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ALIGNING THE PRINCIPLES OF JUDICIARY AND LITIGATION WITH THE FOURTH INDUSTRIAL REVOLUTION

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ABSTRACT

This research is an effort to shed light on the positive value of the amazing technical development that has organized humanity in various fields of life towards achieving, establishing and disseminating justice. And research as well; An attempt to emphasize the possibility of achieving and strengthening the philosophy of "technology for good," especially in the field of justice, in a way that contributes to its effective achievement, with strict adherence to established principles of judiciary and litigation. Through it, it is linked to technology. It is not a matter of control and control based on blind academic nervousness, arrogant professional tendencies, or isolated technical dominance. Rather, it is an integration and harmonization between them. For effective management and organization, it achieves better facilitation of access to justice and increases the efficiency and level of the judicial and judicial work system, with transparency. With speed, simplification, and security. All of that; in an advanced, integrated, and diverse work environment. To achieve the research endeavour, we first reviewed: Some aspects of rapid technical development from the first industrial revolution until the fourth industrial revolution, and even; and the features of the Fifth Industrial Revolution that seemed apparent. Then, in the first section, we presented the concept of electronic litigation and technical efforts in the era of the digital revolution. In the second section, we looked at the most important principles of judiciary and litigation, to talk about then: About the dialectical relationship and the possibility of control and harmonization between it and digital technology. The research reached several results and recommendations, most notably: the possibility of achieving a balance between the principles of justice and digital development, provided that some traditional concepts are reformulated and judicial legislation is modernized. With the use of the "robot judge" in a limited way, without prejudice to the role of the human judge.

KEYWORDS: Technology For Good, Principles Of Judiciary And Litigations Consistency And Alignment, Fourth Industrial Revolution, Judge Robot, The Accused, E-Litigation, Artificial Intelligence, Digital Legislation, Digital Justice Governance.

1. INTRODUCTION

It is established that the basic message of all human beings is to achieve and spread justice. Based God said "We have already sent our messengers with clear evidence and sent down with them the Scripture and the balance that the people may maintain [their affairs] in justice. And we sent down iron, wherein is great military might and benefits for the people, and so that Allah may make evident those who support Him and His messenger's unseen. Indeed, Allah is Powerful and Exalted in Might." Quran. (n.d.). The Holy Quran.

It is also established; the judiciary represents the most important pillar of justice and the hump of the judicial apparatus. But rather; it is considered one of the most important manifestations of state sovereignty. It goes without saying that the judicial and litigation processes are established and governed by a set of well-established principles, all of which combine to fulfil its full role. From another angle; the world has witnessed amazing developments in the technical field thanks to successive industrial revolutions, in what has been called; in the era of digital technology. Its effects were not limited to economic and industrial aspects only

Rather, it extended to bring about profound transformations in management patterns, service delivery methods, and justice systems. And the judiciary; He exercised justice, not in isolation from this tremendous human development, as he continued to interact with it and be affected by it. Artificial intelligence tools, blockchains, big data, and cloud computing have imposed themselves on the legal and judicial landscape, creating a new reality that requires reconsidering how litigation procedures are organized and ensuring that justice is achieved within an integrated digital environment.

This has become clear; in the emergence of remote litigation, as an information judicial system under which all litigation procedures are applied through the electronic court, through computers connected to the Internet and e-mail. And so on; the judiciary is faced with a new mechanism that requires the establishment of foundations, rules and legislation. There is no doubt that this represents a major challenge, especially to his established principles.

This study aims to identify the challenges and opportunities facing these basic judicial principles, the extent to which they are affected by digital technology, and the possibility of overlap and harmonization between them. Therefore, the research has identified a broad framework to deal with the issue, as a comprehensive information development issue for the judicial facility not only to

improve some judicial procedures within the courts, but also to determine the stages of litigation as in their traditional case, according to electronic steps, by employing the general rules of the laws of procedure and pleadings, and adapting them to work in accordance with this system.

1.1. Reasons for Searching

The idea of this research was jumped by examining the decision of the French Constitutional Council Council Constitutionnel Français. (2021, January 15). Issued during the Covid-19 "Corona" pandemic, and the subsequent closure and distancing, on 01/15/2021 AD, which ruled that the visual trial that took place without the consent of the accused was unconstitutional. Considering that - even if the ruling was sound - it constituted a violation of fair trial guarantees and a violation of the rights of the accused.

The procedures stated explicitly in the texts were wasted. At that time, we were pleased with the ruling, as it was a victory for the clear texts. Which means justice according to our estimation! Then God blessed us with the Arab Open University in the Sultanate of Oman organizing a workshop on artificial intelligence, which was a reason for changing concepts towards reconciliation with technology, without standing literally in front of the text for inspiration from its spirit.

The final stage driving this research came when Dr.Kabali, Dean of the University's College of Business Administration, sent a short film to the entire university family (), the summary of his idea was: How can artificial intelligence save (and not destroy) education, or as Dr.Kabali expressed it at the time."AI for good" Artificial intelligence for good.

1.2. Study Problem

Since development in human life is inevitable, the world has become dependent on modern technologies in most of its dealings. However, it seems to some of our legal tribe, and even to some operators, interested parties, and dealers, that technology and litigation may conflict, intersect, and not combine to serve humanity and achieve its mission towards establishing justice among people to the fullest extent. accordingly, the problem of the basic study lies in contributing to proving that technology can be a positive factor in consolidating and serving justice, by discussing the extent to which the basic principles that govern the litigation and judicial processes are affected by the technical revolution, and the extent to which it is possible to dispense with some functions by integrating modern

technology and balancing it more effectively, to eliminate what may be imagined as competition with humans.

In order to achieve more knowledge of the requirements that must be met to hold court sessions electronically, by providing the necessary electronic programs and applications, and what is related to appropriate legislative aspects, in light of the relatively new and strange technology in the judicial facility.

1.3. Study Methodology

To achieve this, we have adopted two approaches: descriptive and analytical, with which the comparative approach appears whenever the occasion arises or occurs. With reference to legal and technical references, in addition to tracking some international and regional judicial models.

1.4. Study Objectives

In general, the study aims to shed light on the principles of judiciary and litigation, and the necessity of harmonizing them with the digital revolution that the world is witnessing, in order to integrate and integrate them. Accordingly, it aims to do the following:

1. A brief explanation of the most important of these principles, their philosophy and goals.
2. Promoting and emphasizing the positive aspects of technology in justice, with strict adherence to established principles.
3. Identifying the challenges facing these judicial principles through rapid technical development.
4. Identify the obstacles, challenges and opportunities in applying electronic courts and judicial principles.

2. LITERATURE REVIEW

I found a number of previous studies on this topic that dealt with its topic in one of its angles, or in part of it, or in a different way, including:

1. Nasser Amin, *Judicial Conditions in the Countries of the Arab Region*, (1999). It is a study that dates back to the pre-digitalization stage in the Arab world. It presented a realistic criticism of the conditions of the Arab judiciary in terms of independence and efficiency, and focused on political interference, weak capabilities, and the absence of independence. While this study kept pace with the Fourth Industrial Revolution and digital justice, it presented a development vision that anticipates the future of digital justice, with a

focus on the manner and necessity of harmony and reconciliation between technology and judicial principles.

2. Muhammad Awad Tarawneh, *Digital transformation in the judiciary and its impact on the rights of litigants* (2020). He addressed the relationship between digital transformation and guarantees of litigants' rights from a procedural angle, and assumed the integrity of the traditional judiciary as a reference that requires supporting it with technology, and that the crisis lies in means and training. While this research focused on the philosophical and legislative relationship between judicial principles and modern technology, and provided a clear and direct criticism of the paper lawsuit system, and the bureaucracy, exploitation and corruption it produces, and showed that the crisis lies in the judicial concepts themselves, and not just in the means. The research also presented a bold reform vision.
3. Said Bouanani, *The Right to Defense under Digital Justice* (2022). The research was specific about the principle of the right to defense and the impact of technology on it. It aimed at the extent to which technology weakens and harms it, and did not discuss the issue of artificial intelligence. While our research touched on a set of principles, presented a vision of the interrelationship between them and technology, and even proposed the possibility of merging artificial intelligence and human justice.
4. Muhammad Ezz El-Din Selim, *the Principle of Confrontation in Criminal Cases in Light of Electronic Litigation* (2019). Like its predecessor, it focused on the fact that a remote trial may weaken the principle of confrontation between opponents, unless technical and legislative guarantees are available that guarantee parity between the parties.
5. Marcel Storme, *Artificial Intelligence and the Future of Adjustment* (2018). Although the two studies discussed technology in light of the philosophy of justice in general; not as a procedural matter. However, the first limited itself to questioning the possibility of artificial intelligence in issuing judicial rulings, while this research increased by providing a comprehensive analysis of the system of principles and technology.

The first also concluded by calling for controlling and restricting the scope of artificial intelligence

intervention, without a comprehensive approach to judicial principles, while this called for complementary legislation between technology and humans and adjusting the principles of litigation to be consistent with reality.

2.1. Search Structure

In order for the research to review the targeted ideas and achieve the desired results; it was divided into an introduction, two sections, and a conclusion. It came as follows: Introduction: On the rapid technical development between the first and fourth industrial revolutions. The first section: The concept of electronic litigation and technical efforts in the era of the digital revolution. The second section: Principles of judiciary and litigation and their interaction with digital technology. Conclusion: It contains the results and recommendations. The references.

2.2. Booted

Accelerated technical development between the first and fourth industrial revolution the world has witnessed great developments thanks to successive industrial revolutions, currently culminating in the Fourth Industrial Revolution. There was no reason to dwell much on the topic of our research during the previous three industrial revolutions.

The first industrial revolution in the eighteenth and nineteenth centuries had limited spread and limited impact in some continents of Europe and America, where industry and machinery played a prominent role in this era, and one of its most prominent results and effects was that most rural societies were transformed into industrial societies.

This is also the case during the era of the Second Industrial Revolution, prior to the First World War, which witnessed growth and development in the field of industry with the entry of oil, gas and electricity into its world.

As for the third industrial revolution: Which began in the 1970s and is still intertwined and influential. The digital revolution exploded in it, with the emergence of the computer, the World Wide Web, information technology, and communications. But it is despite the great impact it had on the following topic of our research, it was not surprising because it did not intersect with the principles of judiciary and litigation, and reflected positively on it, with the emergence of digital memos, and others.

However, the Fourth Industrial Revolution, which was officially announced at the World Economic Forum Schwab, K. (2016).

With what you point out and the amazing

development we are experiencing today; it is characterized by the integration of digital and physical technologies, which has led and will lead to radical changes in various fields. Perhaps one of its most prominent characteristics is the rapid pace of change, which requires continuous adaptation from institutions, individuals, and all sectors of production, management, and governance. This is the transformation we are seeing in business models, which depends on data and digitalization. And the interconnection between devices and systems via the Internet, as it has worked on the integration and overlap of various technologies, including artificial intelligence, robotics, the Internet of Things, 3D printing, block chains, and biotechnology.

The Fourth Industrial Revolution has affected the field of justice, interacting with it and being effective in it. With an overlap between it and the features of the Fifth Industrial Revolution that began to emerge, based on the idea of integrating modern technology and balancing it more effectively with artificial intelligence, to eliminate what some may imagine as competition with humans. Hence, the research aims towards the third industrial revolution. It starts from it and focuses on; On the era of the Fourth Industrial Revolution through its results and recommendations.

3. THE FIRST RESEARCH

The concept of electronic litigation and technical efforts in the era of the digital revolution

The judiciary was not isolated from the impact of technical development, as reliance on the Internet and modern means of communication became a tangible matter practiced in many countries by regulating it in their laws Al-Qaisi, H. (2017).

To talk about electronic litigation and technical efforts in the era of the digital revolution; it is worth dividing this topic into two requirements: We discuss the first requirement; the concept of electronic litigation and electronic court, and in the second; the litigation mechanism through it and its characteristics.

3.1. First Requirement

The concept of electronic litigation and the electronic court and its characteristics

The word litigation in the Arabic language is taken from the root of the triple verb qada. The original verb, qada, means ruling, meaning a decision on the matter. Morphological meter: It has an interaction, which is a source derived from the verb to sue, which is an additional verb with the letters ta' and alif. And litigation is the one who

decides, decides, you decide. The disputants sue the judge, that is, they try them and plead with him, seeking a ruling in a dispute. Litigation: It is the process in which the judiciary is resorted to to resolve a dispute.

And I sued the debt, meaning he asked for it, because it is the interaction of the one who decided. It is said: I sued my debt and required it, meaning I took it or took it (Almaany. (n.d.).

The judge: its meaning in the language is the one who decides matters, the arbitrator. So-and-so was judged, that is, he was made a judge to judge between the people, and it is said: I sued him as my right, so I sued him, that is, I rewarded him, and so he rewarded him. Al-Helou, M. R. (2000).

The word litigation is used in the legal context to refer to the process of filing a lawsuit before the judiciary to resolve a dispute between two or more parties, in any of its civil, commercial, criminal, or administrative fields. The term is used to describe proceedings initiated between two disputing parties. It may be used to refer to the complaint itself. The term international litigation refers to a dispute between states before an international court.

As for the term electronic litigation, it is newly emerging and came with the emergence of modern technology. Therefore, it is rarely found in ancient legal and jurisprudential references, and therefore there is no jurisprudential definition for it. Agreed. In summary, it refers to the use of technology to file a lawsuit and plead it before the court, with the aim of facilitating access to justice. The idea of remote litigation or electronic litigation is derived from the idea of electronic administration, by moving the provision of services to people from the traditional paper form to the electronic form via the Internet and developing the performance of judicial bodies in terms of administrative or judicial services.

Part of jurisprudence has defined electronic litigation as: the process of transferring documents to the court electronically, where these documents are examined by a competent employee to issue a decision to accept or reject them, and a notice is sent to the litigant informing him of what has been done regarding them. Abdul Hamid, A. (2015).

Others said; to say that it is: the authority of a specialized group of regular judges to hear the case and initiate judicial procedures by new electronic means, within information judicial systems with integrated parties and means that rely on international connectivity network technology and computer file programs to consider and decide cases, while implementing judgments Khaled, K. A.-Z. (2015).

Judiciary through electronic means has also been defined by some jurisprudence as: obtaining forms of judicial protection through the use of electronic means that assist the human element, through technical procedures that guarantee the achievement of the principles and guarantees of litigation under legislative protection for those procedures that are consistent with the general rules and principles in the Code of Procedure, taking into account the nature. Special for electronic means .Othman, O. K. (2020).

Accordingly, we can define electronic litigation as: codifying the use of information technology with integrated parties and means; to assist the judicial system in carrying out litigation procedures, hearing and deciding cases, and implementing rulings easily, quickly, with control and safety. It has been proven that through technology it is possible to develop and improve the practice that will change the near future in the world of the judiciary with what have been called electronic courts, development has shown tools, inventions, and services in various fields that differ from traditional transactions in terms of the environment in which they take place. Accordingly, it is possible to have electronic litigation and courts that exempt the lawyer and litigant from moving between courts and exempt the latter from overcrowding with litigants and the public, and the resulting consequences and negatives within the court.

What is established is that the rules regulating the conduct of procedures in the work of the judiciary in all cases; It is considered one of the rules of public order because it regulates the most important facility of the state, and is related to judicial jurisdiction, which aims to achieve justice for all without discrimination, whether related to relationships that arose in a physical or virtual electronic environment. This requires a serious legislative attempt to issue a unified judicial organization that works using modern means of communication to facilitate litigation procedures for litigants and lawyers together through the electronic court.

The term electronic court is considered a relatively modern term and concept. It appeared after the spread of the term electronic government. (Al-Alfi, M. (2007) with the exception of the United States of America and some centres. Mohammad, S. A. (2001). Technology represented the means of activity, the tool of the knowledge economy, and intellectual and commercial capital. The electronic court is considered one of the most important and prominent applications of scientific and technical development in the field of justice, and its application has begun in arbitration of electronic disputes, then it spread due

to the widespread success it achieved in contemporary judicial systems. Statistics conducted by the US Federal Judicial Center indicate that about a quarter of the courts in the United States of America have become highly technological in this regard. Under the responsibility of a member of the court. Mohammad, S. A. (2001). Therefore, its actual application is still in its infancy, especially in Arab countries.

The electronic court has been defined as: a dual-existent information technology space consisting of an international network and a court building that reflects the electronic spatial appearance of judicial agencies and units, which work to receive judicial requests and case lists, prepare electronic file programs, and provide renewed information about developments in cases and ruling decisions, which represents permanent communication with the public. And lawyers. This court also enables the parties to the dispute and their agents to plead, prepare witnesses, and provide statements and direct communication with the court at any time and place. The court also provides new and advanced mechanisms to follow up on cases and review the course of the sessions. Even attending the sessions electronically, and thus; Issuing decisions and rulings with ease and ease.

Al-Sharaa, H. M. (2010). With a difference in the method of storage from paper to electronic supports, and in the electronic certification and document authentication system.

There was also a jurisprudential definition of the electronic court as: a term that means activating information technology in an optimal manner, in a way that helps with the quality of services, whether they are services to the public, the commercial sector, a government entity, or court employees. With the speed of completion of transactions and cases, unifying and simplifying work procedures, and contributing to the security of information by preserving it and making it available to those authorized to view it, in addition to ensuring the quality of work and keeping pace with development .Al-Tersawi, M. E. (2013).

Accordingly; We can define the electronic court as: It is the court that carries out all the work assigned to it by law using a computer that contains programs for applying litigation procedures and is connected to the international communications network to shorten time and effort and issue the ruling in the simplest and fastest way without the personal presence of the court.

The importance of the electronic court appears to be that it achieves justice and imposes an unusual

method of conducting and facilitating judicial procedures and transactions, using the new electronic means of registering the case, initiating its procedures, and preserving its files, a complete shift from the traditional procedures based on paper and the personal presence of the parties, which is a shortening of time. And effort, Judges perform their role by relying on the latest legal programs, including the enormous legal texts and jurisprudence they contain, in the simplest and fastest ways. All of this while facilitating inquiries about various transactions, which reduces congestion and quarrels between opponents, and achieves rights for those who deserve them in the simplest and fastest ways. At the same time, he is exempt from failure to attend the sessions and the resulting penalties and expenses.

3.2. *The Second Requirement*

3.2.1. *The Electronic Court Litigation Mechanism and its Characteristics*

A group of factors combine to form the mechanism for organizing the electronic court. Starting with electronic means, by which we mean a set of computer equipment and accessories, and special software with the availability of an intranet connection (An internal network, where all departments, units, and courtrooms are connected to each other, so that they are restricted to a communication line that connects them to each other, and all court workers can communicate and exchange documents and case files electronically.). As for the court rooms and halls, they are equipped with a mini internal linking system (It consists of a hub and a line distributor on all computers inside each hall that is connected to a large main calculator.), which specializes in displaying what is contained in the case file and showing all the procedures that occur to it, the audience can view it directly, and the other computers are distributed inside the courtroom in the places designated for the parties to the dispute, their agents, and witnesses when they personally attend the courtroom, and they are all linked to the judge's computer. Through which the complete program of the case file is displayed, with all procedures recorded in a visual recording, these procedures are displayed on the main computer screen in the hall and to those present electronically from outside the court building through a camera located inside the courtroom that performs the task of photographing the proceedings of the sessions, photographing the attendees and everything the hall contains, and transmitting these facts to the main page of the website on the Internet, so that those concerned in the case can Others may

enter the courtroom and attend its sessions, and this achieves what is known in traditional judiciary as the publicity of the trial.

The content of the electronic case file record can also be displayed on the public part of the trial on the court's main website in the event that the parties are not present in person, using the hall camera. It is possible to link the content of the main computer screen directly to the court's public part without filming from the camera if the judge decides to hear the case in secret, the filming of the site part will be stopped and played after that. Mahmoud, S. A. (2008).

Then comes the creation of electronic records as one of the necessary factors that constitute the court's organization mechanism. These records contain a database for each case. Accordingly, the electronic record can be defined as a database on the internal network of each court through which the case data is recorded or given a serial information number, so that the electronic case file can be extracted from this record, which is a computer program that contains the statements or documents, documents, and prosecution and agency regulations of the litigants on special files that preserve them and prevent changing their content. And electronic records in which all trial procedures are recorded according to a direct recording mechanism. After the design of the case file is completed, it is sent via the internal network to the follow-up office of the information judge to be presented on the specified hearing date within software principles and mechanisms.

The regulatory mechanism also requires that the court's website be designed so that it is considered an electronic address for the department or court, through which the concerned party can obtain information by browsing the website, searching and knowing what was done in the case, and direct electronic communication with employees through the video conference program that enables the audience. Revisers and lawyers communicate directly with workers in this system, Judges have automatic access to the information access center represented by the person actually responsible for providing it, providing information, and inquiring about the procedures.

Al-Akhras, N. M. (2012).

It also achieves the completion of procedures, initiating lawsuits, and entering litigation without the need for personal presence, through the electronic judicial intermediary and technical linking to the case files for recording.

The electronic litigation system is distinguished from traditional litigation by many advantages and

characteristics, including speed and ease of communication, the ability to send documents and notes, exchange memos, and submit requests, which leads to saving effort, time, and cost Leila, M. K. (2013) without postponing the lawsuit for more than (One of the biggest challenges of traditional litigation is the patience and reassurance it requires, which delays the adjudication of cases, taking advantage of some weak souls.). With the elimination of some of the traditional necessary salary work, such as moving between multiple parties to deposit, register, and pay lawsuit fees, this is a waste of time, but remote litigation faces some challenges and difficulties at the same time. We can identify the most important characteristics and main advantages that characterize the electronic court as follows: -

The most important thing that distinguishes electronic litigation procedurally is: It adopts the philosophy and system of the paperless transactions community () in all procedures and correspondence between litigation parties. Electronic supports replace papers, so that the electronic message becomes the legal basis that the two parties to the dispute can adopt. These documents, electronic documents, and everything related to them, begin with writing, preserving, transferring, and retrieving them, according to prescribed techniques defined by many features. The most important of which is getting rid of paper files, and the subsequent need for storage; which is sometimes disturbed, and the resulting loss and loss of it. In addition to the possibility of accessing and viewing it easily and quickly. The challenge facing this advantage lies in the issue of electronic evidence and its impact, as it is one of the most prominent challenges to the growth and development of remote litigation.

Second: Receive and send documents and documents quickly and securely:

Electronic devices have an effective role in applying remote litigation procedures, as collection, storage, preservation, advertising, and notification had to be eliminated. In the exchange of documents between opponents or their representatives. The Internet provides the possibility of immediate moral delivery of documents attached to lawsuits electronically. Such as books, research, reports, and legal and medical consultations, by downloading or uploading them, without resorting to the outside world:

Third: Implementing litigation procedures: Remote litigation does not differ in terms of subject matter or parties from traditional litigation, but rather in terms of the method of its implementation, as it is carried out using electronic media. Thus, the

electronic mediator assists the judiciary in announcements, dangers, listening to witness statements, interrogating opponents, or exchanging memos between opponents or their representatives. It may be a substitute for adjudication in purely financial and accounting cases. Nourjan Al-Ayoubi, A. R. (2016). Or banking, or expenses, inheritance, wills and endowment issues, and tax and customs issues. Ali, A. M. (1990).

Fourth: Speedy resolution of cases and completion of litigation procedures: -

The process of applying litigation procedures via the Internet contributes to shortening time, saving effort, reducing expenses, reducing public crowding in the courts, and increasing the quality of the level of service provided to the parties to the lawsuit. Abdul Wahab Al-Kayyali, & others. (2011).

Because of its accuracy and speed between the two parties to the litigation, the process of sending and receiving documents and documents takes place without the need for them to move many times to the court headquarters. Another advantage is that the electronic court provides the ability to avoid wasting the time of subsequent sessions in order to remember what happened in the previous sessions, when the judge hears the plaintiff's statements in the first session, and then sets a date for the second session. Al-Nadawi, A. W. (2020).

After a period that may be long, the case is completely forgotten, and the time of the second session is wasted reading the minutes of the previous session. This waste disappears in electronic litigation, as the case will not be submitted to the judge, except after completing all the data, proofs, and statements that the two parties wish to express, so that the summary can then be submitted with the approval of both parties, and it is submitted in full to the judge, who may then need some simple questions and then issue his ruling directly. Al-Qaisi, A. (1999).

3.3. The Second Research

3.3.1. Principles of Judiciary and Litigation and their Interaction with Digital Technology

The judiciary is the state's function in adjudicating disputes in accordance with the law. What is meant by the principles of the judiciary is: These are the general foundations and foundations on which the judicial authority is based and established, in accordance with what most international conventions and global constitutions have focused on. Of: independence, integrity, impartiality, transparency and publicity except in narrow circumstances out of respect for public order, and that there should be no exceptional judiciary for a

person to be tried before a fair court formed in advance before the crime occurred, and by qualified judges, with justice provided free of charge, that litigation fees be zero or affordable and not exorbitant, so that financial obstacles do not cause denial of recourse to the judiciary, specialization in the work of judges, facilitation, impartiality, and irremovability.

As for the principles of litigation, they are the rules and guarantees that represent the general rules for organizing the judicial authority, which relate to how individuals exercise their rights, regulate the desired procedures in the conduct of the case, and control its course from the moment it is filed until the issuance of the ruling, its appeal, and its implementation. At the forefront are: the right to litigation, declaration of attendance, the right to defense and confrontation, including the opportunity to appoint a lawyer, and the right to appeal, with equality between opponents before the judiciary, and speed of deciding cases by simplifying litigation procedures and avoiding complexity. all of that; With the necessity of implementing judicial rulings without prolongation, and without imposing penalties without a judicial ruling, or beyond the provisions of criminalization in accordance with the law, while not restricting resort to the judiciary by immunizing certain acts from its oversight, and without duplication in examining the case for any reason, and that the locations of the courts be close to the litigants. And other rules. Article 14/3 of the International Covenant on Civil and Political Rights includes these principles. Abdel Ghani, H. R. (1986).

In this section, we will review the most important of these principles, which constitute the foundation of the judicial authority. Worth mentioning; these principles differ in their details and application from one country to another according to the prevailing legal system in the country (In addition to these principles, there are several sub-litigation principles that constitute additional details or guidance to the main litigation principles. These principles vary depending on the legal system and applicable laws. Among them: the principle of meeting the interests of retribution, the principle of directing the case, the principle of arbitration procedures, the principle of civil procedures, the principle of ethical and professional rules, and the principle of appeal.), "The Anglo-Saxon system adopts additional principles, although they differ slightly in their details from one country to another, which are: the principle of private prosecution, the principle of meeting the civil interest where judicial parties meet, the principle of presenting original testimony and then questioning

the witness, and the principle of independence and integrity of the court and judges. As for the Latin (Continental) legal system, it adopts additional principles: investigative judiciary, the principle of accusation, the principle of judiciary, and the principle of the written system". and they also differ according to local laws. However, there is a group of them that are common and basic and represent the minimum.

We will divide the topic into two requirements, which we will devote successively to reviewing the most important principles of the judiciary, then the principles of litigation and the extent to which they can be compatible with digital technology.

3.3.2. *First Requirement*

Judicial principles and the extent to which they can be compatible with digital technology. Although the phenomena of conflicts appear to man by nature, where his striving in life to earn his enjoyment collides with the afflictions of a terrified soul, and thus infringes on the rights of others, they become urgent; The necessity of resorting to an arbitrated judiciary on the initiative of the state's general authority in compliance with its social contract, independent of the legislative and princely systems in the judicial system, enjoying independence from external interference. The concept of judicial independence is integrated with the concept of the independence of the judiciary through the independence of individuals and the institution. The independence of the judiciary requires, in addition to the independence of the judiciary; the independence of the judge himself to issue his ruling without bias; Away from any external influences or any personal dimension. the principle of judicial independence is one of the most prominent pillars of justice, as a fair trial is not achieved unless the judge is immune from all forms of pressure or influence, whether from the executive authority or from the parties to the case. The principle of impartiality represents a guarantee of impartial justice that is decided based solely on the law and enhances society's confidence in the judiciary by not taking sides. It works objectively and is not influenced by any political positions or previous opinion regarding the case, regardless of personal interests. Because the password and the secret of the crisis in society towards the judiciary lies in this trust, which constitutes a crisis that has worsened recently in light of the spread of corruption in state institutions globally. Gibbon, E. (n.d.). This requires a series of mechanisms and procedures; It begins with the appointment of the judge himself, while he is not subject to any executive or political

authority, and he must stay away from cases in which his personal, material or moral interests' conflict. The United Nations Basic Principles on the Independence of the Judiciary. United Nations General Assembly. (1985). Al-Adly, M. S. (2005). Stipulate: "Everyone has the right to be tried before ordinary courts or judicial bodies that apply duly established legal procedures for judicial measures." As stipulated in constitutions and laws, "the constitutional legislator in the Sultanate of Oman stipulated the principle of judicial independence in Article 77 of the Basic Law of the State issued by Royal Decree No.6 of 2021, saying: (The judicial authority is independent, and is exercised by courts of all types and degrees. Their rulings are issued in accordance with the law. The law arranges the courts of all types and degrees and specifies their functions. And his powers). Article 78 of the Basic Law states: "No one has authority over judges in their rulings other than the law they are irremovable except in the cases specified by law, and no party may interfere in cases or in matters of justice, such interference being deemed a punishable offence, all provisions pertaining to judges being set forth in the law."

In pursuit of the independence of the judiciary, the principle of separation of powers is established, and the judge is not subject to anything other than the law and is free from any interference by other authorities. Therefore, in appointing and assigning a judge, it should be taken into account: Who is more knowledgeable about the jurisprudence of rulings and who is more informed about receiving the evidence .Turabi, H. (2011). In a gradual and arranged manner that allows whoever is not satisfied with the ruling to raise the matter to the highest level, to support, change, amend, or have his ruling returned to him for consideration again. While ensuring that the ruling passes over every opponent, no party or system is immune from it, all this with his giving is enough and eliminates the need that might tempt his integrity. The conditions for selecting judges vary depending on the legal system followed, as we find in the systems of continental system countries that classify the judiciary as a profession, stipulating the conditions of a public employee for the judge. While the countries of general Sharia consider assuming the judiciary as a promotion by society for the judge and an honor for those who meet the conditions and experience, some of them rely on electing judges from society directly or indirectly.

Regarding achieving consistency between technology and the principle of judicial independence and the independence of the judge, there is no reason to make a comparison between

technical and traditional litigation, as the matter is related to developing legislation and concepts, enhancing the protection of data and documents, and training judges. Discipline requires; Achieving a delicate balance between using technology to support efficiency in judicial work and keeping the decision and ruling in the hands of the traditional judge, technology and digital transformation in the judicial facility have brought about a radical shift in the way judicial cases are conducted, which has cast a shadow on the principle of judge independence and guarantees of justice. On the one hand, technology has contributed to enhancing transparency and reducing external interference by documenting trial procedures electronically, overcoming the disadvantages of electing a judge, and providing information systems that reduce direct friction between the judge and the parties to the case.

The judge's impartiality is evident by reducing this interaction, as most procedures are conducted electronically, which puts an end to manifestations of direct or illegal influence, which is considered a pillar of judicial independence. Abdul Hamid, A. (2021). These systems also allowed the judge to be free from administrative burdens, enabling him to devote himself to the substantive side of the case. It enhanced this independence by reducing direct contact between the judge and opponents, which limits opportunities for illicit influence. Al-Demerdash, A. N. (2022).

They have also made it possible to minimize the intervention of the human element in administrative proceedings, thus providing a more impartial and independent judicial environment. but this digital transformation raises in return; Legal and ethical questions about the negative impact of relying on artificial intelligence systems and algorithms that are imposed on the judge, or limit his discretionary authority, thus restricting his flexibility in assessing the privacy of each individual case, especially if these systems are subject to the supervision of parties outside the judicial authority, whether they are executives or private technology companies. Al-Barqawi, L. M. (2021). And; therefore, preserving the independence of the judiciary in the digital age requires controlling the relationship between the judge and technology, so that the latter remains an auxiliary tool and not a substitute for the judicial authority. In addition, some algorithms may carry a hidden bias, which may affect the impartiality of their judgments, therefore, protecting the independence of judges and guarantees of justice in light of automation requires establishing legislative and technical controls that balance technological

efficiency with the requirements of human justice.

However, despite these concerns related to the impact of technology on justice, it, if used well, is an effective tool to support and enhance the principle of independence and impartiality, by reducing external interference and political or societal pressures, through automated documentation techniques for the conduct of sessions and the adoption of secure electronic platforms, thus preserving privacy. Judge.

Completely eliminating humans in the judiciary using technology and artificial intelligence is very difficult. but it is possible sometimes, that; Because most of the work of the judiciary is related to the human characteristic itself, and what it requires in terms of interaction with the parties, understanding the circumstances and context, and taking humanitarian and ethical factors into account, such as analysis and examination of opponents and witnesses, and the strong need to weigh the evidence, interpret the laws, and make legal decisions based on that.

In addition to the independence of the judiciary, the principle of publicity and transparency in court sessions emerges, which is considered one of the most important guarantees of justice, and one of the basic and common principles between the judicial and litigation processes. The principle in judicial trial sessions is that court processes and judicial decisions are open and clear to the public, unless there is a legitimate legal reason in some cases of a special nature or information of a sensitive nature.

In comparison, we find that technology will contribute more effectively to achieving this principle than is the case in traditional litigation, where halls are crowded and discipline is sometimes reduced, which disrupts the work of judges and annoys them. Technology can establish the principle of publicity if it is used wisely and skilfully. Expanding access, recording sessions, disseminating information, broadcasting sessions electronically, and enabling them to be followed remotely, from that; For example: allocating channels to transmit sessions and broadcast them live, imposing restrictions on broadcasting regarding special issues that require, and increasing the dose of social awareness. This is reflected in building public confidence for the proper functioning of this vital and sovereign facility, ensuring justice and equality, and establishing transparency and community oversight of the performance of the judiciary .Khalil, M. A. (2021).

In addition to digital broadcasting, alternatives should be provided by providing the opportunity for those who wish to attend in person to help achieve

balance. However, it remains necessary to balance publicity and privacy, in cases involving personal data, which calls for establishing legal controls so that this principle is consistent with the data of digital litigation.

The principle of flexibility and specialization in the judiciary and the work of judges is integrated with the principles of independence and publicity. Although the judiciary seems rigid and strict to some because of its connection to well-established judicial traditions, in reality it is completely different. It is characterized by relative flexibility that makes it capable of developing and coexisting with the vicissitudes of life and societal and technological changes, ensuring the efficient and effective delivery of justice. Flexibility is not a new concept in the judicial system, but rather it is an inherent principle, and one of the living principles that makes the judicial system able to adapt and balance with scientific and technical developments. Especially in the era of the information revolution in which we live, and social changes over time and place, to remain able to deliver justice efficiently, while preserving the basic principles of justice.

Flexibility is confirmed; by tracing the process of the judiciary in Roman law, the judiciary responded to the development resulting from the first industrial revolution in trade and labour laws with the emergence of the principle of separation of powers and the principle of the rule of law in the eighteenth century. Likewise, when human rights calls appeared after World War I to speed up the adjudication of cases before the courts.

In the twenty-first century, the principle has become clearer in its response to the Third Industrial Revolution with the spread of technology and because of the complexity of modern issues. This principle is achieved in the continuous amendments we see in the judicial system towards simplifying procedures and continuous amendment of laws to keep pace with developments. All this without prejudice to the principles of established principles and rules and the judge's ability to adapt to the specificities of each case and deal with them in ways that suit them. Digital technology can play a crucial role in enhancing the flexibility of the judicial system, and the associated challenges must be dealt with with caution, through proper planning and the application of appropriate strategies.

The principle of specialization is born of the principle of flexibility. After the judge was comprehensive; Circumstances and developments imposed the allocation of courts to hear certain types of cases, according to a specific legal field, in pursuit

of intonation and efficiency, the judge has the right to experiment; sufficient knowledge of the field, which helps in achieving accurate and quick justice.

Most countries have now decided to allocate courts in specific fields, the most important and famous of which is: the civil judiciary to adjudicate individuals' financial disputes. Family justice, which deals with family rights issues. The criminal judiciary considers crimes, misdemeanours, violations and prescribed penalties. And administrative adjudication of disputes between the administration of government agencies and individuals. Labor justice between employers and workers. And commercial adjudication of corporate and trade cases, control and harmonization between technology and the principle of specialization in the judiciary and the work of judges requires enabling electronic systems to classify and distribute cases according to their specialization. Technology also enables judges to quickly access legislation and provisions related to their jurisdiction, which supports sound decision-making and rapid data analysis. as for the principle of free; Which means that the state bears all litigation expenses to be available to justice seekers, away from financial capacity (This does not conflict with the imposition of some symbolic procedural fees, as these fees do not negate the status of free as long as they do not constitute a real obstacle to litigants, and legislation often allows exemption from them in cases of disability or insolvency. Al-Nasiri, A. M. (2020). (2020).

It can only be achieved by striving to establish the right to access and obtain justice without financial effort. Capitalism has closed the doors of the judiciary, making it difficult for the poor to resort to the judiciary. Court doors are often only opened for a fee. but rather; The system of adversarial agents was established in the judiciary with qualifications that distanced themselves from society and became known to the elite, like the clergy in the ecclesiastical era, who argue on behalf of the opponent and serve his claim at a price, the rich opponent will not be distressed by it if he is unjust, even if it is prolonged. As for the poor, he fears loss, the cost of expenses and fees, and procrastination and stretching the ropes of patience. This intensified lawsuits and arguments, dragged out procedures, and extended deadlines.

There is no doubt that technology effectively contributes to free justice by reducing the cost associated with traditional procedures, especially for vulnerable groups and remote areas. Thus, technology does not threaten the principles of the judiciary, but rather is a means to enhance its

effectiveness, provided that its use is controlled by clear legal and ethical rules.

Judge Robot:

The humanity of the judge in some cases is required, as we have presented, but preparing for the robot judge has become a very possible and soon reality in some types of cases without prejudice to the principle. Technology has already contributed to the existence of a non-human judge, and the matter has begun to expand greatly. Gradually, relying on artificial intelligence in some cases that do not require human character according to their nature and the nature of the robot judge himself, and the cases that can be assigned to it, according to their financial value, and the nature of the penalties imposed on them, such as minor violations, simple financial claims, some family cases such as custody, inheritance and distribution issues, electronic cases, conducting mediation and settlement in civil cases, and some administrative issues related to the application of laws and regulations in Areas of conditional licensing and taxes, some environmental issues related to its violation and pollution, real estate issues related to property rights, and consumer protection issues. Everything that was clear from it did not require much human effort.

There is no doubt that the robot judge will be more ingenious and fair in these cases than the human himself in terms of processing data and analysing evidence very quickly and accurately, while making legal decisions based on the available information and laws. Here we assume that the robot judge will be more objective and fair in terms of the principle of independence and integrity, because he is not affected by human factors such as bias and exposure to external pressures, but this raises many legal and ethical challenges, most notably the responsibility for decision-making, and the impact of human control on software design, as humans are the ones who use technology, set laws, and determine standards of justice and fairness. Therefore, the concept of the robot judge will remain a subject of discussion and research.

Many countries have begun using robot judges, as countries such as Estonia, China, the United States of America, and the United Kingdom have developed successful experiments using artificial intelligence to help human judges in some tasks, from analysing evidence, evaluating simple requests, and issuing rulings in some cases in cases of limited complexity.

Estonia, which is considered a pioneer in the field of e-government, has assigned the robot judge valuable jurisdiction in cases that do not exceed seven thousand euros. Err News. (2019).

It considers small cases such as traffic violations and minor debts; it has been successful in handing down judgements in accordance with predetermined criteria.

In China, artificial intelligence systems have been developed to help judges analyse cases and propose rulings, such as traffic cases. Judge Bots have also been integrated into the courts of some cities to speed up simple commercial cases, in addition to the Shanghai court adopting a system of transcribing speech in hearings and identifying speakers according to their roles. Al Ain News. (2019, February 23).

The experiment showed efficiency despite the challenges related to privacy.

In the United States, artificial intelligence has been used in some states in intellectual property and debt cases, and as an aid in predicting the risks of committing crimes, despite the controversy that has arisen on the subject and the bias that we have alerted us to regarding who controls programming among human beings. State v. Loomis, 137 Wis. 2d 290, 393 N.W.2d 646 (Wis. Sup. Ct. 2016). The experiment succeeded in providing consultations that facilitated governance, but it still requires humans.

This is also the case in the United Kingdom, which was not isolated from dealing with artificial intelligence in the judiciary, where a robot judge was developed to deal in the civil field by analysing contracts and providing legal advice in some simple cases (report published by "Artificial Lawyer" in 2018 the role of AI technologies in contract analysis and providing legal advice in minor cases in the UK.) with cases related to personal debts.

The robot judge's experiments, despite their limitations, have proven successful, represented by speed, impartiality, and reducing financial costs. With many challenges in the possibility of bias when fed with biased data, transparency in not knowing how his decisions were issued, liability in the event of error, influencing the judge's discretionary powers in the event of excessive reliance on smart systems, and control by some programmers to impose technologies that affect judicial rulings, all with the risks of security breaches in cybersecurity. But these challenges can be overcome, as they require updating legislation while enhancing cybersecurity and training, preserving the space of discretionary power for the human judge without technical interference, developing curricula for studying law and scientific research, and continuous training for judges.

The matter is not only about judges; Other judicial professions are affected by technology other than the judge in order to improve the judicial process on the

basis of this principle, and the emergence of robot jurists in the public prosecution (In the field of public prosecution, the use of electronic litigation depends on the legal system in each country and the type of cases and functions it performs. However; There is room to reduce the role of the public prosecution, in many legal cases and systems, such as submitting complaints related to non-physical financial or civil electronic crimes, and minor violations, without the need for public prosecution intervention, as well as in cases of mediation, electronic arbitration, and electronic reconciliation) can reduce the role of the public prosecution, without dispensing with it, as well as lawyers, notaries, and advisors (As for the standing judiciary and the extent to which it is affected by electronic litigation, it is very noticeable and changes rapidly with the development of technology and transformations in the field of justice, as lawyers must confront it. interact and benefit from technology and apply it in practicing their profession, using legal software, case management systems, and electronic security.), by providing some of their services (In the event of shifts towards electronic litigation, the role of notaries may change as well, to be employed for different purposes in legal processes. However, in many cases, they will still have a vital role in ensuring fairness and adherence to legal regulations.).

3.4. The Second Requirement

3.4.1. Principles of Litigation and the Extent to which they can be Compatible with Digital Technology

We presented that the principles of litigation are the set of procedures and rules desired in the conduct of the case, governing its course from the moment it is filed until the issuance of the ruling, its appeal, and its implementation. Below we will review the most important of these principles and the extent to which they can be compatible with digital technology.

We start with the most important ones: Namely: the principle of the right to litigation: The right to litigation is an inherent right for all members of the group, and by it we mean the person's right to resort to the judiciary, to fulfil his rights, to repel attacks on his behalf, or to protect his freedoms. The right to litigation is one of the most precious provisions of the social contract that links individuals to the state and strengthens the bond with it, by providing a feeling of trust and confidence, it is also considered one of the most sacred obligations of the state towards its citizens by guaranteeing all of them this right, and that any of them will find the way paved to a just and

complete judiciary through which their rights, sanctities and freedoms will be protected in the shortest way, in the fastest time, and at the lowest costs. Mustafa, S. (2004).

The right to litigation is one of the rights that may not be infringed or infringed upon, regardless of the means of doing so, whether legislative or executive. Thus, even an employee has the right to sue and dispute with the administration to which he belongs, even if this leads to him being exposed to the actions of his superiors and challenging them in a way that faults them and reveals their deviation from the public interest, disputing the decision. Not the president in person as long as that is a requirement of defense, it therefore falls within the scope of constitutional or legal violation. To be subject to appeal; any law, regulation, instructions, or decisions issued by any party that prevents or restricts this right or any of its legal or constitutional foundations. Al-Yassin, M. A. (1973).

Right to litigation is considered one of the most important principles guaranteeing human rights and is respected by all divine and humanitarian laws and international resolutions and conventions. The Universal Declaration of Human Rights stipulates the right of every human being to a fair trial and publicly before a competent, independent and impartial court constituted in accordance with the law. Amin, N. (1999).

And before all that; preventing the exercise of this right opens the door to personal justice (This is because people demand their rights themselves, so the law of the jungle prevails instead of the rule of Sharia and law prevailing. Zaid, M. A. A. (2023).

There have been many definitions of the right to litigation with many commentators of the law. Some of them defined it as: (an inherent right that arises from the moment a person faces accusation. This right means enabling a person to ward off accusation against himself, either by proving the corruption of his evidence or by establishing evidence to the contrary, which is innocence. Accusation, by its nature, requires defense, as it is a logical necessity for him). Abdel Ghani, H. R. (1986).

The right to litigation requires the existence of a judicial authority that is responsible for ensuring the application and supremacy of the law, guaranteeing it and giving it its effectiveness and necessity, and working to remove what hinders this respect and what hinders its enforcement, by forcing individuals to respect it and implement its rules in their actions and behavior. The right to litigation takes the place of the public freedoms guaranteed by law, which no person may be deprived of. Ammar, S. (2011, May

24).

There is no doubt that technology has affected the principle of the right to litigation positively, with concerns related to protecting the rights of litigants. However, control and harmonization between technology and the principle of the right to litigation is possible and easy. One of the ways in which technology contributes to strengthening the principle of the right to a judge is by facilitating access to justice and accelerating procedures, via digital platforms, which enables people to exercise their right to litigation, regardless of the distances that separate them from the court buildings

While reducing and shortening the time taken by the traditional lawsuit and following up on the progress of the case by submitting requests, scheduling sessions, and managing them virtually. All this while reducing the financial burden on the opposing parties.

The concerns facing this principle due to technology are the inability of vulnerable groups in society, financially or educationally, to deal with modern technologies, and the interruption of services from them constitutes an influential challenge for those who live there. All this with the technology's inherent fears of hacking and hacking. Which exposes parties to the risk of violating their privacy moreover; effective and direct communication between the court and the parties - in some cases necessary to ensure that justice is done - will inevitably be affected by reliance on technical systems.

Technology, in the face of the principle of the right to litigation, is a double-edged sword. It improves the efficiency of the judicial system and contributes to expanding access to the judiciary and exercising the right to litigation, but it may hinder this right in cases of digital divide or hacking and piracy. This requires the judiciary to take these challenges into account by adopting integrated solutions to ensure the protection of basic rights and gain the trust of society.

As for the principle of natural justice and judicial confrontation, or the principle of the right to be heard and interrogated; It is assumed that there are natural standards of justice that must be observed. This includes the right to defense, hearing evidence, and judicial confrontation, which means: the judge confronting the opponents, the opponents confronting each other, confronting witnesses, and accessing lawyers and adversarial agents. This principle contributes to providing fair and impartial judicial processes to achieve justice it is considered an essential part of the guarantees of justice and fair trial in many legal systems around the world, and even;

in the criminal justice system, it is the cornerstone. This principle relates to the right of the accused, the suspect, and the defendant during judicial processes. It aims; to achieve justice, where the opponent has the right to hear the accusations against him and be questioned about them, to present his evidence and arguments in his defense, with his right to examine witnesses and discuss them appropriately, or to remain silent and not give any statement that will be used against him in court. It is a right as old as justice itself, as is the right to life itself it is closely related to the judicial dispute from the perspective of clarifying its aspects, correcting and following up on its procedures, presenting the factual and legal issues related to its subject, and refuting what opposes it by emphasizing the face of truth in what is important of its points, especially through comparison between multiple alternatives, all of which are considered means of defence, even if some of them are deeper. Connected to the subject of the judicial dispute, and the most likely to be won, while supporting it in a productive manner.

The right to defense; The basis of guarantees, and it is considered one of the most important basic and natural rights of man, like the right to life itself, and human rights and freedoms may not be sacrificed without necessity dictated by a valid social interest. Al-Shatewi, S. (2007).

It is not enough for the legislator to determine for each accused person rights before the accusing authority balances them and returns them to logical limits rather, the guarantee of this right must be guaranteed through mandatory means that he owns and directs, including: Indeed, first and foremost, the right to defense, including the right to obtain the advice of a lawyer, and the right to refute the evidence presented by the Public Prosecution in proof of the crime it attributed to him.

In some legal systems, humanity has come a good way in replacing direct confrontation with technical transformation, by adopting the submission and exchange of electronic memos and written pleadings, as a practical beginning towards achieving the goal of confrontation. Closed-circuit video conferences have also been used to achieve the same purpose, and this has achieved greater flexibility. In organizing judicial sessions and facilitating access to people who may have been difficult to attend in person.

To consider the possibility of consistency and harmonization between technology and the principle of the right to hear and interrogate, we find that this principle is guaranteed in *prima facie* judicial sessions, with differences in details between legal systems and the type of cases. And he is criticized for

it; the high cost in time, effort, and money, while wasting resources and ignoring the circumstances of the opponents, and the circumstances of the court in exceptional cases. Such as epidemics or disasters. It remains difficult to verify actual attendance and direct interaction (This obstacle has begun to be overcome by applying biometric verification techniques (face and voice fingerprint) to ensure the presence of actual people.)

Among the most prominent challenges of technology, in addition to the limited and weak ability to evaluate credibility by observing body language and some emotions, which is provided by the traditional system, in addition to the expected security breaches that expose evidence and minutes of digital sessions to manipulation.

Therefore, reconciling the principles of direct judiciary and electronic litigation is a challenge facing legal systems in the modern era. This balance can be achieved by establishing legal standards for remote trial, and issuing legislation and legal regulations that regulate the use of electronic technologies in judicial processes, and ensure the preservation of the principles of justice and transparency, all of that; With increasing doses of training for judges and lawyers on digital litigation. Without detail, debate, or controversy, technology will inevitably excel in achieving the goal and philosophy on which the principle of confrontation is based.

As for the principle of equality in resorting to the judiciary and what it requires in ensuring equal opportunities to resort to the judiciary, by establishing the unity of the courts, the unification of procedures, and the unity of the law applied to the dispute. In addition to removing physical barriers to exercising the right to litigation, it includes all parties to the dispute without discrimination based on gender, nationality, race, color, or any other personal characteristic. It is a fundamental principle in justice and law systems around the world.

The emergence of digital technology has provided great support for this principle, by expanding access to justice through digital platforms, and reducing human discrimination, the influence of bureaucracy, and the potential for corruption. However, achieving this principle faces a challenge in achieving a balance between the use of technology and ensuring equal opportunities due to the digital and awareness gap and unequal technical defense capability, with software and algorithms expected to be biased if they are not designed accurately. Balance can be achieved by reducing the digital divide, diversifying the means of providing electronic justice services,

reviewing applications and software, continuous training, and developing digital legislation.

The principle of the right to challenge the judiciary and the work of judges means that every party to a lawsuit has the right to review judicial rulings before a higher authority, with the aim of correcting a procedural or substantive error that it sees, or an injustice that it believes, or an injustice that it suffered during the trial. This principle would guarantee justice and give litigants an opportunity to correct what they see as affecting their rights. It would also limit legal errors by providing the judicial system with the opportunity to identify and correct any errors that may occur a number of appeals have been settled in the courts, whether appeal or cassation. To remove any violation of the law in the rulings, or to request consideration of cases in which new evidence has emerged to correct serious errors that accompanied the ruling, in addition to constitutional and administrative appeals. This right shall be exercised in accordance with specified periods and subject to specified conditions.

Technology will play a pivotal role in enhancing this principle by facilitating the exercise of the right to appeal by submitting appeals electronically via digital platforms, following up on the progress of appeals, and providing a space for holding virtual sessions. With the same challenges related to information security, the digital divide, and the necessary legislation with training and qualification.

As for providing justice quickly as a principle in litigation; Avoid delays in justice that exacerbate disputes, increase costs, dilute the judiciary, and undermine confidence in it. There is no doubt that the judiciary in its expected form; What is known as digital justice will enable this principle to be better than it is in traditional litigation, starting with submitting claims electronically and holding sessions remotely while simplifying court operations and providing information, legal services and decisions more efficiently via the Internet, facilitating access to justice, and directing digital case management faster and more accurately, through legal systems and technologies. This depends on controlling and improving the security of information and data and making smart use of technology, provided that the tools are prepared to serve the ultimate purpose of justice and achieving transparency. we add an important dimension provided by technology, which is strengthening the principle of innocence, which is considered one of the foundations of justice and integrity in judicial processes, and it is complementary to the principle of "the right to investigation and defense," which gives the accused

the right to present his own defense. The basic principle regarding persons is innocence, the basic principle regarding good intentions, and the basic principle regarding liabilities is that they are free of any obligation, until the opposite is proven by what is reported by the evidence.

As for the impact of digital technology on the principle of innocence: The judicial system has witnessed fundamental changes, especially in the field of collecting and presenting evidence. Digital evidence, such as emails, cell phone records, and computer data, has come to play a crucial role in trials. The principle of innocence faces challenges represented by the reliability of digital evidence, which is vulnerable to forgery and alteration. It is a challenge to ensure the accuracy of information, while setting strict standards for its acceptance and ensuring its reliability.

We can conclude that the principles on which the judicial and litigation processes are based can be classified into two categories influenced by modern technology, which can be summarized as follows: A department that technology outperforms traditional judiciary in achieving and strengthening despite concerns related to its impact on justice. These are: the independence of the judiciary by limiting any interference while preserving the privacy of the judge and separating him from political or societal pressures and public by broadcasting the sessions electronically and enabling the public to follow them remotely, which enhances community oversight of the judiciary's performance. And transparency through automated documentation techniques for the conduct of sessions and the adoption of secure electronic platforms. And free of charge by reducing the cost associated with traditional procedures, and facilitating access to justice, especially for vulnerable groups and remote areas. And impartiality manifested through reduced personal interaction between judge and parties most procedures are carried out electronically, which puts an end to manifestations of direct or illegal influence. Modern technologies also contribute to providing justice quickly and efficiently, while facilitating access to information to a greater extent than what the traditional judiciary provides. Thus, modern technology does not necessarily threaten the principles of the judiciary, but rather it may be a means to renew it and enhance its effectiveness in the era of the Fourth Industrial Revolution, provided that its use is controlled by clear legal and ethical rules and a second section; It is completely difficult to use digital technology; It is necessary for humans to breathe into it, represented by investigation,

interrogation, and weighing evidence, as digital technology simulating human understanding in understanding the context and surrounding circumstances is impossible, because it requires personal interaction, and emotional interaction is impossible with technology. This is necessary in some cases.

4. RESULTS

1. The study emphasized the inevitability of modern technology. Whoever wants it, may God bless him and grant him peace. And whoever refuses to do so; It was a clear breakthrough for him, with the radical transformation it brought about in all fields. Including the field of the judiciary, with its established principles, which now faces a new mechanism, great challenges, and great opportunities.
2. The existing traditional paper claims system has many disadvantages, including: the difficulty of viewing claims by opponents, the difficulty of exchanging memos and sending the claim, the possibility of tampering with the paper documents attached to them and destroying or stealing them, along with the difficulty of retrieving them, in addition to the impact of time factors on the storage and transportation processes.
3. Most of the principles of judiciary and litigation, "authenticity," do not intersect with the techniques of the "contemporary" Fourth Industrial Revolution with its various manifestations, and discipline between them is possible towards consolidating and serving justice and achieving its mission. It has become clear that there is a weakness in the current legislative structure and a wide gap. And a gap.
4. The study emphasized the positive aspects of modern technologies, and the possibility of directing them towards good, "technology in the realm of justice" to contribute to improving and supporting judicial work efficiently. By overcoming the greatest challenges of traditional litigation, in the face of the procedures we are experiencing and the extension of deadlines, by providing complete justice that is done quickly to those who seek it, and is free, reduces the burden on the courts, reduces expenses, and provides better access to information. Modern technology does not know bribery and corruption, if it is well programmed and applied tightly.
5. Modern technologies face major challenges at

- the level of the arc and niche of justice, including concern about the violation of some procedural rights due to excessive automation and reliance on algorithms in making judicial decisions, which constitutes a violation of the principle of impartiality, the guarantees guaranteed to the parties, the confidentiality of data, and the possibility of appealing them.
6. It has become clear that the principles of litigation regarding modern technology are divided into two parts, a section in which technology is superior to traditional judiciary in achieving and strengthening it, eliminating what some may imagine that it is in a state of competition with humans. A section that completely eludes digital technology; There must be the same human breath in it.
 7. The humanity of the judge is necessary in a specific type of judiciary, and completely dispensing with humans in the field of judiciary using technology and artificial intelligence is inconceivable.that; Because the work of the judiciary is related to the human characteristic itself, and what it requires in terms of interaction with the parties, analysis and examination of the opponents and witnesses, understanding of the circumstances and context, taking humanitarian and ethical factors into account, and the strong need to weigh evidence, interpret laws, and make legal decisions based on that.
 8. Partially dispensing with humans in the judiciary is possible by using modern technology as an auxiliary factor and integrating some functions into it. Some countries have developed successful experiences using Judge Boat, such as: Estonia, China, the United States of America, and the United Kingdom, and the experience has shown efficiency despite the challenges.
 9. The research showed that the future of the judiciary cannot be isolated from the path of comprehensive digital transformation. There is an urgent need to develop a flexible and effective electronic judiciary, based on solid principles that take into account constitutional foundations and legal principles, with the need for cooperation between the judiciary, technicians and legislators in formulating these foundations and policies.

5. RECOMMENDATIONS

1. Moving strongly towards modern technology in the field of judiciary, enhancing and

disseminating previous efforts in experimenting with electronic litigation, and supporting complete digital transformation in case management, due to its positive support and effective contribution to its efficiency. It goes beyond the disadvantages of traditional paper lawsuits, provides complete and free justice, reduces the burden on the courts, reduces expenses, and enables smooth access, such as confrontation, attendance, and publicity, in line with modern technology, with periodic, impartial evaluation of the conduct of electronic litigation by analyzing its impact on the principles of litigation, judiciary, and transparency.

2. Regarding legislation and policies: We recommend; Reviewing substantive and procedural laws, and issuing a set of legislation and legal policies, at both levels; International and national, some of which are shocking, and some of which are gradual, while providing a legal and ethical environment that incubates this transformation to adapt to technical transformations, while providing the necessary guarantees to protect the rights of the parties.
3. Regarding application: We recommend; By restructuring the justice sector with strong steps; By partially dispensing with human beings in the judiciary and some auxiliary legal professions, and adopting the experience of the robot judge and the judicial and legal assistant, while precisely determining the type of cases assigned to him, starting with cases of a simple routine nature, with an emphasis on the humanity of the judge in complex cases such as most criminal cases. There should be oversight of its rulings, with the possibility of appealing its decisions.
4. On digital infrastructure in courts: we recommend; to digitize the justice sector, bridging its huge digital divide.
5. Activating the partnership between the judiciary and technical and academic bodies to develop effective technical solutions that suit reality, control excessive automation, support software to overcome potential challenges in violating some procedural rights, cybersecurity, and data protection, and take into account privacy and confidentiality in confirmation of the principle of neutrality.
6. To fill the skills gap, we recommend; Continuous training and qualification for judges, auxiliary staff and lawyers, and

- building their capabilities in electronic litigation, using digital means and technologies, adapting to them and understanding their legal challenges.
7. The necessity of developing an innovative legal education system that responds to technical development and anticipates the expected prospects therein.
 8. Enhancing community awareness of the advantages of electronic litigation, and making remote justice services available through secure and effective platforms. With the preparation of a practical guide explaining the mechanisms of digital litigation, how to use it, and procedures for reporting, appearing, and appealing, to build confidence in the digital judicial system and achieve comprehensive justice. Providing technical and legal support when necessary.
 9. This study was a summary of most of the most important principles. So; We recommend an independent study of the discipline of each principle separately. While continuing to research and expand on ethical issues related to the use of artificial intelligence in the judiciary.

REFERENCES

- Abdel Ghani, H. R. (1986). The indictment system and the right of the individual and society in criminal litigation (Doctoral dissertation, Faculty of Sharia and Law, Cairo).
- Abdul Hamid, A. (2015). Administrative Law of Iraq (Vol. 1). Al Jazeera Press.
- Abdul Hamid, A. (2021). Digital transformation and the independence of the judiciary in the Arab world. *Journal of Legal and Judicial Research*, 14(2), 221–245.
- Abdul Wahab Al-Kayyali, & others. (2011). Political Encyclopedia. Arab Foundation for Studies and Publishing, Atlas Press.
- Adam, A. W. (2020). Explanation of the Law of Evidence (1st ed.). Baghdad.
- Al-Adly, M. S. (2005). The general theory of defense rights before the criminal judiciary. Dar Al-Fikr University.
- Al-Akhras, N. M. (2012). Explanation of the Code of Civil Procedure: Case and Litigation Procedures in a Comparative Study (1st ed.). Dar Al-Thaqafa for Publishing and Distribution.
- Al-Alfi, M. (2007). The Electronic Court between Reality and Expectations. Sixth E-Government Conference, Dubai.
- Al-Barqawi, L. M. (2021). The judiciary and digital transformation: Constitutional and legal challenges. *Journal of Law and Technology*, 6(2), 45–63.
- Al-Demerdash, A. N. (2022). Digital justice and judicial independence in light of artificial intelligence. Dar Al-Fikr Al-Jami'.
- Ali, A. M. (1990). The Theory of Exceptional Circumstances. Egyptian Book Authority.
- Al-Marsafawi, H. (1973). Trial Guarantees in Arab Legislation. Research Institute, League of Arab States.
- Al-Nadawi, A. W. (2020). Explanation of the Law of Evidence (1st ed.). Baghdad.
- Al-Nasiri, A. M. (2020). The Public Judicial System and Guarantees of Justice in Comparative Legislation. Dar Al-Thaqafa for Publishing and Distribution.
- Al-Qaisi, A. (1999). The administrative judiciary and the judiciary of grievances (1st ed.). Dar Al-Awael for Printing and Publishing
- Al-Qaisi, H. (2017). Al-Wajeez in Administrative Law (1st ed.). Dar Al-Awael for Printing and Publishing.
- Al-Sharaa, H. M. (2010). Electronic Litigation and Electronic Courts. Dar Al-Thaqafa for Publishing and Distribution.
- Al-Shteiwi, S. (2007). Administrative Investigation within the Scope of Public Service. Dar Al-Fikr University.
- Al-Tamawi, S. M. (1967). The Three Authorities in Contemporary Arab Constitutions and Islamic Political Thought. Dar al-Fikr al-Arabi.
- Al-Tersawi, M. E. (2013). Circulation and the lawsuit before the electronic courts. Dar Al-Nahda Al-Arabiya
- Al-Yassin, M. A. (1973). Al-Qanun al-Idari [Administrative Law] (1st ed.). Modern Library for Printing and Publishing.
- Amin, N. (1999). Judicial Conditions in the Countries of the Arab Region. Arab Center for the Independence of the Judiciary and the Legal Profession. <http://www.pnic.gov.ps/arabic.gover.derasat>
- Ammar, S. (2011, May 24). Right to Litigation. Research presented at the First Regional Conference on the International Criminal Court, Doha, Qatar.
- Arabic Language Academy. (n.d.). The Arabic Language: A Dictionary of Meanings.
- Artificial Lawyer. (2018). AI technologies in contract analysis and legal advice in minor UK cases [Report].
- Council Constitutionnel Français. (2021, January 15). Resolution No. 872-2020.

- Err News. (2019). Estonia tests robot judge in small claims court.
- Gibbon, E. (n.d.). The Decline and Fall of the Roman Empire.
- Khaled, K. A.-Z. (2015). Administrative Law (Comparative Study) (Book 2, 1st ed.). Dar Al-Masirah for Publishing, Distribution and Printing.
- Khalil, M. A. (2021). Digital publicity and principles of justice under artificial intelligence. *Journal of Law and Modern Technologies*, 9(1), 122-140.
- Leila, M. K. (2013). Constitutional Law. New Nahda Press.
- Mahmoud, S. A. (2008). The Role of the Electronic Computer Before the Judiciary (1st ed.). Dar Al-Nahda Al-Arabiya.
- Mohammad, S. A. (2001). Negotiations in the Contractual Framework: A Comparative Study. House of Culture.
- Mustafa, S. (2004). Civil, Commercial and Criminal Administrative Litigation: A Theoretical and Applied Study in Comparative Tunisian Law (2nd ed.). Tunisia.
- Nourjan Al-Ayoubi, A. R. (2016). The Administrative Judiciary in Iraq, Its Present and Future: A Comparative Study. People's Publishing House.
- Othman, O. K. (2020). Administrative Law (1st ed.). Al-Ahaly Press.
- Quran. (n.d.). The Holy Quran.
- Saleh Al-Adly, M. (2005). The General Theory of Defense Rights Before the Criminal Judiciary. Dar Al-Fikr University.
- Schwab, K. (2018). The Fourth Industrial Revolution. (Original archived on 2018-05-14, Retrieved 2018-03-24).
- State v. Loomis, 137 Wis.2d 290, 393 NW2d 646 (Wis. Sup. Ct. 2016).
- Turabi, H. (2011). Politics and Governance: Sultanic Systems between Principles and Sunnahs of Reality. Dar Al-Arabiya.
- United Nations General Assembly. (1985). Resolution 40/32 of 29 November 1985 and Resolution 40/146 of 13 December 1985. Retrieved from
- Zaid, M. A. A. (2023). Lessons in the History and Philosophy of Law. Library of Arab Studies.