https://www.indiacode.nic.in/show-data?actid=AC\\_CEN\\_3\\_20\\_00034\\_187201\\_1523268871700&orderno=71](https://www.indiacode.nic.in/show-data?actid=AC_CEN_3_20_00034_187201_1523268871700&orderno=71)

<sup>21</sup> State of Maharashtra versus Dr. Praful (Supreme Court of India): <https://indiankanoon.org/doc/560467/>

<sup>22</sup> Centre for Legal Policy, The fourth way- Drafting a Data Protection Law for India and the global South: <https://vidhilegalpolicy.in/impact/a-fourth-way-drafting-a-data-protection-law-for-india-and-the-global-south/>

The use of electronic filing minimized time wastage caused by the use of hard copy.

Transparency was enhanced by the use of digital case tracking.

Remote hearings in the pandemic allowed courts to operate at mass.

Nevertheless, researchers always caution in India, critical infrastructure and digital literacy gaps are the major barriers to digital justice. In a study by NLU Delhi, it was discovered that the judges and lawyers became general rather fast, but the large groups of the self-represented litigants became unable to access the virtual hearings because of the lack of internet and device connectivity<sup>23</sup>.

## **2.5. E-Court Literature in the European Union and Lithuania.**

Eu has another design; common regulations intersect with the national laws. The largest EU-level regulations are the eIDAS Regulation (Regulation No, 910/2014) that harmonises electronic identification and trust services both nationally and internationally. This makes sure that digital signatures, seals and documents are considerable across the EU so that cross-border electronic communication is possible. The other pillar of digital justice in the EU is the General Data Protection Regulation (GDPR)<sup>24</sup>. GDPR establishes strict principles of dealing with personal data such as the data on court proceedings. Courts should provide the confidentiality, restrict the access to data and prevent the breach of the digital records. Such as the data on court proceedings. Courts should provide the confidentiality, restrict that access to data and the prevent breach of the digital records. Such a regulatory framework does place EU digital courts as one of the most privacy safe in the world.

Besides this, the European e justice Action Plan is a strategic direction towards achieving better digital collaboration between Member States. Numerous Member States have also enacted national legislation permitting remote hearings, electronic filling and access to case online. Indicatively, Germany authorises video hearings under Code of Civil Procedures 128a with Lithuania and Estonia having high e justice systems connected with national sites

---

<sup>23</sup> Access to Legal Information and Research in Digital Age by Prof. Dr. Ranbir Singh: <https://nlu-delhi.ac.in/download/publication/2015/Access%20to%20LEgal%20Informationa%20and%20Research%20in%20Digital%20Age.pdf>

<sup>24</sup> Regulation (EU) 2016/679 of the European Parliament and of council dated 27 April 2016: <https://eur-lex.europa.eu/eli/reg/2016/679/oj>

of e-government. The European Court of human rights (ECHR) is also very instrumental in that it interprets Article 6 of the European Convention on human rights that provides the right to fair trial. According to the case law of ECHR, remote hearings are allowed provided that they do not interfere with the procedural guarantees and that they do not disadvantage any of the parties.

The areas of European scholarship are oriented on legal harmonisation, international procedures, electronic signature and digital identities. Michal Bobek and Florence G'sell are authors that examine the difficulties of establishing standard e-justice in different legal systems. Improvement in cross borders cooperation is attributed to be one of the benefits of the EU e justice Portal, yet academic researchers state the necessity of the availability of digital translation services and connectivity of national systems<sup>25</sup>.

The ongoing digital transition is thus occurring in an already deteriorated situation. It is characterized by two phenomena. First, the appearance and development of increasingly sophisticated technologies (Artificial intelligence, blockchain etc.) that will result in a deep reorganization of jurist's work. Second, the multiplication of legal startup (Legal techs) that provide innovative services to litigants and citizens. In this respect, it clearly appears that all the services which are not supplied by traditional actors (including the state) will, sooner or later, be provided by startups, as long as there is a viable business model for them. For example, it is at present not possible for an individual to file a complaint online. A startup has thus started to provide this service by offering litigants the possibility to draft their complaint on the platform, which is subsequently delivered to the competent jurisdiction by mail. Other platforms provide online dispute resolution services (mediation or arbitration) and sometimes bring together litigants who suffered from a similar damage. In this context, digitalization has become a major concern for the judicial system, if only to prevent it from becoming out of date or being left behind<sup>26</sup>.

The field of Lithuanian legal scholarship examines how national initiatives for digital justice align with EU-level laws, such as the GDPR and eIDAS Regulation, and is written by

---

<sup>25</sup> The court of Justice of the European Union by Author Michal Bobek: [https://www.coleurope.eu/sites/default/files/research-paper/researchpaper\\_2\\_2014\\_bobek\\_0.pdf](https://www.coleurope.eu/sites/default/files/research-paper/researchpaper_2_2014_bobek_0.pdf)

<sup>26</sup> Justice: Get Digital. Three questions to Florence G'sell by Author Institut Montaigne: <https://www.institutmontaigne.org/en/expressions/justice-get-digital-three-questions-florence-gsell>

academics from Vilnius University, Mykolas Romeris University and local law publications. According to studies Lithuania's judicial system is good however remote hearings still need to be developed.

## **2.6. E-justice Trends Worldwide During COVID-19**

COVID-19 pandemic affected the world justice systems more than ever. Courts resulted in the rapid use of digital tools as they needed to keep operating as physical court buildings were shut down or reduced to limited capacity. Previously gradual, digital changes that used to be slow, gradually turned into urgent needs. Remote filings, hearing held, virtually and electronic communication became the norms in different jurisdictions.

Prior to the pandemic, most courts were not ready to be technology dependent as they believed that the technical reliability was a matter of concern or the hearing should be conducted in a real-life setting. These assumptions were altered due to the pandemic. Courts found that much of the types of hearings, particularly the procedural administrative or documentary cases, would be effectively undertaken online. The change proved that digital justice had the capability of continuity even in times of crisis.

Millions of virtual hearings were held by countries such as India during the pandemic. Videoconferencing platforms were almost solely relied upon by the Supreme Court and the High Courts. In a similar fashion. The EU member States developed digital court services at a high rate, enacted regulations on remote testimony, submission of documents electronically and online delivery of judgement. UK, which is no longer a member of the EU, also came up with influential reports the analysis of user experiences of virtual hearings. Which high lists the best practices that contributes to the European dialogues<sup>27</sup>.

After the pandemic, most jurisdiction decided to keep hybrid or fully remote hearings of suitable cases. The practice demonstrates that online hearings cut on time, delays and enhanced the efficiency of the court. Nevertheless, it revealed several weak points including:

- Disparity in devices and access to the internet.
- Absence of digital skills amongst users.

---

<sup>27</sup> What to expect when joining a telephone or video hearing, published on 30 october 2020 from HM Courts and Tribunal Services: <https://www.gov.uk/guidance/what-to-expect-when-joining-a-telephone-or-video-hearing>

- Problems in examination of witnesses.
- Issues regarding cybersecurity.
- Uncertainty in the long-term regulation.

Consequently, the world has been striving to enhance digital infrastructure, enhance cybersecurity systems, enhance judges and lawyers training and formulate a clear procedural guideline on digital hearings. Among the post pandemic trends, there is also a trend towards hybrid justice in which the courts will integrate physical and virtual elements. The routine or procedural hearings of many courts are online with a few cases that are complex or sensitive left to be heard in person. This mixed system tries to reconcile efficiency and equity. The other trends are that it has more focus on digital inclusion. The governments and courts acknowledge that technological reforms should avoid setting up new barriers in the hands of vulnerable groups. Digital literacy programs, making digital access points available to the public (like e-seva centres in India) and ensuring that virtual hearing rooms are available to everyone and easily accessible in local court buildings have become significant measures of ensuring equality. On balance the pandemic moved the digital transformation several years ahead and proved that technology may be a potent instrument in the promotion of access to justice, though should be used cautiously and inclusively<sup>28</sup>.

## **2.7. Virtual proceedings concern**

Online hearings have elicited a lot of scholarly controversy. Researchers single out issues pertaining to:

**Demeanour evidence:** Psychology and legal research indicate that visual information is potentially distorted on video and that this can influence judgement on credibility.

**Formality and decorum:** According to some writers, the aspect of coming home to a court of law makes the court proceedings less serious.

**Confidentiality:** Research indicates that there are dangers of litigants who come to hearings of areas that cannot assure privacy.

**Witness coaching:** It is demonstrated by literature that remote testimony creates the risk of off-camera assistance.

**Unequal technological competence:** Disparities in the quality of devices, lighting or audio may undermine litigants unwillingly.

According to the arguments of legal experts such as Nigel Pleming KC and Professor Kim Ferzan, there are some specific kinds of cases that digital hearings should be extra cautiously restricted, such as criminal cases; intricate family cases and cases that might involve

---

<sup>28</sup> Court Operations during the COVID-19 Pandemic, Author Julie Marie Baldwin:  
<https://pmc.ncbi.nlm.nih.gov/articles/PMC7354363/>

delicate cross-examination<sup>29</sup>.

## **2.8.Evidence of multiple jurisdictions**

United Kingdom: HMCTS pilot projects demonstrate a substantial efficiency improvement but indicate that older litigants and individuals with disabilities had technical problems<sup>30</sup>.

United states: Research by the National Centre for State Courts revealed that remotes hearings had a negative impact on the failure to appear rates on low-levels cases, but an increased due process issue in eviction cases.

Canada: The council works hard to ensure that citizens have access to an accessible, efficient and timely judicial systems. The trust of Canadians is essential to the proper functioning of our justice system. Unfortunately, several factors can undermine public trust and that is what we are continually addressing. A study found that virtual hearings increased regional and Minority groups participation, especially in the North<sup>31</sup>.

Australia: In assessments of administrative tribunals it was found that virtual hearings are quite effective in document heavy, low emotional cases, however in criminal trials which are fundamentally based on fairness, it would be seen that concerns still exist.

One of the most frequent conclusion reached by jurisdiction is that internet hearings can work well with simple uncontested or procedural cases but in complex cases the issue of fairness come to the light.

## **3. E-COURTS: Operation, Benefits and Challenges.**

One of the greatest changes in the contemporary justice system is e-courts. Historically, the court services involved physical operations: litigants submitted paperwork, attorneys appeared physically during hearings, judges kept handwritten records clerks could only document the proceedings of the cases manually. This system would be formal and well-established resulting in efficiencies in form of delays in the administrative department, lost files, long queues and high costs related to travelling and paperwork. The more societies relied on technology, the more pressure was imposed on courts to modernise and be more efficient. E-courts are a solution to this requirement, as they combine the digital systems with judicial processes.

An e-court is a court, which utilizes electronic procedure at different stages of cases management. These involves e-filing cases (e-filing), electronic document review, computerized assignment of cases, payment of fees online, electronic signatures, case tracking online

---

<sup>29</sup> A toolbox for the Effective Implementation of Climate Law, Speaker Nigel Pleming KC, The British Institute on International and Comparative Law (BIICL): <https://www.qmul.ac.uk/law/events/archive/items/a-toolbox-for-the-effective-implementation-of-climate-law.html>

<sup>30</sup> A toolbox for the Effective Implementation of Climate Law, Speaker Nigel Pleming KC, The British Institute on International and Comparative Law (BIICL): <https://www.gov.uk/government/organisations/hm-courts-and-tribunals-service/about/research>

<sup>31</sup> Canadian Judicial Council: Access to justice: [Access to justice](#)

and online hearings. E-courts maintain the documents electronically, which is easily retrieved and is long lasting as opposed to using physical records which may be lost or damaged. E-courts enhance the speed of the judicial administration process by minimizing the workload of the court officials, allowing no physical storage, and increasing the speed with which the judges, lawyers and litigants could communicate<sup>32</sup>.

The development of information technology and communication technology, rising internet penetration and the necessity to have quick justice pop up the emergence of e-courts. Most countries have realised the fact that justice should not be just physical but also digital. E-courts: The e-courts are focused on ensuring that the legal processes are made transparent, efficient and accessible through reducing unnecessary physical processes. They are an evolution of a paper culture to an electronic environment in which legal systems are more precise and quicker.

E-courts are not eliminating the judges or undermining the law. Rather, they improve the operations of the courts by ensuring that the administration processes are made easier with technology enabling the judges to concentrate more on administration of Justice. Courts digitalisation is not merely a technological improvement, but a form of structural change that is meant to enhance access to justice by everyone.

### **3.1. Functioning of E-Courts**

To know the ways in which e-courts are operated, it is important to consider the technological devices and processes applied in the contemporary judicial systems. These systems that connect different platforms, database and electronic processes to establish a stream of digital workflow. Although the mechanism of e-courts is different in various countries, most of them comprise similar features that facilitate efficient administration of Justice.

#### **3.1.1 Electronic Filing (E- Filing) Systems.**

The e-courts centre on e-filing. It also enables litigants and lawyers to file petitions, applications, affidavits and supporting documents electronically using special online portals. Users are able to upload files anywhere instead of having to go through lengthy queues at court registries or having to pay someone in order to lodge a document. E-filing systems will often force users to open accounts, authenticate themselves and file files in standardised formats including PDF. Once submitted, the system will automatically create a recognition receipt that will have a date stamp on it, which is transparent and makes it impossible to change anything. E-filing also narrows the load borne by the court personnel who will no longer be required to fill in cases manually or make out difficult paper files. The documents are arranged systematically in the digital databases with ease in accessing by judges and also by litigants at any point. The system also enhances accountability since all the actions are logged on electronically.

---

<sup>32</sup> Virtual Courts in India, E-courts services: [https://ecourts.gov.in/ecourts\\_home/index1.php](https://ecourts.gov.in/ecourts_home/index1.php)

### **3.1.2. Electronic Case Management Software.**

Judicial functioning is dependent on case management. Delays are common in the traditional courts due to inefficiency in the admin processes like lost files, scheduling or unfinished documentation. These systems give judges access to case files digitally allow them to review documents, schedule hearings and issue orders. Lawyers and litigants are informed about their upcoming hearings, deadlines and submission of documents via automated-notification.

cases can also be tracked by the court, and the delays can be noted and statical reports generated using case management systems. This assists the judicial authorities to invest resources better, detect bottlenecks and introduce changes to curb backlogs<sup>33</sup>.

### **3.1.3 Virtual Hearings Platforms.**

One of the most evident elements of e-courts is virtual hearings. They include carrying out court proceedings using video conferencing as opposed to having them physically present. Those involved participate in hearings via secure online connections and judges conduct them in courtrooms with screens installed or in other remote places. Virtual hearings came out in the course of the COVID-19 pandemic but since they are convenient and efficient they have persisted even after the pandemic. The specifics of virtual hearing platforms usually involve the following: the ability to show evidence on a screen, chatting (as a communication tool between a lawyer and a client) and the possibility of recording to create a transcript. Government approved platforms are commonly used by courts in an attempt to foster security and privacy. By conducting virtual hearings, judges are able to complete more cases in a day, allowing less physical congestion in the courtrooms and enabling parties who are located far to attend.

### **3.1.4. Electronic Allowance and Communications.**

E-courts also offer online payment gateway to court fee eliminating the use of cash and paper receipts. Litigants are notified automatically by email or SMS on the status of the cases, the date of hearings and orders. This saves the aspects of having to go to court over and over again and communication is met on time.

### **3.1.5. Digital Evidence Systems**

E-courts are able to permit presentation and submission of evidence electronically. This encompasses e-metric documents, audio records, CCTV videos, text messages, e-mail and meta data. Digital evidence is supposed to be well authenticated to make it reliable. Encryption tools, hash verification and digital certificates are the methods used by the courts to ensure the integrity of electronic evidence.

---

<sup>33</sup> Article: Accountability and Transparency of the Electronic Court and Litigation systems in Indonesia by Author Tanto Lailam: [https://www.researchgate.net/publication/378632445\\_Accountability\\_and\\_Transparency\\_of\\_the\\_Electronic\\_Court\\_and\\_Litigation\\_Systems\\_in\\_Indonesia](https://www.researchgate.net/publication/378632445_Accountability_and_Transparency_of_the_Electronic_Court_and_Litigation_Systems_in_Indonesia)

## **3.2. Advantages of E-Courts**

The e-courts imply a variety of advantages that directly contribute to access to justice. They are beneficial to litigants, lawyers, judicial and general to the operations of the justice system. The effectiveness and dynamism of digital processes is the sources of most benefits.

### **3.2.1 Increased Availability to everyone**

E-courts minimise the geographical and physical distance since users can file documents and case details as well as participate in hearings remotely. People residing in rural areas or in regions which are distant to the major cities no longer have to travel very far to get to courts. Individuals with disabilities or mobility issues are able to become more engaged in court proceedings. In linguistic access, e-courts are also facilitating access to services by providing multilingual interfaces and automatic translation software in certain jurisdictions.

### **3.2.2. Greater Speed and Efficiency.**

Digital processes are much faster as compared to manual processes. Electronically submitted documents are received instantly by the judges. Automated scheduling eliminates administrative delays. The virtual hearings avoid unnecessary adjournments by non-appearing of parties. Case management systems enable the courts to track the progress and minimize the backlog. All these enhancements help in resolving the cases faster.

### **3.2.3. Less Expensive to litigate and courts.**

The e-courts also help in saving money on litigation through the ease of traveling, physical record keeping and going to court. By not having to commute to work, spend hours in traffic and hours in the overcrowded courtroom and lawyers save time. Courts save money that would be used in printing, paper, storage and administration. The digital systems are cost-efficient in the long run since they minimize the cost of running the system.

### **3.2.4. Better Transparency and Accountability.**

E-courts enhance the level of transparency and accountability through real time access to case information, automated updates and electronic records of everything that has been done. Accountability and transparency are essential, considering that the e-court is a new system for the judiciary, judges, prosecutors, advocates and the justice seeker, especially courts at regional levels. Also, the system is fundamental to study comprehensively, considering the many problems of regulation, electronic case management, overlapping authority and lack of electronic professionalism of law enforcement officers. Moreover, the issues ensure the preservation of data security; several court websites have been hacked by unauthorized individuals, indicating that the effectiveness of protecting state court websites against cybercriminal activity has been inadequate. For this reason, this research is carried out with the hope that e-courts and e-litigants will encourage the creation of a modern judiciary that is the pride of the community, independent and impartial of courts and judges in electronic system. It is a fast accurate, effective and efficient process and a fair judge's decision. All papers, hearings and orders are time stamped, and a definite audit trail is formed. It eliminates chances of corruption, manipulation or document loss. Litigants are also able to follow their cases without relying on the contact with the court staff and intermediaries<sup>34</sup>.

### **3.2.5. Higher Quality Record Keeper and Long-term preservation or Integrity of Justice in Times of Emergency.**

In a digital record, storage, organisation and recover is simpler as compared to physical files. Paper files can become spoilt due to time, accidents but digital files are stored safely in the cloud storages or judicial servers. The courts do not need to be concerned about physical storage spaces since they can keep their historical records in whole. Digital courts are important as the COVID-19 pandemic has shown. Whereas physical courts were closed down in most countries, the e-courts did not cease operation, so there were no cases where urgent cases where urgent cases like bail applications and domestic violence cases as well as constitutional petitions were not heard. Digital hearings came in handy as well in times of natural disasters and environmental emergencies as well when the political environment was unstable.

### **3.3. Challenges of E-Courts**

Despite all the advantages of e-courts, they have severe challenges that cannot be ignored and should be resolved. Digital Justice has the potential to cause new inequalities, particularly to those groups that are not techno savvy or digitally literate.

#### **3.3.1. Digital Inequality and Inequality.**

Digital divide is the divide between those people who are able to access technology and those who are unable to access technology. Such separation is found within the income range, geographical regions, age and education. A lot of rural regions do not have a constant internet connection. There are people who lack access to smartphone or computers. There are people who do not know how to utilize digital systems. In their case, online courts might turn irrelevant and unintelligible which is the opposite of the idea of equal access to justice

#### **3.3.2. Malfunctioning of Technology and inadequate infrastructure.**

E-courts are dependent on a steady internet connection, operational servers and current software. Technical issues like delays in audio or screen freezes or computer crashes may interrupt hearings and make users feel frustrated. Poor electricity supply and inadequate bandwidth is a critical problem in most third world countries that will hamper the effective operation of a virtual hearing.

#### **3.3.3. Cyber risk and Privacy threats.**

The sensitive information stored in digital courts includes personal information, financial information, evidence and names of witnesses. Hacking of judicial databases may weaken the integrity of the cases, trigger data leakage or result in identity theft. Courts should also apply effective encryption, passwords and effective cyber protocol to safeguard electronic records. Without well-established cybersecurity, there will be a decrease in trust in systems.

### **3.3.4. Lack of Training of the Judges, Lawyers and Staffs.**

There are a lot of legal specialists who are not completely trained to use digital tools. The judges can encounter the challenges of working with virtual hearings platforms, examining electronic evidence or working with electronic case files, Lawyers might find it hard to advocates in an online environment or have a confidential communication with their clients. The personnel of the court might lack technical troubleshooting. To achieve the maximum of the benefits of e-courts, training is required<sup>35</sup>.

### **3.3.5. Objections to Procedural Fairness and Reliance on Government Finance or Policy Stability.**

Procedural fairness is based on the fact that parties are afforded an equal opportunity to make a case, to challenge evidence and to communicate with counsel. These rights can be infringed in the virtual world. Online, judges will find it hard to determine the credibility in which witness can judge due to the lack of body language and facial expression. Witnesses can be off camera coached. Hearings may also leave parties struggling to privately consult their lawyers. In complicated criminal cases, these restrictions become a big issue of fairness. Digital courts need a continuous investment to be developed and maintained. There is a need to update digital systems regularly, revise security protocols and replace hardware. Digital reforms may be slowed down or sabotaged by inconsistent government policies, limited budgets or even political changes.

## **4. The Virtual Hearing Revolution in the Current Justice System.**

One of the most significant advances to the contemporary justice system is virtual hearings. Hundreds of years of justice have been administered primarily within brick-and-mortar courts where the judges, lawyers, parties and witnesses and the other people were in the same physical location. The courtroom was not only a legal area it was a representation of the state power, justice, discipline and openness as well. It was considered that the physical presence of all the parties involved was imperative in ensuring that they had appropriate communication, a sense of decorum, discerning the credibility of witnesses and safeguarding the dignity of a court session. This however changed as the digital technology began to strength and the internet expanded leading to a migration of many public institutions to

---

<sup>35</sup> ECourts Services- Virtual courts, District and Taluka Courts of India:  
[https://ecourts.gov.in/ecourts\\_home/](https://ecourts.gov.in/ecourts_home/)

electronic governance. Technology was also beginning to be tried by the courts by the courts to file documents, track cases and distribute information. However, even with these new advancements in the digital world or real court proceedings still required nearly total attendance. It is only in exceptional cases that virtual hearings were employed like in cases where the statement of the prisoners was recorded through the use of video conferencing hearing of foreign witness or safeguarding of unprotected victims.

It is all different with the COVID-19 Pandemic. Courts worldwide experienced a crisis like never before when strict lockdowns were introduced and physical movement was limited. On the other hand, safety demanded the physical courtroom closure. Indeed, justice could not be suspended entirely since the citizens required to be guarded against their rights, freedom and property. Virtual hearings were the most manageable option in this emergency scenario to save the lives of the justice system<sup>36</sup>.

In India and the European Union and numerous other countries, the courts were quick to implement the video conferencing services and started holding hearings via the Internet. What began as a temporary emergency plan turned out to be efficient in treating great quantities of cases. As time went by governments judicial administrators and judges came to appreciate that virtual hearings were not only crisis tools but also here to stay and could transform the way justice was prepared in future.

Therefore, virtual hearings in the present day are a new judicial reality. They mirror the change towards technology-based justice and a move away of the place based one. This replacement has a direct impact on the access to justice, judicial efficiency, fairness transparency and trust by the people. Simultaneously, it also causes profound legal, social and ethical issues that should be thoroughly considered<sup>37</sup>.

#### **4.1. Definitions and Significance of Virtual Hearings.**

A virtual hearing is a court session that takes place through the digital technologies where the courtroom judge, litigants, attorneys, witnesses and other court remotely attend a court session over the internet using electronic devices. The real courtroom is substituted with

---

<sup>36</sup> Access to Justice for all and the Covid-19 Pandemic: Recommendations for Action. Event: World Justice Challenge Webinar <https://worldjusticeproject.org/our-work/engagement/world-justice-challenge/access-justice-all-and-covid-19-pandemic>

<sup>37</sup> OECD: Tackling Coronavirus (COVID-19): [https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/09/access-to-justice-and-the-covid-19-pandemic\\_0ea1b2a3/09a621ad-en.pdf](https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/09/access-to-justice-and-the-covid-19-pandemic_0ea1b2a3/09a621ad-en.pdf)

the virtual one where the dialogue happens via audio and video delivery. Through this has altered this shape the legal nature of the proceedings has not been in any way altered in comparison with a physical court. The orders made at the virtual hearings are legally binding recorded evidence has legal merits and procedural laws remain intact in their entirety. In most countries, virtual hearings have become legally accepted judicial proceedings. In India, the Supreme Court and High Courts issued special rules on video conferencing so as to govern online hearings. Digital communication, electronic signatures and online judicial cooperation are legally supported at the national level in European Union because of the national laws and the EU regulations. Remote hearings are also not denied under international human rights standards provided that the fair trial guarantees are not compromised. Online hearings do not eliminate judicial jurisdictions. The judges still dominate the process, manage entry and provide enforcement of the legal process. The distinction comes in the medium of communication. Technology takes the place of physical presence in the process of linking the court and the people. Once a person is arrested or detained, he or she must be brought promptly to appear physically before a judge. This is a right without exception. It must be automatic and does not depend on the choice of the person in question. The purpose of bringing the person before a judge is so the judge may decide whether the person's detention is lawful and necessary. The physical presence of the person gives the judge the opportunity to find out how they have been treated in custody. It also facilitates immediate transfer to a remand detention centre if continued detention is ordered by the judge. Detention on remand should not involve a return to police custody.<sup>38</sup>

## **4.2 Virtual Hearings Practical Working Step by Step.**

The concept of virtual hearings is conducted in a highly structured digital experience that substitute the actual courtroom hearings with electronic variations.

### **4.2.1. Online Listing and Case Scheduling**

This starts with digital case listing. In grounds that are daily courts post the lists of causes on their official websites and mobile applications. The lawyers and litigants are automatically informed by SMS and E-mail of the hearing dates and times. Each case has a secure video conferencing link. It is an online system that enhances openness and makes sure that interested parties do not have to go to the court to stay updated.

---

<sup>38</sup> On-line hearings in justice systems(UN Human Rights): <https://www.ohchr.org/sites/default/files/documents/issues/ruleoflaw/Briefer-Online-hearings-justice-systems.pdf>

#### **4.2.2. Organisation of Online Documents.**

All documents that will be presented before the hearing including petitions, replies, affidavits, applications and annexures are prepared in electronic form before the hearing. These are documents that are uploaded by means of official e-filing portals. The lawyers arrange their arguments in the form of digital files bookmarks and hyperlinks. Case records are also reached in digital dashboards instead of physical files by judges.

#### **4.2.3. Introduction to the Virtual Court Courtroom.**

During the hearing's day, the participants enter the court via the secure digital connection. The officials in the court authenticate their identify. The lawyers can be requested to prove their ban enrolment, and the parties can be requested to present proof of identifications. After the verification the judge enters the virtual courtroom and the hearings starts.

#### **4.2.4. The Hearing's Procedure.**

The virtual hearings process has the same format as the physical hearings. Oral arguments are offered by lawyers. There is the display of documents using the screen-sharing. Testimonies are recorded on camera. Judges provide directions and ask questions. Confidential communication between lawyers and clients can be done in breakout rooms. All the proceedings are done electronically.

#### **4.2.5. Reading of Orders and Judgements.**

The judge announces the order or sets the case aside to be determined after the hearings. Final orders and judgement are made available as electronic files and provided to both parties. One can also get certified copies online available. This is an electronic workflow system that guarantees judicial continuity without hardware reliance.

### **4.3. Larger Benefits and Effective functionality or Virtual Hearings.**

The virtual hearings have also been shown to be very effective in a number of critical aspects of access to justice.

#### **4.3.1 Greater Physical Courts Access.**

Physical distance is one of the greatest disadvantages of physical hearings because it becomes a barrier to justice. In the old systems individual had to cover a long distance to be in hearings. This travelling was expensive, income deprivation, physical exhaustion and danger. The fact that a number of individuals could not afford to make frequent visits to court led to people giving up legal claims. This physical burden is done away with in virtual hearings. An individuals may appear in court either at home, a legal aid centre or at a local cyber facility. This would particularly be significant in large nations such as India whereby the courts are distributed over expansive geographical regions. This digital access is very useful to the rural inhabitants, elderly populations, disabled citizens and migrant workers.

#### **4.3.2. Increase in Speed and Case Disposal.**

The traditional courts are provoked by grave delays due to adjournments, congested court-rooms, transportation issues and the inability to efficiently administer the cases. These delays are greatly minimized through virtual hearings. Attorneys are able to present themselves in several courts within a day. Cases can be scheduled by the judges in a better way. There is no need to move files between courts physically. Consequently, this has resulted in the courts being able to hear more case within a specific time. This assists in clearing up of cases and accelerates the process or resolving disputes.

#### **4.3.3. Financial Aid to Litigants.**

Virtual hearings save a lot of money in litigation. Litigants are able to save on travelling, accommodation, eating and loss of daily wages. Lawyers will save transportation and offices costs. To the economically less powerful part of society, this will help to make litigation less expensive and motivate them to find legal solutions.

#### **4.3.4. Administrative Efficiency to the Judiciary.**

In the case of the judiciary, the virtual hearings save the costs incurred in operations such as electricity, security, building maintenance, use of paper and storage of records. Electronic files need much less storage space and are much easier to handle. The staff at the court are able to concentrate on other administrative tasks that are value producing than paperwork.

#### **4.3.5. Hearing Procedure: Maintaining Justice in Emergency Situations.**

Among the greatest benefits of virtual hearings, it is possible to note the fact that the justice system will not have to be disrupted under the emergency conditions. In the conventional

systems courts rely a lot on physical presence. Physical court buildings are frequently forced to be shut down when there is a serious emergency, e.g. during a pandemic or natural disaster, political unrest and in cases of security threats. This puts a scenario where justice is postponed or not taken at all. Nevertheless, justice requirement does not cease in case of emergency. The citizens still require their protection of life, liberty, property, family rights and personal safety.

The most obvious example of how virtual hearings aided in the continuation of justice is the COVID-19 pandemic. The lockdown caused a huge crisis in courts around the world as people were limited in their movements and in person meetings were risky. Without the courts being fully closed, thousands of pressing cases would have not been heard. This might have resulted in gross injustice such as extended illegal imprisonment, refusal of medical aid, unpaid labour, domestic misconduct and abuse of basic rights.

The Virtual hearings have resolved the issue because the judges, lawyers and litigants can communicate through the internet at their homes. Cases like bail cases, protection orders, custody cases and constitutional cases were conducted online and were urgent cases. This waves to make sure that even during lockdown of society justice was not fully suspended. In addition to pandemics, virtual hearings come in handy during floods, earthquake, storms, transport strikes or political unrest. Physical travel in such cases is dangerous or not possible. With digital courts, it is possible to hold hearings without put a risk in the lives of people. The demonstrates that virtual hearings are a safety net to the justice system since it will not collapse when a crisis strikes. This advantage in a larger way enhances the public trust on the judiciary. The citizens have a lot of security knowing that even in extreme situations, court will not be closed. Therefore, virtual hearings safeguard not the individual rights only but the stability of the whole legal system as well.

#### **4.4. Significant and Profound Disadvantages of Virtual Hearings.**

Virtual hearings have advantages, but they also create significant problems that compromise equality and justice. Despite all advantages associated with virtual hearings there are deep and serious limitations that cannot be overlooked. Such constraints influence equity, equality, dependability and the quality of justice in general. Technology will be helpful but will not be able to substitute a human presence and conventional courtroom proceedings. Justice encompasses not just speed and convenience, but it is about listening carefully ensuring a proper understanding being sensitive to emotions and involving equal participation.

Remote hearings depend entirely on e-system. Justice may not be served in the event that people cannot equally access these systems or in the even that the technology fails. Most of the issues that are caused by the virtual hearings are not minor technical bugs but structural problems, which are quite severe and challenge the basis of fair trails. Social inequality, poor infrastructure, cybersecurity threats, issues with the examination of witnesses, absence of courtroom discipline and lawyer client communication issues are some of there limitations. Unless these issues are appropriately addressed, virtual hearings can give rise to new types of injustice rather than eliminate the old ones.

Thus, as much as virtual hearings are useful, they cannot be considered as a substitute of physical courts. They should be applied selectively and economical particularly on sensitive and serious cases. Control issues, it may be more difficult for a judge to control a virtual courtroom than a physical courtroom. Judges can't see what's going on behind the scenes of the camera lens. While most court sessions are open to the public, cases without a jury usually involve just the judge, the client and the lawyers. But when you're online using a service like zoom, children, relatives and anyone with a password can watch. This is especially important when it comes to requesting witnesses. In a physical court, the judge can order that the witnesses stay outside the courtroom until it's time to testify. It is harder to enforce the rules when you are conducting court virtually. Many personal records including psychological evaluations, medical reports and other information are introduced in trials and other court hearings. There is a greater risk that this information can be hacked when youre in a video conference<sup>39</sup>.

#### **4.4.1. Digital Divide and Social Inequality.**

One of the greatest problems with virtual hearings is the digital divide. Digital divide refers to the variance between people who can easily access the internet, digital devices and technical expertise and those who cannot. A big population in most of the countries among them the developing ones, does not have access to proper internet facilities. In developed nations not all the population groups, including elderly folks, low-income families, rural citizens and individuals with disabilities and experience minor digital challenges.

---

<sup>39</sup> Advantages and Disadvantages of Virtual Court Hearings by Author R Sadler Bailey:  
<https://www.greerinjurylawyers.com/advantages-and-disadvantages-of-virtual-court-hearings/>

A lot of the individuals lack access to smartphones, laptop and computers. Other people might possess gadgets but lack the knowledge of how to use video conferencing systems, web-based forms and electronic documents. Still others reside in places where the internet connection is low, unreliable, or it does not exist at all. Virtual hearings are confusing and stressful to such people. This poses a severe threat that the rich, educated and urban people will have a comfortable time as the poor, uneducated and rural people will be left behind. In case an individual fails to attend a virtual hearing because he or she has no technology, his or her case might be postponed or terminated. This is a direct breach of the very concept of equality before law.

Digital confidence is also influenced by social inequality. Numerous poor and the illiterate litigants are terrified to stand in front of cameras, scared to press the wrong buttons or in fear of technical failure. They are giving whole helplessness to lawyers or cyber facilities. This dilutes their first-hand involvements in their case.

So, it is not just a technical issue the digital divide is a social justice issue. Unless governments encourage people to use virtual courts and at the same time encourage digital education, access to the internet and cheaper gadgets than digital justice will become digital discrimination.

#### **4.4.2. Technical Issues and Lack of Infrastructure.**

Online hearings slowly depend on technology. This involves electricity, internet connectivity, software platform, servers, camera, microphones and digital storage systems. Failure of any of such elements can result in a disruption of the entire hearing. Electricity supply in most regions particularly those in the rural areas is irregular. Internet connections are poor and slow. Audio video frequently freezes or cuts off. They can eject the participants out of the hearings without prior notice because of network failure. When it occurs in the process of key arguments or testimony of the witness it is very harmful to the quality of justice.

Technical problems are worldwide even in cities. Servers may crash following heavy load. Software platforms can run smoothly. Compatibility may result from updates. Lawyers and judges might not be trained to find out solutions to technical problems on the spot. This leads to delayed, adjourned or postponed hearings. As compared to the physical court where the entire court proceeds even in the case of minor disruption, a virtual court will simply fall as soon as there is a technical failure. This indicates that digital justice is so weak.

Virtual hearings are not possible in the case of weak infrastructure. Thus, digital hearings can never be stable and reliable without the powerful digital infrastructure, constant electricity, high-speed internet and effective technical support.

#### **4.4.3. Information Security and Hacking.**

Virtual Hearings need the transfer and processing of very delicate individual and legal information. This incorporates identifies documents, criminal records, financial, medical reports, family conflicts, witness statement and confidential legal strategies. All this information is saved in the digital copy on servers and cloud systems. Unless these systems are well secured, this kind of information is liable to theft, leakage or abuse. Court systems may be attacked by hackers, interfered with or manipulated. There is a possibility of videoing of hearings by unauthorized persons and spreading them through social media. This will be very deterred mental to victims, witnesses and accused persons.

Privacy is particularly significant in family cases, sexual offence cases and juvenile cases. Any information leakage may ruin the self-image, security and reputation of the people. It is nearly impossible to delete the personal information, once it is leaked online.

The independence of the judiciary is also put at risk by cybersecurity issues. In case of hacking into court systems, it is possible to alert, destroy and block judicial records. This poses a great threat to the rule of law. Thus, effective cybersecurity regulations, encrypted sites, limited access, data protection officers and constant monitoring are all that is needed to secure digital courts.

#### **4.4.4. Issues with witness Examination and Evaluation of Evidence.**

The inability to examine the witnesses and check evidence properly is among the most severe constraints of virtual hearings. In a conventional physical court, the behaviour of witnesses is closely monitored by the judges as they testify in court. The judge observes the body language, stammering, tone of voice, eye contact, emotional response and general confidence. Such sign usually serves the purpose of the judge to determine whether the witness is telling the truth or attempting to conceal something. The cross-examination in the physical courts also works better as the lawyers can respond directly to the responses of the witness and see the responses that comes naturally.

This personal observation is extremely decreased in virtual hearings. The judge does not even physically see the witness but looks at him through a camera screen. Videos and sound quality are usually determined by internet speed, lighting and the position of the camera. It can be very easy to conceal significant facial expression and emotional response because of a bad camera angle, a screen that is out of focus or because of low sound quality. The judge might not be in a position to comprehend whether the witness is nervous, confused, confident or under pressure fully. This directly influences the credibility that can be determined by the court.

Lack of control to the physical setting of the witness is another big issue. The judge in a courtroom makes sure that the witness is alone without external influence and does not have any hidden documents to support him. During virtual hearings one cannot easily assure that the witness is not reading himself/herself, being instructed by a person standing near or even being coached using a different device. One can never be certain that an off-camera person is not coaching the witness. This poses a great danger to the equality of trial proceedings. Online hearings also complicate the procedure of handling physical evidence. Physical evidence including weapons and documents as well as electronic equipment and forensic samples are crucial in criminal cases. Such evidence is indicated in virtual courts as in the form of scanned copy, photographs or video recordings. This decreases the pure physical examination of evidence. The judge himself is not able to touch, feel or closely investigate the material object. This can compromise the accuracy of evidence evaluation particularly during criminal trials where physical evidence is vital.

In India, only after legal acceptance of video conferencing, serious criminal trials are still normally performed in a physical hearing. *State of Maharashtra v. Dr Praful B. Desai* (2003) permitted recording of evidence through video conferencing however the Supreme Court noted that it would not overrule fairness. It portrays the fact that the Indian courts acknowledge that technology is useful but are still wary of its influence on the credibility to witnesses and right to fair trial.

The same as the case in the European Union legal system. Video hearings have only been accepted by the European Court of Human Rights under the circumstances where video conferencing allows the accused and witnesses to be effective participants as well as consult their lawyers. This demonstrates the fact that even the international law acknowledges that the right to a fair trial can be infringed when the virtual examination of the witnesses is

performed improperly. Thus. Virtual hearings are practical to use in procedural issues, but they are extremely unsafe in a severe criminal case where someone can only be truthful, and the physical evidence can serve as a determining factor<sup>40</sup>.

#### **4.4.5. Undermining of Courtrooms Discipline and Judicial Authority.**

The other significant problem that virtual hearings have brought is the loss of courtroom discipline and the judicial power. There is a high psychological and symbolic value in the physical court room. The courtroom setting gives the perception of seriousness, respect and fear of law. The fact there is a judge, a police team, court officers and national symbols indicate one thing that the judicial process is definitive and legitimate. To talk to the court, lawyers are standing, parties are also behaving in a respectfully way and no one is talking or mobile phone is on silent. This corporal punishment is used in order to uphold the integrity and status of the judicial system

This strong air is highly diminished in the case of virtual hearings. People usually attend hearings at their homes, offices or even in the open areas. The gravity of proceedings is sometimes spoiled by background noise, family disturbance, mobile phone disturbances and poor camera setups. Other participants go before hearings casually dressed, lying on beds or sitting in a noisy place. Such actions would not be tolerated in a real-life courtroom. This undermines the ethical power of the court. Controlling courtrooms virtually is also a challenge to the judges. On physical courts a judge may warn a lawyer or party that is misbehaving instantly and even take strict action like contempt of the court. In virtual hearings, it is hard to manage masses of people. Muting microphones, kicking out participants in virtual rooms and dealing with interruptions consume time and decrease the flow of the hearings.

The fact that this courtroom discipline has been lost also impacts negatively on the confidence of the people in the justice system. People will start feeling that judicial authority is decline when they observe court proceedings in a careless manner. The law becomes irresponsible when it is not formal. This is a harmful psychological impact of the long-term virtual justice. Some of the High Court in India have come up with strong or strict guidelines of virtual hearings requiring lawyers and parties to appear presentable and sit in a

---

<sup>40</sup> Article 6 (criminal limb) hearings via video link, European Court of Human Rights: <https://ks.echr.coe.int/documents/d/echr-ks/hearings-via-video-link>

formal setting and act with dignity. This demonstrates that virtual forums naturally decrease courtroom discipline and need extra policing in order to preserve authority. In this sense, virtual hearings are practical, but they may also undermine the psychological respect of traditional courtrooms and the symbolic power of the law.

#### **4.5. Problems with Lawyer- Client Communication.**

The state of effective communication between a client and a lawyer is one of the most crucial preconditions of the fair trial. A client should be at liberty to free-flowing presents facts to the lawyer, advisory services will be given in a confidential way, and every aspect of the case should be comprehended. Lawyer in physical courts easily sit next to their clients, whisper instructions on hearings, clarify on witness statements and legal strategy preparation is done on the spot. The intimate and confidential communication is extremely hard in virtual hearings. The client and the lawyer are often not in the same places. During the hearings, they are not allowed to speak one on one. There is no provisions of special digital breakout rooms. Even in case of the existence of such digital features, a lot of clients are not aware how to use them adequately. Lack of digital literacy renders it nearly impossible that most litigants can effectively converse in significant instances of the case.

This is an even greater problem to poor, illiterate, rural litigants. They tend to depend totally on the attorney to undertake the online procedure. They do not even know what is happening on the screen. This undermines their practical involvements in their case and add to its blind reliance on lawyers. This dependency is dangerous as it increases lack of transparency and awareness of the clients.

Another issue is that will be of great concerns is confidentiality. Clients might not get privacy in their homes or in the community cyber centres. Strict legal conversations between family members or strangers can be heard. This contravenes the lawyers-client privilege which is a major element of a fair justice system.

Courts in both Europe and India have realized that virtual hearings cannot be offered in any case where the conditional consultation between the accused and the lawyer cannot be effectively ensure. This indicates that the concept of digital justice will fail to work effectively without the safeguarding of lawyer client trust and privacy.

In a such way, even though virtual hearings make it more democratic to have access to courts, it tends to undermine the most human aspect of justice, the relationship between lawyer and client.

#### **4.6. European Union and India compared in These Challenges.**

A comparative analysis of both countries European Union and India reveals that both legal systems permit the use of virtual hearing but have various type of challenges depending on their social, economic and technological statuses.

The application of virtual hearings in India is rising at a high rate due to the COVID-19 pandemic. Thousands of online hearings were effectively carried out by the Supreme Court and High Courts. Nevertheless, the district and lower court level has a lot of issues left. There is poor internet connectivity in the rural places, intermittent power supply and most of the courts do not have adequate digital facilities. The majority of litigant lack personal computers and access to internet connections. There are also low digital literacy whereby old and poor litigants are the ones who are the least. It is because of these reasons that India is not fully relying on virtual courts, and it still must learn a lot on physical hearings when dealing with serious issues.

To the difficult, the European Union is usually better equipped in digital infrastructure, electricity stability, speedy internet and digital literacy. Majority of citizens feel at ease with the use of online platforms. Even before the pandemic courts were already advanced in digital systems. There is also enhanced cybersecurity protection due to the existence of good Data Protection Laws under the General Data Protection Regulation (GDPR).

Nonetheless, virtual hearings are not discussed as an ideal solution even in the European Union. In several EU nations, the use of online hearings is strictly prohibited in major criminal cases, family matters involving children and sensitive human rights. The European Courts of Human Rights had always been keen to ensure that virtual hearings do no go against the right to fair trail as provided in Article – of the European Convention on Human Rights.

India, therefore, has come to the same conclusion as the European Union does by various experiences. On routine case, virtual hearings are efficient in terms of process, reduction of costs and on other minor issues but these hearings cannot substitute the real courts in cases that are serious and sensitive.

## 5. International Law Standards of Digital Courts.

The coming to light of e courts and virtual hearings in the world has occurred under the greeting of the international human rights law that has been in existence since time long standing. Although the concept of modern technology did not exist during the drafting of these international tools, their values can be applied to digital courts to the full extent. Global judicial fairness is anchored on the International Covenant on Civil and Political Rights (ICCPR), 1996 and especially Article 14 that enshrined the right to a fair and open hearings by an independent and unbiased court. The incorporates the following fundamental rights, the right to know of charges, the right to time and the appropriate facilities to organise a defence, the right to a lawyer, the right to interrogate the witnesses and the right to equality of arms between the defence and the prosecution<sup>41</sup>.

The protection of these rights in physical courts is achieved by personal presence, courtroom discipline, open access by the public and personal interaction between the judges, lawyers and the parties. These rights in digital courts are supposed to be technology recreated. When a litigant is unable to make stopped eye contact with the judges because of the quality of the video is poor, because of sound disturbance, they are unable to hear submission because of the technical restrictions and because of the technical limitations they are unable to privately consult their lawyer, then their rights to a fair trial are practically ruined, despite the fact that they exist on paper. Such a symbolic or illusionary justice is plainly not welcome by international law.

The UN Basic principles on the Independence of the Judiciary (1985) are another very important instrument in the world. These principles demand that the judicial system should operate without political interference by the executive, the legislature, personal businesses and political powers. In the conventional courts, interference may be in the form of threats, bribes or political pressure. During digital courts, interference can be done by controlling servers, software manipulation, hacking judicial database, spying on hearings or even automated decision making using unregulated algorithms. In case the court technologies are under the control of government agencies or commercial enterprises without the rigid judiciary oversight, the independence of the judiciary is at risk. Thus, the international norms now entail that digital court infrastructure should be designed, maintained and monitored by the judicial authority.

---

<sup>41</sup> General Assembly resolution 2200A adopted on 16 december 1966 (International covenant on civil and political rights): <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights>

Another universal principle is open justice. The justice system should be accountable, and people should have confidence in the court proceedings, which is only possible when they are open. This is assured in digital courts by means of live streaming, limited public connections, posting of record hearings or live media access. Otherwise, online hearings may turn to secrecy and inaccessibility which will harm the democratic oversight of the courts. Therefore, the international law is not against digital justice, but it remains strict on the way it should work to maintain the sense of fairness, transparency and independence.

### **5.1 Europe: Digital Justice with a Heavy Human Rights Oversight.**

Digital Justice in Europe is not being left in the national discretion. It is continuously controlled by the jurisprudence of the European Court of Human Rights (ECTHR) by the means of the application of the Article 6 of the European Convention on Human Rights, having the right to a fair and public trial. The strongest digital justice case is the *Marcello Viola v. case Italy* (2006). The accused in this case had to appear by way of the video conferencing owing to security threats associated with organised crime. The applicant claimed that his rights had been infringed since he had not appeared in front of a judge physically.

The ECTHR decided that video hearings are not necessarily illegal. They are however illegal when they deny people the opportunity to participate well in the proceedings. The court imposed a number of conditions the accused should be able to watch and hear well, privately consult with an attorney in the process of hearings, watch the witnesses and confront the evidence provided by the prosecution. As per Article 6 would be violated by any breach of these protections. Such a decision made to be the rule of thumb to all the European digital courts. As an illustration when a convict in Spain conducts the hearing by video but cannot communicate privately with their lawyer because of guards around them or technological restrictions, the hearing may be contested under that principle which is referred to as *Viola*. This demonstrates that the concept of European digital Justice is legally constructed based on the protection of rights and not administrative convenience<sup>42</sup>.

---

<sup>42</sup> Article 14 of Right to fair trial, observations on Draft General Comment no.32 (Human rights law resource (Australia): <https://www.hrlc.org.au/app/uploads/2025/04/Submission-General-Comment-No-32-on-the-Right-to-a-Fair-Hearing-2npz.pdf>

### **5.1.1. Germany Innovative Technology and profound judicial reservation.**

Germany offers one of the best examples of how the digital justice can be working based on serious legal discipline. Video hearings have been allowed in Germany since the early 2000s in specific situations through civil procedure. In time of the pandemic the facility was extended to commercial disputes, labour law cases, tax cases, social security cases and immigration disputes. As an example, the big corporate contract disputes between the parties who are in various federal states were often held as video hearings and saved time and money on the travelling. Nevertheless, German judges do not consider video hearings as immediate substitutes of physical hearings. Judges check the stability of the internet, the quality of microphones, the camera and access to digital documents before starting any form of virtual proceedings. In case any of the sides complains of technical challenge that might affect the fairness of the hearing, the hearing will be postponed. This high procedural discipline is indicative of the high judicial culture of Germany.

Physical hearings are universal in severe criminal cases like murder, rape, organised crime and terrorism cases in Germany. This is due to the fact that witness truthfulness, emotional reaction, hesitation, fear as well as overall conduct are regarded as the primary focus of criminal justice, which cannot be deemed as safely evaluated through the digital screen only. Germany is therefore a supportive digital model not a replacement model.

### **5.1.2. France Digital Emergency Justice and the Protection of the Vulnerable.**

France was one of the countries that were highly dependent on virtual hearings in case of an emergency more so in case of COVID-19. The online reviews of immigration detentions, asylum appeals, domestic violence protection orders and urgent administrative disputes were made. As an example, victims of domestic violence could receive restraining orders via video hearings at a period when physical courts had been closed partly. The issue however became more significant when lawyers and human rights organisation claimed that inmates were frequently attending through congested detention facilities in which they could not assure confidentiality. There were cases when interpreters did not connect. Migrants and asylum seekers were not familiar with the technical platform, and this created confusion and anxiety. Elderly litigants were unable to log in and could not get adjournments or unfavourable decisions.

In response, French governments declared the obligatory legal assistance in digital hearings to vulnerable individuals increased the number of interpreters, improved confidentiality

rights and wider exceptions to physical hearings were essential. The experience of France also proves that digital justice can be just only in case social vulnerability is completely covered by the State<sup>43</sup>.

### **5.1.3. United Kingdom Digital Growth and The Digital Divide Reality.**

One of the quickest conversations to digital courts in Europe was done in the United Kingdom. The UK Supreme Court first in its history held online oral hearings. Courts of magistrates extensively resorted to virtual hearings when it comes to bail. Video platforms were utilized in family courts in terms of child custody. Contract disputes, lease disputes and commercial litigation were done online in civil courts. This was certainly an advantage to businesses and law firm's cases were quicker and the need to travel was minimized and cases could be handled as soon as they occurred but the case with poor and unrepresented litigants was completely different. A big percentage of the population was unable to afford laptops or a stable internet connection. Other participated in hearings at community parks in the edges of offices or in crowded living quarters where people had no privacy. This was mostly the case in domestic abuse cases as the victims was usually intimidated due to the presence of the accused in the same house at the hearing. Such grave dangers compelled the UK judicial system to establish publicly available digital participation rooms within certain court facilities where individuals with vulnerability could hear cases without any dangers with technical support. The case of UK is a strong demonstration that the efficiency of technologies without any social protection leads to injustice rather than to its resolution.

## **5.2. United States: Constitutional Rights as the Ultimate shield to full Digital Trials.**

Video hearings were not new to the US judiciary that was digitally advanced even before the CM/ECF (Case Management/Electronic Case Files) system enabled the electronic filing nationwide. In the face of the pandemic, courts quickly halted the processes of bail, motion hearings and oral arguments to zoom and related mediums. Inmates came out of detention centres through video connections. Attorneys were litigating in their offices. Courts were led by judges in their offices or in their houses.

Nevertheless, the US digital justice is guided by the constitutional guarantees. The Sixth Amendment ensures the right of confronting the witnesses, a trial in the presence of others

---

<sup>43</sup> Managing Civil disputes in France during the COVID-19 crisis (III) by Carine Paide: <https://www.white-case.com/insight-alert/managing-civil-disputes-france-during-covid-19-crisis-iii>

and the right of a good lawyer. These assurances in themselves restrict the option of complete virtual criminal trial. In Maryland v. The Supreme Court permitted video testimony under extraordinary situations, which included the need to protect child victims against trauma (Craig,1990). Even at that time, there was need of stringent security. Several states conducted virtual jury trails in the period of COVID-19. Nevertheless, most of the judges dismissed such trails after noticing a decline in juror concentrations, technical distractions of witness testimony and group jury logic deteriorated.

Therefore, with the lifting of restrictions most US jurisdictions reverted to physical jury trials in the shortest time possible. This is the reason why the United States has a hybrid justice system governed by a constitution, but online tools complement and are not substitutes of the essence of criminal justice.

### **5.3. Canada and Australia as a Geographically Inclusive Tool in Digital Courts.**

Canada and Australia both have the difficulty of serving its citizens that reside in a remote territory of vast size. The digital courts emerged as potent instruments to minimize geographical injustice. The video links provided access to magistrates and judges among the local communities of Northern Canada and rural Australia. Immigration tribunals, labour tribunals and administrative courts began moving numerous of their hearings online.

Governments invested heavily in order to be fair:

- Access to broadband in the rural regions.
- Legal aid video centres.
- Translation systems and interpreter systems.
- Confidential coded court systems.

Digital courts would have been city tools without such social investment. Canada and Australia therefore show that digital justice can only work successfully when it underwent welfare based legal infrastructure<sup>44</sup>.

### **5.4. India Large scale Digital Consumption and Gravely poor Structural Inequality.**

India is one of the most significant digital court projects ever in the history of humankind. The Indian government through the e-courts mission project is planning to link more than

---

<sup>44</sup> Legal Assistance services in Australian Government (Attorney-General's Department <https://www.ag.gov.au/legal-system/legal-assistance-services>)

25,000 Indian courts with digital case management systems. It involved millions of hearings by the pandemic including bail, labour disputes, constitutional petitions, taxation cases and cases involving public interest litigation. This digital transformation had a constitutional basis on two historic court rulings. The Supreme Court in *State of Maharashtra v. Dr. Praful B. Desai* (2023) stated that the right to fair trial is not infringed by the recording of evidence by using video conferencing. In *Swapnil Tripathi v. The Court Supreme Court of India* (2018) permitted live broadcasting constitutional hearings, which would increase information transparency and accessibility to the population.

India has deep rooted social challenges in fact of this development. In most villages, citizens have to cover very long distances to cyber cafes to attend hearings. Hearings were cut off by power failure. In prison video rooms privacy between lawyers and clients is usually not established. A large number of litigants who are old are unable to use digital platforms. Due to such disparities, the majority of severe criminal cases continue to be held in physical courts. India therefore represents a model of digital justice which is necessitated but not entirely on equality of access.

### **5.5. China High speed Digital Courts and the Danger of State Control.**

China has specialised internet courts that deal with internet commerce disputes, internet fraud and online contracts. As an example, a cheated buyer on a web-based e commerce may submit his case online, provide screenshots with evidence, take a hearing online and have a verdict made at home. Robotics help in evidence check and drafting of judgement. The same system however has serious human rights concerns. State owned media possess judicial information. Decision assistance algorithms are not clear. Automated judicial procedures can hardly be contested by citizens. Surveillance and algorithmic control can lead to reduction in judicial independence, although efficiency may increase which is the concern of international observers.

### **5.6. Singapore: The Most Disciplined Digital Judiciary in the World.**

Singapore is the best organised digital justice in Asia. All litigation is paperless even before litigation in a court of law online dispute resolution is promoted. Artificial intelligence is not applied to substitute court ruling but as an aide to the judges. The laws of cybersecurity are very strict. Frequently judicial training makes sure that the judges are digital savvy. Effective education to the citizens also means that the citizens are aware of how to utilize

digital courts. Singapore demonstrates that flawless integration of law, education, technology and institutional discipline can result in sustainable digital justice.

### **5.7. Japan and South Korea: well Developed Infrastructure That is emotionally and personally sensitive.**

Japan and South Korea have some of the best digital infrastructure across the globe. They both have broad adoption of e-filing and remote hearings on commercial and administrative proceedings. The two are however cautious in the criminal and family law proceedings. These nations have realised that the human emotions, fear, shame and vulnerability cannot be entirely reflected through the screen. Thus, physical hearings are still prevalent in such regions.

### **5.8. Conclusion of International Judicial systems.**

One thing has become universal across all continents. No nation has substituted conventional courts with entirely digital courts. Every legal system currently has hybrid systems. Routine cases go online. Explicit situations are corporeal. Technology aids the judges but does not substitute the human judicial authority. As demonstrated by the global experience digital courts have become a part and parcel of modernized system of justice. They cannot succeed, however without human rights protection, constitutional oversight and cybersecurity, judicial training and policies of social inclusion. Those countries who failed to follow these ideals were protested by people, disbelieved in and judged unjustly. Those countries which respected them developed strong and trusted judiciary.

## **6. How Effective are E-courts and Virtual Hearings in Improving Access to Justice?**

Virtual hearings and e-courts have brought a significant change in the justice system. Making courts accessible to people is one of the most powerful means through which they enhance the access to justice. Previously even those who had to attend a single hearing had to travel long distances, use money on the transport and take time off to the hearing. On the part of online courts, parties are now able to attend hearings in their homes or close areas. This comes in handy particularly to those residing in the countryside, the elderly persons with disabilities or those in the workplace and women who have family obligations. This way, e-courts minimize the physical, financial and time restrictions to justice.

The other great benefit associated with virtual hearings is that it enhances efficiency and speed of the justice system. The cases documents and tracking of cases can now be done through the internet. This saves the bulk of paperwork and facilitates handling of cases by the courts. Online systems have contributed to minimization of cases backlog and unnecessary adjournments in most countries. The virtual courts were instrumental during the COVID-19 pandemic as they ensured that courts operated even during lockdowns. Cases like bail bailouts, family claims and cases of public interest were also heard online demonstrating that justice can be administered even during a crisis situation. The use of e-courts also contributes to the minimization of the total litigation cost. Parties end up spending less money on travelling, staying and making frequent visits to court. Online hearings can help lawyers to deal with various issues more efficiency or effectively. To the government, digital records save the government the expense of storage as well as enhance transparency. These savings facilitate the justice system to become cheaper to the ordinary citizens and enhance the trust of the people in the justice system.

But not every sector of the society can enjoy the benefits of e-courts. One of the greatest challenges is the digital divide. There are not many people who have access to smartphones, computers, consistent internet and digital skills. This is more acute in the rural regions in the poorer the aged and the less education sections. Virtual courts might literally become a new wall to such people rather than a solution. When an individual is not able to log in to a hearing, uploading documents and comprehending digital processes, the right to access justice is undermined. In virtual hearings, there are also serious issue related to fairness and quality of justice. Among the technical issues that could disrupt hearings are poor sound or video freezing, power outages and slow internet access which would disrupt effective communication between parties, lawyer and judges. Lack of physical presence can also make the process less serious and can influence the evolution of witness behaviour and credibility. Physical courtrooms continue to be relevant in the criminal trials, as well as sensitive family cases in order to guarantee dignity, discipline and fairness.

Cybersecurity and data privacy are two important issues. The process of court proceedings requires personal information that is sensitive. Without the appropriate protection of the digital platforms, the possibility of hacking, leaks and personal data abuse exists. This may damage the privacy and security of litigants and decrease the trust in electronic justice systems by citizens. Thus, powerful data security laws and safe technologies are mandatory to ensure efficient working of the e-courts.

All in all, e-courts and virtual hearings can be very beneficial to the access to justice although their effectiveness will depend on their implementation. With good digital infrastructure, affordable internet, digitally trained users and legally protected laws, e-courts are obviously more efficient, less expensive and more accessible in dispensing justice. Nevertheless, in the absence of proper planning and inclusion they would lead to the spread of inequality and unfairness as well. This is why a hybrid approach, i.e. online hearings in case of appropriate cases and physical courts in case of complex and sensitive cases, has become popular in most countries. Technology in this balanced manner can indeed act as a medium to justice, instead of acting as an obstacle<sup>45</sup>.

### **7. Access to Digital Justice in The Future and Key Findings.**

The future of access to justice in the digital era is directly linked to the future advancement of technology. The civil infrastructure and legal changes. Digital justice is no longer an emergency device that is applied in times of crisis, as in the case of the COVID-19 pandemic. It is slowly being implant in the judicial system of most countries. This, it can be concluded that its future areas rely on the level of effectiveness of government, court and other legal institutions in enhancing digital systems without put at risk fairness, security and equality.

The growth of digital infrastructure at all levels of the courts, particularly rural and semi urban regions will be one of the most significant changes in the future. Currently, there is an unequal access to the digital. A lot of lower courts are still without a stable internet, up to date hardware and trained technical persons. In the future justice systems should be able to have high speed internet, video conferencing and secure digital systems in each of the courts complexes. This will enable the digital justice to be applied uniformly without inequality of the states and rural courts. Another key development expounded in the future is establishment of digital access centres to litigants by the government. There are lots of individuals who lack access to computers, smartphones and a reliable internet connection. Governments can develop free e-courts service centres in district courts, legal aid offices, public libraries and local government buildings in the future. Such centres will have the potential of assisting individuals in conducting online filing, uploading their documents,

---

<sup>45</sup> Unlocking Justice: How Virtual Courts are revolutionising Access to Fair Trials by Athour Sahil Arora: <https://justiceaccelerator.ai/blog/virtual-courts/>

participating in virtual hearings and monitoring case developments. This will eliminate the reliance on the middlemen and enhance the confidence of the people in the digital courts.

Another area that will be a part of digital justice in the future is more powerful cybersecurity systems and data protection laws. The possibility of cyberattacks, data leaks, identify theft and unlawful recording of data grown as more court data goes online. Advances encryption, access control policies and routines cybersecurity audits will also be required in the courts in the next years. Other countries such as the European Union are already governed by the strict data protection requirements by GDPR. Other powerful court specific data protection legislation should evolve around the world to safeguard the privacy and dignity of litigants.

The other topic is considered in the future is the development of artificial intelligence and automation in court administration. Artificial intelligence can assist in listing cases, sorting documents, translating, scheduling and legal research. Nevertheless, the application of AI in the future should never be beyond the control of a human. The decision-making process of the judiciary should not be completely automated. Judges should be required to be aided by technology and not by technology thinking, fair play and sensitivity.

The development of cross border online justice and international collaboration will also be seen in the future. As cross border trade movement and arbitration increase online, cross border court hearings, the delivery of documents and international arbitration can be effectively carried out with the help of online tools. Nevertheless, it needs to be internationally harmonized with the law, digital signature recognized and mutual trust in judicial technological systems.

Therefore, the future breadth of digital justice is wider and brighter, nevertheless it requires ongoing support of policy investment by the population, legal protection and solid ethical regulation. When developed well, digital justice can make it a powerful tool of equal, rapid and inclusive access to justice.

**Key Findings of Access to Digital Justice:**

Physical access to justice has been greatly increased through E-Courts.

Among the most significant discoveries of the research, it is possible to mention that e-courts and online hearings have contributed significantly to the physical accessibility of the justice system. Previously, individuals were required to cover a long distance of traveling to hear a case in the court and miss daily wages; the money could be used to by means of

transport and accommodation. Through introduction of online hearings litigants are now able to participate in the court hearings at home or in places close to them. This has particularly helped individuals in rural settings, women with family commitments, the old, individuals with disabilities and those individuals who are at work. This has led to the narrowing down of the physical distance between people and courts hence making justice more accessible and inclusive than ever.

Digital Courts have made the delay shorter and judicial efficiency higher.

The paper concludes that virtual hearings have assisted in increase the efficiency of the entire courts in general. The time that would be used by judges, lawyers and court personnel in filing cases, submitting documents electronically on digital cause lists and displaying court orders online saves a lot of time. The judges can handle more cases within a day since there is less adjournment create by delays during travelling or crowded court rooms. Attorneys do not have physically to be present in different courts at the same time. This has move quick disposal of cases and has assisted in curbing the issue of case backlog that has been experienced over a long period of time particularly in the civil and administration cases.

Litigants have reduced cost of litigation.

The other significant conclusion is that e-courts and virtual hearings have minimized the cost of litigation among common people. Litigants also save on transportation, food, lodging and making of frequent trip to court. Several individuals also do not lose income because they do not have to be physically out of the work making them attend short hearings. The saving on the reliance on clerks and middlemen has also minimized unnecessary costs. Thus, the digital justice has provided the legal procedure more affordable and financially accessible to the poor and middle-income population.

E-Courts Managed to have continuity of justice even in case of emergencies.

This report evidently demonstrates that courts were critical in ensuring that the judiciary operated in emergency cases, particularly in the COVID-19 pandemic. As physical courts were shut because of lockdown, virtual courts also facilitated hearing of such urgent cases as bail applications, petitions of fundamental rights, domestic violence cases and commercial disputes. This avoided the total collapse of the justice system and safeguarded the constitutional rights of citizens in an emergency situation in society. This observation confirms

that digital courts are vital resources to judicial continuity in times of national and international emergencies.

Digital Divide is the largest barrier to Equal Access.

Although e-courts are advantageous to the justice system, this paper concludes that the greatest obstacles to access to equal justice is the digital divide. A big part of the society does not have access to smartphones, computers, consistent access to the internet or technical expertise. This issue is complex in the rural and remote regions and in the elderly, illiterate and economically disadvantaged. To these groups, it is hard or even impossible to have virtual hearings. This has made digital justice so far favourable to the digitally educated population and digitally poor population is relegated. This disparity the very concept of equal access to justice.

Technical Problems Often Interfere with Virtual Hearings.

The other significant discovery is that the issue of technical failures is still common in virtual court proceedings. Problems with internet connectivity, power interruptions, broken microphones, video lag and overloading of servers are some of the problems that interfere with hearing and usually lead to unwarranted adjourning's. In some cases, litigants do not even attend a hearing at all as a result of technical difficulties, causing ex-parte decision or postponements. These issues complicate the efficient operation of e-courts and lower the trust of people in online in courts.

Weakening of courtroom Discipline and Authority.

The study reveals that virtual courtroom settings undermine courtroom discipline and judicial power at times. Courtroom decorum in the physical courts is enforced by formalities, physical attendance of the judges and orderly conduct of the lawyers and litigants. During online hearings, there are moments when some respondents are casually dressed, talk without authorisation or adhere to the proper court etiquette. This lowers the severity of the process, and it compromises the respect and power of the court. Such an observation means that as much as digital courts enhance convenience, they should have strict behavioural rules to ensure that they maintain judicial discipline<sup>46</sup>.

---

<sup>46</sup> Article- The Digital Divide: Ensuring Equitable Access to Online Learning Resources, Author: Amer Research Taqa: [https://www.researchgate.net/publication/388869720\\_The\\_Digital\\_Divide\\_Ensuring\\_Equitable\\_Access\\_to\\_Online\\_Learning\\_Resources](https://www.researchgate.net/publication/388869720_The_Digital_Divide_Ensuring_Equitable_Access_to_Online_Learning_Resources)

## **8. Recommendations to Increase access to Digital Justice.**

The growing trend in e-courts and virtual has changed the justice system in most countries fundamentally. Although the concept of digital justice has demonstrated a high potential in increase access, efficiency and continuity of judicial services. This new development also presents serious legal, social and institutional issues. According to the specific results of this study and the general findings of the academic insights on digital justice reforms, general guidelines are suggested to promote the digital justice system functioning in fair, inclusive, safe and sustainable ways. Access to justice via information systems-reducing costs and reallocating resources. As a result of all these innovations aimed at ensuring that the parties have to visit the court building only when strictly necessary, reform of the judicial map to reduce the physical presence of courts in a given area has been implanted or is under consideration in some countries. These reforms are incidentally often described as the ultimate advantage of using digital services, since the costs of developing and operating information systems are perceived by States as being far lower than those of procuring and maintaining judicial buildings and they even produce savings in human resources at the local level. However, some people point out that such a calculation does not necessarily take account of the hidden costs of switching to paperless services. Firstly, this involves a transfer of costs from the operator (the judicial systems) to the user (the citizen), the main costs being related to the time spent by the person who inputs data into the information system, a form of transfer observed with most online public or consumer services. Then there are the new costs that have to be incurred for the deployment of a high quality paperless service in the long term, for example investing in the new human resources profiles that have become essential for online justice (mostly by recruiting new staff when training or retraining is not enough) although the statutory staff costs for judges, prosecutors and registrars should for the moment at least remain unchanged.

### **8.1. Creating a Good and Solid Legal Foundation of Digital Justice.**

The initial and the most significant suggestion is the establishment of a well-defined, consistent and through legal framework of the working of digital courts. Virtual hearings were also initiated in most countries as emergency measure in the crises like the COVID-19 pandemic. Nevertheless, judicial systems cannot be sustained on long term basis on emergency-based practices. Thus, the new digital justice should be based on the officially established laws, court regulations and constitutional protections. The legal status of the virtual

hearings, electronic filing, online evidence, digital records, e-signature and video testimonies should be clearly regulated through this legal framework. It should establish the terms within which the online hearings should be allowed, how the right to hearings in the form of publicity should be maintained, how the consent of the parties should be received and how the protection of procedural rights, including the right to fair hearing, natural justice and equality before the law should be ensured in cyberspace. Lack of legal clarity will result in unequal, random and unchallengeable digital justice.

Moreover, there should be legislation on liability in instances of system breakdowns, unjust digital exclusions or technological failures that impact the verdicts. Stable legal system guarantees certainty, consistency, responsibility and institutional trust in digital courts.

## **8.2. Bridging the Digital Divide and Technological Equality.**

The most important suggestions are the fact that there is an immediate necessity to narrow down the digital divide to ensure that digital justice is not a privilege of the technologically developed parts of society. The academic literature has continued to demonstrate that digital access is not equally shared in terms of age, income, education, geographical areas and social groups. Unless these inequalities are reduced, the digital courts can end up maintaining the already established social and economic injustices rather than break down the barriers. Governments should consider the internet access as a fundamental civic good to administer justice like the use of physical court houses. This involves massive investment in broadband development, especially in the rural areas, remote areas and economically disadvantaged areas. It should have affordable access to data, open Wi-Fi areas around complexes of courts and cheap digital gadgets to make sure that citizens will be able to meaningfully engage with online proceedings.

Moreover, effective public-assistance mechanisms should be in place to support the digital justice. Assisted e-court services should be provided at the free legal aid offices, the district courts, the local administrative centres and community service hubs which provide trained personnel to assist litigants in filing cases, uploading documents, comprehending the notices and participating in hearings. This makes digital justice inclusive as opposed to being exclusive.

### **8.3. Increasing Quality, Reliability and Standardization of Court Technology.**

The next significant suggestion is the necessity to enhance the quality and reliability of the court technology with the help of national or regional digital Standards. Technical failure on retention is one of the greatest threats to the credibility of virtual hearings. The inadequate quality of video, audio failures, camera failure and shaky stands are direct causes of undermining fairness and efficiency of judicial processes. The adoption of standardized technical thresholds that all courts should observe before online hearings should be conducted is necessary by the judicial systems. These requirements must have minimum internet speed, video resolution, sound quality, encryption levels, power backup systems and limits on server capacity. Professional IT personnel should also support the courts so that they are able to resolve technical issues immediately when the hearings take place.

Technology should be used to serve justice but not to control it. Thus, the court rooms should be left to the jurisdiction of the courts and not to the court platform and system designs by the technology companies themselves. This maintains the autonomy, responsibility and objectivity of digital justice institutions.

### **8.4. Enhancing Cybersecurity and Courts Data Protection.**

One of the most important and confidential aspects of the reform of the contemporary judicial system is the protection of the digital court data. Court files are highly personal and confidential such as identity documents, medical records, finances, family conflicts, criminal charges and witness testimonies. In case they are leaked, hacked or distributed unlawfully, such information may do hopeless damage to people and greatly decline public trust in the justice system. Thus, it is essential that digital courts should be based on hard cybersecurity and data protection policies. The end-to-end encryption, secure authentication systems, identity verification mechanisms and user-role based access restrictions controls should be developed by all judicial platforms. Access to recordings and documents in the court should be restricted to authorized individuals and all access must be digitally recorded and audited.

Besides that, there should be direct legal consequences of illegally recording virtual hearings, publishing court proceedings illegally, misusing personal court data and cyberattacks on judicial infrastructure. Digital justice is not only a technical problem, but it is also a basic human rights concern that has been associated with privacy, dignity, security and due process.

### **8.5. Securing Procedural Fairness and Right to a Fair Trial.**

Digital justice increasing efficiently but it should never undermine the main principles of procedural justice. The right to a fair trial encompasses the right to be heard in the right way, the right to bring out evidence in an effective way, the right to have a confidential legal counsel and the right to have an equal opportunity during the process. The virtual platforms can block unplanned communication, delay observation of the non-verbal behaviour and compromise confidentiality in the relationship between the lawyers and the clients. Hence, online court session should be well calculated in order to maintain justice throughout. The judges should make sure that interruption by technical risk are properly handled, parties are well heard and that no party is disadvantaged because of poor access to digital facilities. Online procedures should be designed to have enough time to submit, secure clients-lawyers conference and protection against witness manipulation.

In serious criminal cases, complicated evidence-based disputes, as well as sensitive family cases, the physical hearing as a mode of proceeding should usually be the mode of preference unless all the parties reach agreement in favor of virtual hearing. The consideration of the fairness of the trial should always be protected first before convenience and speed.

### **8.6. Ongoing Digital Training and Capacity Building.**

Digital justice is not merely of a machine but also of a person. The judges, lawyers, court officials and legal aid officers need to be not only knowledgeable in the legal sphere, but also digitally competent. Lots of the first ineffective experiences of the virtual courts happened not so much because of technology but by the untrained and unfamiliar users. Judicial academies and bar councils should institutionalize the regular digital skill training programs. These must include instruction on cybersecurity awareness, digital ethics, online courtroom protocol, working with electronic evidence, online hearing management and accessibility compliance. Training cannot be a one-time program but should be a non-stop process that keeps changing with time and new technologies. A digitally assured judiciary will guarantee a more seamless process, greater cybersecurity awareness, improved quality of the process, and increased levels of confidence among the population in the online system of justice.

### **8.7. Implementing Powerful Monitoring, Accountability and Impact Evaluation systems.**

The establishment of constant monitoring and evaluation of the digital justice is one of the most significant long-term recommendations. The introduction of e-courts is insufficient, and one must measure, assess and improve the real-world impact of the same, basing on evidence.

Courts are expected to regularly gather and release information regarding:

- Case duration.
- Number of virtual hearings carried out.
- Appeal and reversal rates.
- Technical failures rates.
- User satisfaction.
- Levels of accessibility among the vulnerable groups.
- Cybersecurity attacks.

These systems should be audited and researched by independent academic institutions, judicial research bodies and the civil society organizations. Evidence based reform is a guarantee that digital justice is not overly progressive and stick to trends in technology.

### **8.8. The Hybrid Model of Justice as a Permanent System.**

Lastly, this study highly proposes the implementation of a hybrid justice system within the institutions as the standard of permanent model of judicial operations in the digital era. An all-digitalized court system is neither achievable not desirable. Similarly, going back to the full physical court system would be disregarding the advantages of technology that have been proven. The hybrid model would permit routine procedural issues, simple disputes, administrative cases and parties that are geographically remote to be heard digitally but make physical courtrooms available to serious criminal cases, complex civil cases and those involving vulnerable persons.

This balance combines human response, constitutional protection, technological efficiency and moral accountability. The hybrid model provides flexibility, resilience, inclusiveness and proportionality of judicial operations and is therefore the most viable recipe of the future working of justice.

To conclude, digital justice should be created not only as a technological project but as a judicial revolution on the basis or rights. Technology should not be controlled by law but

the reverse. In fact, digital courts can help increase access to justice only where there are powerful legal frameworks, equitable access to digital technologies, secure infrastructure, skilled professionals, procedural safeguards and continued public accountability. Digital justice, when applied in a responsible and hybrid and inclusive way, can help justice systems to work more quickly, more open, more cheaply and more effectively to satisfy the needs of the modern society without undermining their moral and constitutional principles.

### **Conclusion.**

In the conclusion the study was carried out to examine the effectiveness of e-courts and virtual hearings in increasing access to justice in the virtual era. The primary objective was to find out whether digital technology has made people access the justice system more conveniently, faster and cheaper. The paper depends on legal research comparison of various legal system, practical operation of digital courts in particular in India and the European Union. The analysis reveals that digital courts have introduced numerous positive impacts on the justice system. Virtual hearings and e-courts have minimized physical barriers time and money spent on litigation. Citizens do not have to go far distances to initiate a case or to represent during regular hearings anymore. The justice process has been accelerated and made easy by the introduction of online case filing, digital records and virtual court appearances. In such cases as in the COVID-19 pandemic, digital courts were of great significance to the justice system as they guaranteed the continuation of its operations without facing full disruption. This shows conclusively that technology has made courts efficient and accessible.

Meanwhile, the study also mentions that not all people have equal access to digital justice. There are still numerous individuals lacking access to the proper internet, computers and knowledge. This brings about a digital divide particularly among the rural population, poor section of the population, old age and people with disabilities. Virtual hearings are also disrupted by technical issues like bad internet connectivity, power outages, system crashes etc. incidents like online courts present a challenge in investigating witness, upholding a sense of order in the courtroom and effective communication between lawyers and their clients.

Another important finding of the study is that data privacy and cybersecurity are also a great concern in digital courts. The information in the court cases is very personal and law related; therefore, the information needs to be well secured. Without proper protection there

is a possibility of hacking, misuse of data and loss of confidence of the people to the justice system. Thus, accountability mechanisms, powerful technology and effective legal regulations should always accompany digital justice.

Comparatively, the European Union and India have achieved great flash point in their journey to digitalizing their courts. Nevertheless, the two continue to face the same challenges in respect to infrastructure, inclusion, rights to fair trial and protection of data. The practice of other nations also demonstrates that the virtual courts can be effective only when they are backed up with the powerful legislation, trained lawyers and judges and equal treatment of all citizens.

The greatest findings of this study are that e-courts and virtual hearings have enhanced the access to justice, although they can only work best when they are not over-utilized. The digital courts will never be able to substitute the physical courts. The serious criminal cases, complicated trials and sensitive cases that requires personal interaction still need to be heard face to face. Thus, the hybrid concept of justice which incorporates both physical courts and digital courts is the best suited system in the future.

Finally, the issue of justice in the digital age requires not just technology but also equity, equality, security and good legal regulation. Digital courts can be an influential resource to increase the justice system in case digital courts are established with adequate infrastructure, equality of access to digital devices, data security, judicial education and constant surveillance. Technology is the future of justice as it offers a support mechanism to the courts and not as a total alternative to the traditional process of justice.

## Summary

**Tanvi Sharma**

### **Access to Justice in The Digital Age: The Effectiveness of E-courts and Virtual Hearings**

In this Master thesis, I am going to discuss the subject of this paper, which is titled Access to Justice in the Digital Age: The effectiveness of E-Courts and Virtual Hearings. The primary objective of the study is to investigate the extent in which digital technology has enhanced access to the justice system by people and the increasing of virtual courts in providing fair, efficient and inclusive justice. The paper is concerned with the increased utilization of digital courts, in particular, following the COVID-19 outbreak and assesses the advantages as well as the barrier of the change. The study is based on doctrinal and comparative legal approach. It is informed on the premise of analysis of law and judicial rulings, legal reports and official court systems. Digital justice has been adopted in various legal systems particularly India and the European Union thus a comparative approach is employed to comprehend how these nations have embraced digital justice. There are also other countries like the United States and portions of Asia whose practical experiences are taken to facilitate the analysis.

The thesis starts with the definition of the term access to justice and its significance as a core value of humanity. On these points out the fact that traditional court systems usually present barriers because it is time consuming in terms of long delays, expensive and geographical distance and complicated processes. The paper then identifies how the digital technology was incorporated into the justice system to address some of these issue by e-filing, virtual hearings, online case management and electronics court records. The study reveals that e-courts and virtual hearings have changed live of many people positively. They have minimized time taken to file a case, hearings and made it cheaper to travel and litigate as well as making it easier to those who are living long distances before the court locations. Digital courts also guaranteed the continuity of justice during the physical court closure in time of emergency, namely, the COVID-19 pandemic. These innovations were evident to enhance efficiency, convenience and openness in the court of justice.

Nevertheless, there are also severe challenges and limitations of digital justice defined by the study. The biggest problem is the digital divide, as there are still many individuals who

lack access to both the internet and digital devices of the lack of technical knowledge. This reduces equal access to justice particularly among rural people, poor, elderly and people with disabilities. Other practical issues that have been pointed out in the study include technical breakdown, low network connectivity, ineffective infrastructure and power outages which hinder efficient operations of virtual courts.

On the other hand, conclusion is that virtual hearings cause problems in the examination of witnesses, evaluation of evidence, disciplining the courtroom and communication between lawyers and their clients. Physical absence may undermine the confidentiality, influence the ability to see the non-verbal behaviour of witnesses and decrease the gravity of the court's session in general. Another issue is that raised by the research is the data privacy and cybersecurity, as the court proceedings are associated with highly sensitive personal and legal data that should be very well-guarded. Comparatively the thesis concludes that both India and the European Union have gone a long way in terms of digitalization of their court systems. The EU digital justice initiative and India e-courts project have improved case administration and accessibility. Nonetheless, the two systems have continued to encounter similar problems concerning infrastructural, privacy, fair trial and inclusion of the digital. It demonstrates that digital justice is a worldwide trend that has both advantages and threats regarding various legal frameworks.

According to the finding it can be concluded in the thesis e-courts and virtual hearings have enhanced access to justice only to a little degree. The technology of digital cannot totally substitute traditional courts. Although it enhances expediency, ease and economic efficiency it does not entirely ensure justices, equality and human relations in all categories of cases. Thus, the study is a strong indicator of the hybrid justice system, according to which physical courts and digital ones operate at the same time,

General recommendations on how to reinforce digital justice are also contained in the thesis or it include here are some points:

- Developing effective legal system on digital courts.
- Minimize the digital divide by improving infrastructure and support by the general population.
- Securing of cybersecurity and data protection.
- Training judges and lawyers on a consistent basis and digitally.
- Confidentiality of procedural fairness.
- Continuously observing the effects of e-courts.

The general finding of the study is that technology is supposed to serve as an aiding factor towards justice, not as an alternative to conventional values of the judiciary. Digital courts can transform the justice systems and make it more accessible, more affordable, faster and more transparent. Provided that it is properly regulated and implemented inclusively. Nevertheless, global justice over the digital sphere can as well bring forth new sources of difference and danger unless appropriate precautions are taken.

In short, this thesis concludes that the future of justice is a digital-physically balanced justice system, where efficiency is balanced with fairness, human dignity and the rule of law. When used appropriately, taking equity, security and fairness into account e-courts and virtual hearings can produce justice that is more quick, fair and available to all. Technology should be a bridge to justice not a barrier.

## Santrauka

**Tanvi Sharma**

### **Prieiga prie teisingumo skaitmeniniame amžiuje: elektroninių teismų ir virtualių posėdžių veiksmingumas**

Šiame magistro darbe aptarsiu šio straipsnio „Prieiga prie teisingumo skaitmeniniame amžiuje: elektroninių teismų ir virtualių posėdžių veiksmingumas“ temą. Pagrindinis tyrimo tikslas – ištirti, kiek skaitmeninės technologijos pagerino žmonių prieigą prie teisingumo sistemos ir kiek virtualių teismų plėtėsi užtikrinant teisingą, veiksmingą ir įtraukų teisingumą. Straipsnyje nagrinėjamas padidėjęs skaitmeninių teismų naudojimas, ypač po COVID-19 protrūkio, ir vertinami šio pokyčio privalumai bei kliūtys. Tyrimas grindžiamas doktrininio ir lyginamuoju teisiniu požiūriu. Jis grindžiamas teisės ir teismų sprendimų, teisinių ataskaitų ir oficialių teismų sistemų analize. Skaitmeninis teisingumas buvo priimtas įvairiose teisinėse sistemose, ypač Indijoje ir Europos Sąjungoje, todėl lyginamasis metodas naudojamas siekiant suprasti, kaip šios šalys priėmė skaitmeninį teisingumą. Taip pat yra ir kitų šalių, tokių kaip Jungtinės Valstijos ir kai kurios Azijos dalys, kurių praktinė patirtis yra naudojama analizei palengvinti.

Disertacija pradedama nuo teisingumo prieinamumo sąvokos apibrėžimo ir jos, kaip pagrindinės žmonijos vertybės, svarbos. Atkreipiamas dėmesys į tai, kad tradicinės teismų sistemos dažnai kelia kliūčių dėl daug laiko reikalaujančių procesų, brangių ir geografinių atstumų. Toliau straipsnyje nustatoma, kaip skaitmeninės technologijos buvo įtrauktos į teisingumo sistemą, siekiant išspręsti kai kurias iš šių problemų, naudojant elektroninį dokumentų pildymą, virtualius posėdžius, internetinį bylų valdymą ir elektroninius teismo įrašus. Tyrimas atskleidžia, kad elektroniniai teismai ir virtualūs posėdžiai teigiamai pakeitė daugelio žmonių gyvenimą. Jie sutrumpino bylos pateikimo ir posėdžių laiką, atpigino keliones ir bylinėjimąsi, taip pat palengvino gyvenimą tiems, kurie gyvena dideliais atstumu iki teismo vietų. Skaitmeniniai teismai taip pat užtikrino teisingumo tęstinumą fizinio teismo uždarymo metu nepaprastosios padėties, būtent COVID-19 pandemijos, metu. Šios naujovės akivaizdžiai padidino teisingumo efektyvumą, patogumą ir atvirumą.

Nepaisant to, tyrime nustatyti ir dideli skaitmeninio teisingumo iššūkiai bei apribojimai. Didžiausia problema yra skaitmeninė atskirtis, nes vis dar daug asmenų neturi prieigos prie

interneto ir skaitmeninių įrenginių dėl techninių žinių stokos. Tai mažina lygias galimybes gauti teisingumą, ypač kaimo gyventojams, neturtingiems, pagyvenusiems ir neįgaliesiems. Kitos praktinės problemos, į kurias atkreipiamas dėmesys tyrime, yra techniniai gedimai, prastas tinklo ryšys, neefektyvi infrastruktūra ir elektros energijos tiekimo sutrikimai, kurie trukdo efektyviai veikti virtualiems teismams.

Kita vertus, išvada yra ta, kad virtualūs posėdžiai sukelia problemų apklausiant liudytojus, vertinant įrodymus, drausminant teismo salę ir bendraujant tarp advokatų ir jų klientų. Fizinis nebuvimas gali pakenkti konfidencialumui, turėti įtakos galimybei matyti neverbalinį liudytojų elgesį ir sumažinti teismo posėdžio rimtumą apskritai. Kita tyrimo keliamą problema yra duomenų privatumas ir kibernetinis saugumas, nes teismo procesai yra susiję su labai jautriais asmens ir teisiniais duomenimis, kurie turėtų būti labai gerai saugomi. Palyginimui, disertacijoje daroma išvada, kad tiek Indija, tiek Europos Sąjunga nuėjo ilgą kelią skaitmenindamos savo teismų sistemas. ES skaitmeninio teisingumo iniciatyva ir Indijos e. teismų projektas pagerino bylų administravimą ir prieinamumą. Nepaisant to, abi sistemos ir toliau susiduria su panašiomis infrastruktūros, privatumo, teisingo teismo ir skaitmeninių technologijų įtraukties problemomis. Tai rodo, kad skaitmeninis teisingumas yra pasaulinė tendencija, turinti ir privalumų, ir grėsmių, susijusių su įvairiomis teisinėmis sistemomis.

Remiantis disertacijos išvadomis, galima daryti išvadą, kad elektroniniai teismai ir virtualūs posėdžiai tik šiek tiek pagerino prieigą prie teisingumo. Skaitmeninės technologijos negali visiškai pakeisti tradicinių teismų. Nors jos didina greitį, paprastumą ir ekonominį efektyvumą, jos ne visiškai užtikrina teisingumą, lygybę ir žmonių santykius visų kategorijų bylose. Taigi, tyrimas yra stiprus hibridinės teisingumo sistemos, pagal kurią fiziniai ir skaitmeniniai teismai veikia vienu metu, rodiklis.

Disertacijoje taip pat pateikiamos bendros rekomendacijos, kaip sustiprinti skaitmeninį teisingumą, arba joje pateikiami keli punktai:

- Efektyvios teisinės sistemos, pagrįstos skaitmeniniais teismais, kūrimas.
- Skaitmeninės atskirties mažinimas gerinant infrastruktūrą ir visuomenės paramą.
- Kibernetinio saugumo ir duomenų apsaugos užtikrinimas.
- Nuolatinis teisėjų ir advokatų mokymas skaitmeniniu būdu.
- Procesinio teisingumo konfidencialumas.
- Nuolatinis elektroninių teismų poveikio stebėjimas.

Bendra tyrimo išvada yra ta, kad technologijos turėtų būti pagalbinis veiksnys siekiant teisingumo, o ne alternatyva įprastinėms teismų vertybėms. Skaitmeniniai teismai gali transformuoti teisingumo sistemas ir padaryti jas prieinamesnes, įperkamesnes, greitesnes ir skaidresnes. Jei jos bus tinkamai reguliuojamos ir įgyvendinamos įtraukiai. Nepaisant to, pasaulinis teisingumas skaitmeninėje erdvėje taip pat gali sukelti naujų skirtumų ir pavojų šaltinių, nebent bus imtasi tinkamų atsargumo priemonių.

Trumpai tariant, šioje disertacijoje daroma išvada, kad teisingumo ateitis yra skaitmeniniu ir fiziniu požiūriu subalansuota teisingumo sistema, kurioje efektyvumas yra subalansuotas su teisingumu, žmogaus orumu ir teisine valstybe. Tinkamai naudojami, atsižvelgiant į lygybę, saugumą ir sąžiningumą, elektroniniai teismai ir virtualūs posėdžiai gali užtikrinti greitesnę, teisingesnę ir visiems prieinamą teisingumą. Technologijos turėtų būti tiltas į teisingumą, o ne kliūtis.

## REFERENCE:

1. Author Jason Tashea: The legal and technical danger in moving criminal courts online [https://www.brookings.edu/articles/the-legal-and-technical-danger-in-moving-criminal-courts-online/?utm\\_source](https://www.brookings.edu/articles/the-legal-and-technical-danger-in-moving-criminal-courts-online/?utm_source)
2. Technological Requirements for Videoconferencing Judicial Hearings: Enhancing the Credibility and Reliability of remote Testimonies by Author Jorge Alberto Aaujo in Cornell University [https://arxiv.org/abs/2507.19496?utm\\_source](https://arxiv.org/abs/2507.19496?utm_source)
3. International Covenant on Civil and Political Rights: General Assembly Resolution 2200A(XXI) <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights>
4. European Convention on Human Rights Cour Européenne Des Droits De L'Homme: Council of Europe: [European Convention on Human Rights](#)
5. International Covenant on Civil and Political Rights by General Assembly resolution 2200A (XXI) <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights#article-14>
6. Access to Justice by Mauro Cappelletti, Harvard Law Review by Austin Sarat [Review: \[Untitled\] on JSTOR](#)
7. Access to justice: The newest wave in the worldwide movement to make rights effective by Author Bryant Garth (PDF) [Access to justice: The newest wave in the worldwide movement to make rights effective](#)
8. The Hamlyn Lectures, 2008 (Judging Civil Justice) by Author Hazen Genn <https://www.thebritishacademy.ac.uk/documents/812/BAR23-08-Genn.pdf>
9. 'The OCED Digital Government Index (DGI) survey on Open Govt data 5.0: <https://www.oecd.org/en/topics/digital-government.html>
10. Ministry of law and justice, GOI, Department of Justice: <https://doj.gov.in/>
11. Shaping Europe's digital future, managed by Directorate-General for communications network, content and technology: <https://digital-strategy.ec.europa.eu/en/policies/eidas-regulation>
12. Stanford Law School, Expanding Access to Justice in Eviction and Family Law (809L): <https://law.stanford.edu/education/only-at-sls/law-policy-lab/practicums-2023-2024/expanding-access-to-justice-in-eviction-and-family-law-809l/>
13. Author: Rebecca L.Sandefur, Legal Tech for Non-Lawyers: Report of the Survey of US Legal Technologies: <https://www.americanbarfoundation.org/wp-content/uploads/2023/04/report-us-digital-legal-tech-for-nonlawyers.pdf>
14. How to Think About AI by Author Richard Susskind: <https://www.susskind.com/>
15. Making Justice systems more effective and people centred by OECD: [https://www.oecd.org/en/publications/making-justice-systems-more-effective-and-people-centred\\_e02fd90b-en/full-report/leading-the-transformation-of-the-justice-system\\_d7121065.html](https://www.oecd.org/en/publications/making-justice-systems-more-effective-and-people-centred_e02fd90b-en/full-report/leading-the-transformation-of-the-justice-system_d7121065.html)
16. Digitalization and E-Justice by Rule of Law and Human Rights (UNDP): <https://www.undp.org/rolhr/justice/digitalization-and-e-justice>
17. Article: Asian data privacy laws: trade and human rights, Author Graham Green leaf: [https://scholar.google.com/citations?view\\_op=view\\_citation&hl=en&user=03FXwOcAAAAJ&citation\\_for\\_view=03FXwOcAAAAJ:q3CdL3IzO\\_QC](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=03FXwOcAAAAJ&citation_for_view=03FXwOcAAAAJ:q3CdL3IzO_QC)
18. The information Technology Act,2000, Ministry of Information Technology, (GOI): [https://www.meity.gov.in/static/uploads/2024/03/IT-Act-Rules\\_2000\\_0.pdf](https://www.meity.gov.in/static/uploads/2024/03/IT-Act-Rules_2000_0.pdf)
19. Section 65B of Admissibility of electronic records of Information Technology Act,2000: [https://www.indiacode.nic.in/show-data?actid=AC\\_CEN\\_3\\_20\\_00034\\_187201\\_1523268871700&orderno=71](https://www.indiacode.nic.in/show-data?actid=AC_CEN_3_20_00034_187201_1523268871700&orderno=71)
20. State of Maharashtra versus Dr. Praful (Supreme Court of India): <https://indiankanoon.org/doc/560467/>
21. Centre for Legal Policy, The fourth way- Drafting a Data Protection Law for India and the global South: <https://vidhilegalpolicy.in/impact/a-fourth-way-drafting-a-data-protection-law-for-india-and-the-global-south/>

22. Access to Legal Information and Research in Digital Age by Prof. Dr. Ranbir Singh: <https://nludelhi.ac.in/download/publication/2015/Access%20to%20Legal%20Information%20and%20Research%20in%20Digital%20Age.pdf>
23. Regulation (EU) 2016/679 of the European Parliament and of council dated 27 April 2016: <https://eur-lex.europa.eu/eli/reg/2016/679/oj>
24. The court of Justice of the European Union by Author Michal Bobek: [https://www.coeurope.eu/sites/default/files/research-paper/researchpaper\\_2\\_2014\\_bobek\\_0.pdf](https://www.coeurope.eu/sites/default/files/research-paper/researchpaper_2_2014_bobek_0.pdf)
25. Justice: Get Digital. Three questions to Florence G'ssell by Author Institut Montaigne: <https://www.institutmontaigne.org/en/expressions/justice-get-digital-three-questions-florence-gsell>
26. What to expect when joining a telephone or video hearing, published on 30 october 2020 from HM Courts and Tribunal Services: <https://www.gov.uk/guidance/what-to-expect-when-joining-a-telephone-or-video-hearing>
27. Court Operations during the COVID-19 Pandemic, Author Julie Marie Baldwin: <https://pmc.ncbi.nlm.nih.gov/articles/PMC7354363/>
28. A toolbox for the Effective Implementation of Climate Law, Speaker Nigel Pleming KC, The British Institute on International and Comparative Law (BIICL): <https://www.qmul.ac.uk/law/events/archive/items/a-toolbox-for-the-effective-implementation-of-climate-law.html>
29. A toolbox for the Effective Implementation of Climate Law, Speaker Nigel Pleming KC, The British Institute on International and Comparative Law (BIICL): <https://www.gov.uk/government/organisations/hm-courts-and-tribunals-service/about/research>
30. Canadian Judicial Council: Access to justice: [Access to justice](#)
31. Virtual Courts in India, E-courts services: [https://ecourts.gov.in/ecourts\\_home/index1.php](https://ecourts.gov.in/ecourts_home/index1.php)
32. Article: Accountability and Transparency of the Electronic Court and Litigation systems in Indonesia by Author Tanto Lailam: [https://www.researchgate.net/publication/378632445\\_Accountability\\_and\\_Transparency\\_of\\_the\\_Electronic\\_Court\\_and\\_Litigation\\_Systems\\_in\\_Indonesia](https://www.researchgate.net/publication/378632445_Accountability_and_Transparency_of_the_Electronic_Court_and_Litigation_Systems_in_Indonesia)
33. ECourts Services- Virtual courts, District and Taluka Courts of India: [https://ecourts.gov.in/ecourts\\_home/](https://ecourts.gov.in/ecourts_home/)
34. Access to Justice for all and the Covid-19 Pandemic: Recommendations for Action. Event: World Justice Challenge Webinar <https://worldjusticeproject.org/our-work/engagement/world-justice-challenge/access-justice-all-and-covid-19-pandemic>
35. OECD: Tackling Coronavirus (COVID-19): [https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/09/access-to-justice-and-the-covid-19-pandemic\\_0ea1b2a3/09a621ad-en.pdf](https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/09/access-to-justice-and-the-covid-19-pandemic_0ea1b2a3/09a621ad-en.pdf)
36. On-line hearings in justice systems(UN Human Rights): <https://www.ohchr.org/sites/default/files/documents/issues/ruleoflaw/Briefer-Online-hearings-justice-systems.pdf>
37. Advantages and Disadvantages of Virtual Court Hearings by Author R Sadler Bailey: <https://www.greerinjurylawyers.com/advantages-and-disadvantages-of-virtual-court-hearings/>
38. Article 6 (criminal limb) hearings via video link, European Court of Human Rights: <https://ks.echr.coe.int/documents/d/echr-ks/hearings-via-video-link>
39. General Assembly resolution 2200A adopted on 16 december 1966 (International covenant on civil and political rights): <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights>
40. Article 14 of Right to fair trial, observations on Draft General Comment no.32 (Human rights law resource (Australia): <https://www.hrlc.org.au/app/uploads/2025/04/Submission-General-Comment-No-32-on-the-Right-to-a-Fair-Hearing-2npz.pdf>
41. Managing Civil disputes in France during the COVID-19 crisis (III) by Carine Paide: <https://www.whitecase.com/insight-alert/managing-civil-disputes-france-during-covid-19-crisis-iii>
42. Legal Assistance services in Australian Government (Attorney-General's Department <https://www.ag.gov.au/legal-system/legal-assistance-services>
43. Unlocking Justice: How Virtual Courts are revolutionising Access to Fair Trials by Athour Sahil Arora: <https://justiceaccelerator.ai/blog/virtual-courts/>
44. Article- The Digital Divide: Ensuring Equitable Access to Online Learning Resources, Author: Amer Research Taqa: [https://www.researchgate.net/publication/388869720\\_The\\_Digital\\_Divide\\_Ensuring\\_Equitable\\_Access\\_to\\_Online\\_Learning\\_Resources](https://www.researchgate.net/publication/388869720_The_Digital_Divide_Ensuring_Equitable_Access_to_Online_Learning_Resources)