Legal Regulation of the Smart Electronic Court in Jordanian Courts

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Abstract

This study aims to introduce and organize dealing with smart electronic courts considering the lack of legal legislation regulating the work of artificial intelligence systems, so the study deals with the supporting stages for the establishment of a smart electronic court, clarifying the foundations of organizing the smart electronic court and its requirements, and finally the regulatory proposals for the smart electronic judiciary due to the advantages provided by the use of the smart electronic judiciary. To implement this, it is recommended the establishment of a legal system that introduces and enables electronic judicial work, using the experiences of other leading countries in this field, as well as monitoring smart electronic judicial work by verifying the validity of court procedures and preserving the rights of litigants.

Keywords: Smart Litigation; Smart Court; Remote Litigation.

1. Introduction

The current era is witnessing a wide digital transformation in all fields, even in the field of litigation. Courts are using computer electronic means as part of litigation work, such as archiving. With the spread of the technological leap to reach software and robots that have the ability to work with human logic, some countries have begun to move to electronic courts based on Artificial Intelligence (AI), and it becomes only a matter of time for this software to enter the Jordanian judiciary, which has affected all areas of life with its superior capabilities, including improving judicial work.

The importance of the study lies in anticipating the electronic reality of smart electronic courts, and the possibility of organizing them within the Hashemite Kingdom of Jordan. Due to the lack of legal legislation regulating the work of the elements of smart electronic courts, such as robots and algorithms, because of the speed of technical development compared to the legal situation, this led us to study the mechanism of establishing a legal system that regulates the work of electronic courts in case of transitioning to them. This will be done to keep pace with the development witnessed by the legal environment within a preventive view which protects the legal and realistic system from potential damages to facilitate the adoption of electronic courts according to a flexible legal system capable of continuous development¹. This will enhance the status of justice and judicial transparency in Jordanian courts.

2. Supportive Stages for Establishing a Model Smart Electronic Court in Jordan

Before the advent of computers and the Internet, all judicial procedures were traditionally conducted through paper statements and records. Moving into the electronic age and the spread of the Internet, this made it possible to transfer some of the work done by humans to computers. With the technical progression, it became possible to hold litigation sessions electronically remotely, which led to support the establishment of a smart electronic court through the phases of technical life and its development.

Some believe that there are three main stages through which work can be done to reach AI litigation and bring about this technological change in litigation, which will lead to reforming the justice system based on smart technology:

1. The first stage: This technology is provided in informing, supporting, and guiding people working in the judicial field, and this technology will support them while carrying out their work.

¹ Amr Taha Badawy Muhammad, The Legal System for Intelligent Robots, Dar Al Nahda ,Al Elmiya for Publishing and Distribution, UAE, Dubai, 2022, p. 170.

2. The second stage: Smart technology will replace the jobs and activities previously performed by humans, which will create the techniques of human replacement with the smart electronic element.

3. The third stage: With the use of this sophisticated technology, judges will administer justice in quite diverse ways.

The previous stages can be combined to (supportive technology, replacement technology, and technology to create a new smart jurisdiction).

Using the above classification, most of the judicial reforms supported by smart technology for smart judicial transformation focused on two stages: (supportive technology, and replacement technologies), and the application of technological innovation using specific forms of AI began. For example, smart technology has been used to make online justice services available to the public, as well as access to alternatives of justice through information-based systems, and the growth of companies providing legal services online is observed during the past three years.²

Based on the above, the authors will try to find stages specific to the Jordanian legal and judicial environment to form a supportive basis for the existence of smart electronic courts in the Hashemite Kingdom of Jordan; this will happen as follows:

2-1: The First Stage: - The Traditional Electronic Legal Regulation

The Jordanian legislator has taken care to keep abreast of technical developments, including the Electronic Transactions Law No. (15) issued in 2015 and its amendments, in addition to some other texts in special laws, such as the Banking Law, the Civil Procedure Code, and the Jordanian Evidence Law, as they sought to establish a transitional period from traditional tools to modern technologies by creating the basic pillars supporting electronic interactions.

2-1-1: The Jordanian Electronic Transactions Law

Article $(2)^3$ of this law defines "electronic transactions as transactions carried out by electronic. In other words, this regulation provides the supporting structure to adopt the existence of remote communications electronically without physical presence, as required by smart court hearings and pleadings. In addition, the smart court will be committed to applying the value and spatial jurisdiction in accordance with the Jordanian laws in force, but the decision on this will be electronic. In the same article, the legislation defines the nature and system of electronic information, as well as the idea of an electronic information message as "information generated, sent, received, or stored by any electronic means, including e-mail...".

The law regulates electronic records, electronic signatures, and electronic documentation. As well as the validity of these rules, and electronic authentication bodies. Article (9) of the same law stated, "The information message is a means of expressing a legally acceptable will to express an offer or acceptance with the intention of creating a contractual obligation", as well as the rules for sending and receiving these electronic messages and electronic money transfer mechanisms.

2-1-2: Banking Law

The Jordanian Banking Law is a basic pillar of the state's economy, and it contains texts that can be described as the text supporting the existence of smart electronic courts. Article $(92)^4$ of this law, in its paragraph (a), states: "The Central Bank, in coordination with banks, establishes an electronic system for transferring funds between banks and performing clearing and settlement operations and it has the right to administer this system and to conduct payments and receipts operations through it".

As well as paragraph (b) which states "Banks may use electronic archiving systems to keep electronic records instead of the original books, records, statements and documents... etc., as long as the provisions of the Electronic Transactions Law are followed," as well as paragraph (c) which permitted members of the bank's board of directors to attend meetings by any of the video calling methods, as well as Paragraph (d), which

² T Sourdin, Judge v robot, Artificial intelligence and judicial decision-making, Handbook for Judicial Officers, 2021. https://www.judcom.nsw.gov.au/publications/benchbks/judicial_officers/judge_v_robot.html ³ Electronic Transactions Law No. (15) of 2015, published on (Qararak) website.

⁴ Banking Law No. (28) of 2000 and its amendments, published on (Qararak) website.

exempted banks that use computers or other modern technology devices in organizing their financial operations from organizing trade books as required by the effective trade law; also, the information obtained from these devices or other modern methods is considered as commercial books, assuming that the Electronic Transactions Law's rules are followed.

2-1-3: Jordanian Civil Procedure Law

The Civil Procedure Law is considered the general legislation for litigation procedures, as it contained texts supporting the establishment of smart electronic courts. Based on the text of Article $(222)^5$ of the same law, it is identified that the paper copy that is identical to the electronic version saved in the database approved by the Ministry of Justice can be approved and considered as the original. The same applies to what was stated in paragraph (1) of Article (21) of the possibility of the court assistant recording trial proceedings using electronic devices.

2-1-4: The Jordanian Evidence Law

Evidence derives its authority from the legal texts contained in the Jordanian Evidence Law, and in light of the laws keeping pace with technological developments, the Jordanian Evidence Law, according to recent amendments, has considered electronic means an authoritative proof just like traditional means. Examples of this include the wording found in Article (13) of the Law of Evidence. ⁶, especially paragraph (d), which considered the authenticated computer extracts to have the strength of normal attribution.

The aforementioned legislations cannot be considered sufficient to establish a smart electronic court, as they deal with electronic transactions in general, or they have dealt with electronic transactions according to separate legal texts in several laws.

2-2: The Second Stage: - Supporting Electronic Applications (Software)

Jordan has started providing electronic services through websites and software, including (electronic issuance of non-judgment certificate, company registration through an electronic portal in the Companies Controller Department).⁷

Among the electronic applications that support litigation in Jordan is providing services to inquire about cases and lawsuits brought by lawyers by entering the site and typing the full name of the lawyer, his union number, and his electronic address documented in the Bar Association. This service has also become available through the smart phone and to everyone by registering on the site, where the concerned person can know the case against him and his position in it, and it is also possible to pay for executive orders electronically, in the event that a person is obligated to pay an amount of money such as alimony or compensation and others. With this service for smart phones, the concerned person can know the type of the case brought against him, whether civil or criminal, the case number, the name of the court, the classification of the case, the date of the specific session, and the type of party (complainant/defendant, plaintiff/defendant).⁸

From the Jordanian experience in electronic judicial work is the "Mizan Network", which is an internal network in the Ministry of Justice that connects the courts and sections of each court to each other, as it is used to store data in a central database, through which judges are given access to information each according to the nature of his work.

This network facilitates the work of the courts, improves the quality of judicial work, and enables information exchange and preservation in a file known as "electronic lawsuit". However, this does not mean that the court has become electronic, but rather these are only electronic automation services.⁹

⁵ Civil Procedure Law No. (24) of 1988 and its amendments, published in the official journal No. 3545 on page No. 735.

⁶ Jordanian Evidence Law No. (30) of 1952, amended until 2022, published on (Qararak) website.

⁷ The official website of the e-government, the Hashemite Kingdom of Jordan. https://portal.jordan.gov.jo/wps/portal?lang=ar#

⁸ Jordanian Ministry of Justice, http://www.moj.gov.jo/DetailsPage/MOJ/NewsDetails.aspx?ID=532

⁹ Nadia Jamal Abu Talib and Shereen Abu Ghazaleh, Electronic Courts, Al-Aan publishers and distributors, Jordan, Amman, 2018, p. 61.

2-3: The Third Stage: - Assistive Electronic Regulation of Smart Litigation

This first stage began in some countries, including China, after a national conference on computer and court communication issues ("the 1996 conference") and ended up in 2003 when Chinese courts finished the digitization of the files and website's links. It adopted a focus on technology to solve judicial administration issues for the first time. Beforehand, a number of court files were manually handwritten. The Supreme Court ruled that the main reason courts engage in computer systems is because traditional handwriting of court files, including rulings, cannot provide efficient services in light of the rising number of cases. On a wide scale, the effectiveness of the courts has been compromised by the absence of digital or electronic documents connected to the regular work of the courts, such as the filing of cases and evidence documents as well as legislative tools that judges have frequently referred to. Therefore, reforming the Chinese courts. The People's Courts (1999–2003) underwent a five-year overhaul, and courts all throughout the nation relied on computers to digitize documents. To enhance the technology contribution to the functioning of the judicial administration, the national Internet courts connecting has been accomplished.¹⁰

From another experience, courts in the United States use AI to make specific judicial decisions. For example, these courts use advanced algorithms to aid in pretrial detention of defendants. The Public Safety Assessment Tool is also used by jurisdictions in 29 US states to determine the risks associated with defendants. As for the legal representation of a lawyer using smart technologies, it differs from one country to another. It may be considered a tedious and long process in one country, while another country sees it as means that have a positive impact on the quality of judicial work, based on the fact that automation is superior to humans in increasing productivity, as studies indicated a reduction of lawyers' working hours by 13%, allowing for faster case handling.¹¹

The advanced ADR program (Rechtwijzer) in the Netherlands, which can assist couples going through the divorce or separation procedure, includes ODR components. Before presenting alternatives based on it, Rechtwijzer gathers information about the parties and their connections. The program also provides the parties with "information, resources, links to other sites, and personal assistance" to aid in the resolution of their dispute. If a resolution cannot be found, the final phase comprises (Rechtwijzer) providing the parties with information and the contact details of knowledgeable third parties, such as mediators, attorneys, and other dispute resolution procedures.¹²

The possibility for further AI systems to be incorporated into legal practice is also indicated by these developments in ADR. If these techniques are successful in the field of ADR, then it is also feasible to implement AI systems in the legal system. The experience of ADR programs can help designers and implementers improve any AI arbitration programs. Alternatively, they could gain from AI systems that are more explicitly created to help court authorities and study the successes and failures of such arrangements.¹³

The authors believe that the various international experiences in electronic judicial work and the announcement of the great countries of their intention to establish smart electronic courts based on AI will inevitably lead to the development of the Jordanian legislative view to build a modern law that addresses the legal aspects of smart courts; furthermore, it takes required succession into account in the judicial environment in a manner commensurate with enact laws that preserve the basic principles of litigation and align with the idea of a smart court that is entirely powered by AI applications.

Therefore, the next stage in Jordan is the introduction of AI to the department of Routine Cases, this will require the classification of cases from easy to complex. As such, smart judiciary can be applied to cases that have been described as easy, setting fixed criteria for their classification. Among the proposed appropriate criteria for their inclusion in smart litigation in Jordan, for example, are cases of traffic violations without the

¹⁰ Shi, Changqing & Sourdin, Tania & Li, Bin. (2021). The Smart Court – A New Pathway to Justice in China?. International Journal for Court Administration. 12. 10.36745/ijca.367 496

¹¹ Samuel Maireg Biresaw, Abhijit Umesh Saste, The Impacts of Artificial Intelligence on Research in the Legal Profession, *International Journal of Law and Society*. Volume 5, Issue 1, March 2022, pp. 53-65. doi: 10.11648/j.ijls.20220501.17, p59.

¹² T Sourdin, Judge v robot, Artificial intelligence and judicial decision-making, Handbook for Judicial Officers, 2021. https://www.judcom.nsw.gov.au/publications/benchbks/judicial_officers/judge_v_robot.html
¹³ T Sourdin, Judge v robot, Artificial intelligence and judicial decision-making, Handbook for Judicial Officers, 2021. https://www.judcom.nsw.gov.au/publications/benchbks/judicial_officers/judge_v_robot.html

presence of physical damage, cases that do not require the presence of the parties, repeated routine cases in similar rulings, labor issues in wages and the termination of specific and indefinite contracts, and traditional personal status issues such as marriage, divorce, and others. Indeed, pleading for the aforementioned cases will be within the proposed criteria by submitting the two parties' data electronically, as well as the judgment from the smart judge electronically.

To clarify what cases can be included for adjudication through smart courts, these are, for example, special cases in family matters (such as marriage, divorce, alimony, parental authority, etc.), labor cases (such as cases of termination of the work contract, worker rights, etc.), and routine cases in which the judge has a job similar to the work of a notary. In these cases, judges rely on digital registration and automating processes which are prerequisites for IT in smart litigation. The smart file portal can also assist the parties in presenting their argument to the court in the most effective manner. Since there is clever software that can assess the conflicting parties' points of view and deliver the optimal outcome based on their input, competing parties can utilize it to achieve a settlement. If the case cannot be resolved by smart software, it will be sent to court for a verdict. Intelligent information technology can be used in knowledge systems that make it simple for the judge to access legal sources that he needs in the case before him, as well as creating an intelligent digital case file that can present vast amounts of information in an accessible manner. As for complex cases, AI can be relied on secondarily (assistant) as an initial stage where the judge or authority in these cases must issue a judgment in order to end the case. Because of this, AI has a variety of applications.¹⁴

In a practical experience in Jordan, and after the emergence of the Corona pandemic, the Jordanian Judicial Council took upon itself to use modern technologies in conducting investigations before the judicial police and the Public Prosecution in addition to trial sessions through the use of trial technology (remotely) and the available means of visual communication, in line with national and preventive policies, and in cooperation with the Ministry of Justice, the Department of Reform and Rehabilitation Centers, and the Public Security Directorate. A total of (9,000) trials were held (remotely) during the year 2020, in coordination with the Department of Reform and Rehabilitation Centers, to increase this by (800%) compared to previous years. This included investigation procedures and consideration of cases of violations of defense orders and cases before major criminal courts and courts of first instance in their criminal capacity, which contributed to maintaining what has been accomplished in the past years in reducing the litigation periods and keeping them within reasonable legal periods. This enabled the members of the Public Prosecution and the judges to accomplish their percentage 98% of defense orders violations at the end of the year with full capacity, in addition to the expansion of digital transformation procedures for transactions and procedural requests. This is done in the enforcement departments, activating the work (remotely) of the execution judges, electronic registration of lawsuits and appeals, and electronic payment of fees. These measures taken are the starting gateway to electronic technical judiciary and a starting point and a shift towards a new stage in Jordanian legislation, where, for the first time, the application of modern technology was adopted in conducting legally approved judicial notifications and the electronic filing system for judicial papers in all courts of appeal, which contributed to reducing the number of attendance sessions and speeding up judicial procedures. All of this was done in parallel with the measures taken in order to raise the capabilities of judges and prosecutors to use technology through holding a number of training courses using various visual media, in addition to holding lectures for students of the Judicial Institute diploma program, which were held (remotely).¹⁵

The authors believe that what was previously mentioned represents the previous stage of entering the courts and IT completely, but the entry of AI with them only in the routine cases, and not the complex ones that the court considers. However, with the current development of AI in all sciences, including smart litigation, great confidence has been generated in the ability of this software to enter the judicial world in all of its cases and all of them, and the emergence of the smart electronic smart judge began to replace the human judge in all his works. There are many countries, including Jordan, that have introduced many electronic software to assist in the litigation process, but despite the introduction of these technologies, they cannot be considered in any way resembling an electronic court, whether traditional or smart. There are a lot of software and systems in Jordan that easily help to speed up litigation in a smooth way, such as requesting a non-judicial certificate electronically or searching through the Jordanian national number in the judicial enforcement departments and

¹⁴ A. D. (Dory) Reiling, Courts and Artificial Intelligence, international journal for court administration, E-ISSN: 2156-7964, Reiling, A.D. (Dory)., 2020. Courts and Artificial Intelligence. *International Journal for Court Administration*, 11(2), p.8. DOI: <u>http://doi.org/10.36745/ijca.343</u>

¹⁵ The Jordanian Judicial Council, The Jordanian Judiciary Takes Its First Steps Towards an Electronic Judiciary, Judges Section,

https://jc.jo/ar/blog/details/alkda-alardny-ykhto-aol-kht

other electronic help and support programs. On the other hand, judges must comprehend how AI functions in order to use it properly. To make its material more accessible to AI systems, courts in turn demand that it be digitized with accurate legal translations. Additionally, courts must continuously assess the success of their system and make any required adjustments. This kind of development work for courts and court systems is a new task.¹⁶

2-4: The Fourth Stage: - Electronic Court

Restoring the public's faith in the legal system and ensuring genuine access to justice are the two main objectives of judicial reform and its evolution. To guarantee the achievement of this objective, nations started integrating cutting-edge technology into civil procedures. Digital technology have become more important in recent years for enhancing civil proceedings. Mobile technologies (such as smartphones, tablets, and laptops), digital signatures, chatbots, natural language processing, mobile phone identifiers, and the Internet of Things are some examples of these technologies.

The introduction of information technologies is on a large scale in courts, justice system bodies and institutions, as well as automating their activities, so the introduction of electronic litigation is an important step to improve and elevate the litigation system, providing participants in litigation the opportunity to: ¹⁷

- Submit and receive procedural documents in electronic form.
- Use templates for claims, appeals, and various statements.
- Transfer of the authority to submit documents to the court to a representative of the plaintiff or defendant.
- Identify the notifications issued by the court to the address.
- and other judicial matters.

The most up-to-date technology is used in smart courts. For instance, China's courts have entered a new era thanks to the introduction of the smart court, which has made it possible to use more advanced technologies. Information technology was addressed by the Supreme People's Court in order to build a "open, dynamic, transparent, and appropriate" judicial system that enables the public to comprehend, trust, and watch. Modern court reform, which was formally introduced in 2017, requires a system substantially reliant on current technology. The objective of advancing judicial reform using contemporary science and technology was combined by courts. In addition, the Supreme People's Court stated in the most recent Five-Year Reform Outline for People's Courts that one of the ten objectives of justice reform during this age is "all-round progress in constructing the smart court" (2019-2023). Among the precise steps taken to accomplish this goal, technological advancements connected to AI were mentioned. These included enhanced voice-to-text hearing techniques and clever case management assistance tools. A demonstration of China's first "Internet Court," which resolves Internet-related disputes like those involving online loans, e-commerce (dispute and product liability issues), do-it-yourself (DIY), and stationary robot in the lobby providing online legal assistance to court users, on-site facilities for electronic document filing, dedicated virtual courtrooms, voice recognition independent of the speaker (they no longer need session writers), and other innovations. ¹⁸

3- Legal Regulation of Litigation through Smart Electronic Courts

The smart electronic court is the courts that use AI applications in the litigation process. We will explain what the concept of AI in litigation is, and then show the mechanism of its application in smart litigation.

The Russian Federation defines AI as "a set of technological solutions that allow simulating human cognitive functions (including self-learning and the search for solutions without a predefined algorithm) and obtaining results comparable with the results of the thought and activity of the human being when performing specific tasks" in its Strategy for the Development of Artificial Intelligence in Russia for 2030. Software (including

¹⁶ A. D. (Dory) Reiling, Courts and Artificial Intelligence, international journal for court administration, E-ISSN: 2156-7964, Reiling, A.D. (Dory)., 2020. Courts and Artificial Intelligence. *International Journal for Court Administration*, 11(2), p.8. DOI: <u>http://doi.org/10.36745/ijca.343</u>

¹⁷ Kaganovska, T., Muzyka, A., Hulyk, A., Tymchenko, H., Javadov, H., Grabovskaya, O. (2022). Introduction of Information Technologies as the Newest Concept of Optimization of Civil Proceedings', *Journal of Information Technology Management*, 14(3), pp. 1-25. doi: 10.22059/jitm.2022.87260

¹⁸ Shi, Changqing & Sourdin, Tania & Li, Bin. (2021). The Smart Court – A New Pathway to Justice in China?. International Journal for Court Administration. 12. 10.36745/ijca.367 (p8.

those using machine learning techniques), information and communication infrastructure, and other technological solutions are among the available options. This definition has received criticism for focusing only on high AI, although in fact AI encompasses lesser degrees as well. Therefore, the European Union's definition of AI was used as "a system that demonstrates intelligent behavior by analyzing the environment and taking actions – with a certain degree of independence – to achieve specific goals", as AI systems may be software-based only and operate in a virtual world (voice assistants, image analysis software) or can be embedded in advanced AI devices like (robots, automated vehicles) for example.¹⁹

When discussing artificial intelligence (AI) systems used in smart courts, we bring up the smart assistant of the court, which is an intelligent system that helps create a database of the presented case by extracting the essential details and indexing legal norms. The smart assistant of the court can also gather similar guidelines, claims, and other information that supports the litigation process. This is the most prevalent system, and it has applications. The Shanghai Supreme Court has established standards of proof for common offenses and different stages of litigation. This technology can offer assistance in criminal cases, analyze the evidence, and verify and control the evidence chain. As a result, electronic litigation employing AI apps is regarded as a full online litigation and aids in the sharing of numerous pieces of information, the application of algorithms, and the establishment of trial rules. The use of technology in document distribution, evidence delivery, and court proceedings has shown the direct impact of AI on judicial innovation. The extensive collection of AI technologies, such as AI-assisted trials and judicial activities, has led to widespread support for judicial reform because AI has an impact on the justice system.²⁰

Also, AI can deal with handwriting and convert it into electronic writing that can be entered with smart programs, whether the input is handwritten (with the help of applications that distinguish this handwriting) or input through computer screens; furthermore, voice input can be dealt with using special smart software to interpret speech and interpret its meanings. There is also a feature of AI by cleaning the sound and filtering it from external influences accompanying it such as noise, and smart robots (represented in our smart court research) can perform various actions as if they were performed by a human, by recognizing the surrounding factors such as sound, movement, and others.²¹

The same goes for advancements in online dispute resolution ("ODR"), a type of ADR in which parties use the Internet and technology to assist resolve their conflict quickly and affordably. As a result, remote ODR is now possible via an Internet connection. These systems fall under the category of expert systems. Experts in the area designed them, and they have rule-based algorithms that help the computer make judgments based on data from the parties. To make justice more accessible to everyone with enhanced objectivity and openness, smart electronic courts are being organized with this goal in mind.²²

According to some, everything will soon be done online, including

legal proceedings. This is because AI technology in legal proceedings is directly intended to address the issue of the large number of cases that are currently pending before the judiciary by enabling the judge to hear the dispute quickly and accurately.²³

The authors find that the Jordanian courts have relied on the existence of some laws that deal with electronic interactions and introduced them by adopting them formally in the court and its procedures and objectively in other courts, and this represents the first stage as a traditional electronic legal organization despite the demand for the existence of more in-depth legislation. In the second stage, in which supporting electronic (software) applications exist, it is shown that there are many of these applications in Jordan, and it is possible to add other applications to them. Thus, the authors can say that Jordan has entered this stage and is constantly developing it in an accelerating manner. As for the third stage, as a supporting electronic organization for smart litigation,

¹⁹ Shchitova A.A. (2020) Definition of Artificial Intelligence for Legal Regulation, Advances in Economics, Business and Management Research, volume 156, 2nd International Scientific and Practical Conference on Digital Economy (ISCDE 2020), Kutafin Moscow State Law University (MSAL), Moscow, Russia p618.

²⁰ Aini, G. (2020) A Summary of the Research on the Judicial Application of Artificial Intelligence. *Chinese Studies*, **9**, 14-28. doi: <u>10.4236/chnstd.2020.91002</u>.

²¹ Khaled Hassan Ahmed Lotfy, Artificial Intelligence and its Civil and Criminal Protection, Dar Al Fikr Al Jamii, Egypt, Alexandria, 2021, p. 42.

²² Gustavo Ariel, Are artificial intelligence courts a discrimination risk, An official EU website, 2021. https://futurium.ec.europa.eu/en/european-ai-alliance/open-discussion/are-artificial-intelligence-courts-discrimination-risk.

²³ Zichun Xu (2022) Human Judges in the Era of Artificial Intelligence: Challenges and Opportunities, Applied Artificial Intelligence, 36:1, DOI: <u>10.1080/08839514.2021.2013652</u>

it has been implemented in a limited way in Jordan by digitizing the judicial interactions, and this stage represents an essential step for the implementation of the other stages, so the legislative, executive, and judicial authorities should start to implement these stages now, by benefiting from the experiences of developed countries in this field, as shown above from the Chinese, Dutch, American experiences, and proposals for European Commission laws. And in a way that is commensurate with the Jordanian environment. As for the fourth stage of establishing a Jordanian electronic court, shallow studies in this field have been shown. The authors suggest establishing these courts, even for a specific type of cases or for a certain category of litigants who stipulated among themselves that they resort to litigation in this court. However, the issue here whether the existence of an electronic court is a main condition for the existence of a smart court. The authors confirm that it is possible to skip this stage and move to the establishment of the smart electronic court directly without going through the establishment of a traditional electronic court. Thus, the Jordanian legislation is still insufficient and supportive of the judiciary in entering the world of AI by litigation fully and directly, emphasizing that this matter will not see the light without the development of infrastructure.

4- Distinctive Characteristics of Artificial Intelligence Courts

Smart courts have multiple characteristics compared to traditional courts, and to shed light on these differences and advantages in favor of smart courts, thus, will show the most important characteristics of smart courts as follows: -

4-1: Advantages of AI in Litigation in General

The use of AI in litigation gives other advantages compared to traditional litigation, the speed of data processing in the smart system is not at all comparable to the traditional system, and human intelligence needs to adapt to the new environment and this is not needed by artificial intelligence applications. Also, AI application learns by the input of big data, and the memory of AI is almost unlimited, unlike human intelligence, which is characterized by limitations and disparity between one person and another. The most important part is that AI does not have an emotion, and its judgments will not be affected by any emotions, while the human being is controlled by his emotions.²⁴

Accordingly, the authors find that what has been mentioned can be applied to smart litigation. As for the aspect of speed, cases will be decided more quickly, and the issue of disparity in experiences between human judges will be addressed, and the issue of dismissed judges will be eliminated, and the electronic judge will be able to deal with any circumstance and will not need to adapt to the surrounding environment. Therefore, the decisions of the smart judge will not be affected by the surrounding environment. In terms of learning, the smart judge can acquire the experience of the highest judges by entering legal information, previous court decisions, and legal data from all directions, and thus he will act as a distinguished expert judge without the need to acquire this experience by tens of years and rule in thousands of cases. The smart (programmed) judge is also distinguished by the continuous development of automatic machine learning, and this is what distinguishes the algorithms of the smart judge from the use of any other traditional software. The disparity in the traditional judiciary between judges is through experiences and conditions for the adoption of court decisions on these criteria, while the disparity in smart courts is less severe and depends only on the amount and volume of data entered to the court through the algorithms of its smart judges, and the way smart courts operate when litigating is in a way that is closer to arithmetic operations without judicial analyzes as is the case in traditional courts. Nonetheless, in terms of emotion and personal feelings that can be negative issues when the courts deal using human qualities because they are inherent in humans in general, which may result in decisions in courts with an emotional bias side or may be political or professional while these emotional, psychological, social, and other matters are not present permanently in smart courts.

In the current era, for example, the application of AI is controlling road transport after the control was for human drivers, where this was previously unlikely. By implementing this idea on smart litigation, it can develop without the presence of a human, such as the judge, writer and lawyer, within the so-called "smart electronic courts", which leads us to say that AI, when applied in litigation, has distinct characteristics compared to electronic courts.

4.2: The Most Objective AI Courts

²⁴ Ammar Karim Al-Fatlawi and Ali Al-Mashhadi, Civil Responsibility for Complex Artificial Intelligence Technology, Durob Al Maarifah for Publishing and Distribution, Arab Republic of Egypt, Alexandria, 2022, p. 39,40,41.

A few advantages of the smart court include maximizing the use of technologies like the Internet, computing, big data, and AI, enhancing trial system and capacity renewal, enhancing judicial credibility, ensuring the fairness and efficiency of the judiciary, and achieving highly intelligent performance and management of people's courts.²⁵

Although technology cannot completely replace judges in decision-making, some claim that judicial AI has been extensively used in areas where judges have discretion, such as sentencing, determining the amount of compensation, and assessing evidence. Practice demonstrates that it is successful in preventing judges' arbitrary decisions. For instance, the transition from ADR to ODR promotes judicial process transparency and allows for the public to witness the emergence of "digital justice." AI helps the judiciary function more effectively and fairly while also facilitating public monitoring and the dissemination of justice. The digital display of the judicial process makes it increasingly amenable to coding, quantification, analysis, forecasting and auditing.²⁶

It has been asserted that the "smart" transformation of courts through the use of information technology will be consistent with the traditional ideals of the judiciary by allowing court services to be more open, effective, and customer-focused. Regarding the expanding global Internet user population, this technological ease can enable adequate judicial systems, which will help to drastically lower the high expenses involved with obtaining justice. The public will be able to get close to judicial openness with the use of Internet technology, a good example of which is to download all judgements on the Internet, together with the intelligent technical growth of litigation will strengthen the justice system through technological means.²⁷

The authors believe that one of the important elements in traditional litigation is the impartiality of the judge with the opponents, as well as the element of experience (for the human judge), in adapting cases and ruling them in accordance with the laws in force, as well as the element of working actively without fatigue so that his decisions are sound, as well as the element of working without nervousness or pressures of any kind, whether social or professional, in addition to the element of integrity of the judge, and other elements that when negatively practiced, the judicial decision would become subjective. Therefore, intelligent litigation shortens all these reservations until they become almost non-existent. Therefore, it can be said that intelligent litigation is more objective than traditional litigation, which is reflected in the quality of judicial rulings and reduces the number of appeals to judicial rulings, which speeds up the disposition of cases.

4.3: The Best Quality AI Courts

The goal of judicial AI, according to its proponents, is to use technology to analyze cases that are similar based on big data, develop guidelines against standards of evidence, verify and compare those standards, exclude unreliable or illegal evidence, prevent outside interference, and boost the credibility of the judiciary. The AI-powered solution can achieve complete transparency of the trial procedure and the court case handling process with the use of the Internet. Justice in court may become more transparent as a result. Judicial AI can be used to force the case records management system to give up conventional methods of archiving and achieve comprehensive supervision of the trial processes of cases, among other things, so that similar cases can receive the same or similar judgment results. This is made possible with the aid of big data and a unified platform. The goal of identical cases leading to identical verdicts can be achieved through exchanging data, and the function of judicial AI extends beyond just developing fresh approaches to challenging issues. It can also make judicial decisions more uniform. ²⁸

Based on the above, the use of AI applications in litigation will make the judiciary more flexible, easy, and fair, which shows transparency and provides new solutions to address difficult cases. Therefore, below present the organizational proposals for electronic courts.

²⁵ Shi, Changqing & Sourdin, Tania & Li, Bin. (2021). The Smart Court – A New Pathway to Justice in China?. International Journal for Court Administration. 12. 10.36745/ijca.367 (p2.

²⁶ Zichun Xu (2022) Human Judges in the Era of Artificial Intelligence: Challenges and Opportunities, Applied Artificial Intelligence, 36:1, DOI: <u>10.1080/08839514.2021.2013652</u>

²⁷ Shi, Changqing & Sourdin, Tania & Li, Bin. (2021). The Smart Court – A New Pathway to Justice in China?. International Journal for Court Administration. 12. 10.36745/ijca.367 .p5.

²⁸ Aini, G. (2020) A Summary of the Research on the Judicial Application of Artificial Intelligence. *Chinese Studies*, 9, 14-28. doi: <u>10.4236/chnstd.2020.91002</u>

5- Organizational Proposals for Smart Electronic Courts

This requirement, show several helpful proposals to enter a world of intelligent litigation, and these proposals will be specific to the application of smart courts in Jordan and the mechanisms for accessing this application within a well-studied scientific methodology and also within solid legal mechanisms. The most prominent of these proposals are:-

5-1: The Existence of a Fully Smart Judicial Court (Chamber)

The authors find that litigation through the smart court could be in cases that are examined or heard quickly, provided that the consideration of the case before the smart court is optional for both parties. To implement this, the following legal text is suggested: "The smart court is intended to consider cases examined quickly, provided that resorting to it is optional, with the consent of both parties. The prior agreement in the contract to resort to the smart court takes the ruling of the arbitration agreement in terms of the necessity of resorting to the smart court and that it may not be waived except with the consent of the two parties".

As for cases considered or heard quickly, these are urgent cases that are considered by the subject judge on a permanent basis, i.e. not a temporary procedure as in urgent requests. This means that urgent requests are not included in electronic litigation, as they are temporary procedures and in most of them require physical disclosure of the subject of the urgent request, such as a request to invite a witness who fears missing the opportunity to have his testimony heard, and a request for appointing custodians.²⁹

Therefore, the proposal to include urgent cases in electronic litigation and smart courts is limited to cases that are considered permanently in the court and the judge has permanent decision regarding them. The right as a result of the judgment is certain for the concluded litigation stage, such as in claims for labor rights.

The Jordanian Arbitration Law No. (31) of 2001 and its amendments is used in a manner that does not contradict the principles of the smart court, as it is suggested, as mentioned, that resorting to the smart court should be by the agreement of the parties to the dispute, and at the same time the agreement must be written, whether it was before the dispute or After filing the lawsuit, that does not contradict the essence of the idea of the smart court.³⁰

Based on this, robots have been used in arbitration by providing the smart arbitrator with information, as it collects and analyzes the information entered into it. It also has the ability to read the case papers, collect evidence, investigate and issue judgments at the end.³¹ Of course, what the smart arbitrator doing may be measure with the intelligent judge, since they share the same matter, with separate considerations for each of their work.

5-2: Smart Electronic Litigation within Time Limits and Gradual with Censorship

Smart litigation and smart courts are among the developments of the modern era. Therefore, the Hashemite Kingdom of Jordan should keep pace with development, and create a legislative environment that incubates smart courts to overcome possible problems. The authors believe that the application of AI should be according to a chronological order, with the provision of specific mechanisms for evaluating each of the stages. A good example here is the experience of the United Arab Emirates. In the year 2000 AD, the UAE started an electronic transformation project, and in 2003 AD the e-government project was established. In 2014 AD, the first smart city (Silicon Park) was completed. In 2015 AD, the provision of government services in the UAE was transformed into the electronic manner by 100%. In 2017, the UAE launched the Artificial Intelligence Strategy as the first major project within the UAE Centennial 2071.³²

5-2-1: Smart Electronic Litigation Within Time Limits

²⁹ Mahmoud Muhammad Al-Kilani, Principles of Trials and Civil Procedures, Second Edition, Dar Al Thaqafa for Publishing and Distribution, 2021, p. 272-273.

For more information on the subject, see the previous reference, p. 259-303.

³⁰ Similar to Article (3), Article (10), Article (6), Article (7) of the Jordanian Arbitration Law No. (31) of 2001 and its amendments - [Amended Arbitration Law No. (16) of 2018].

³¹ Khaled Hassan Ahmed Lotfy, Artificial Intelligence and its Civil and Criminal Protection, Dar AlFikr Al Jamii, Egypt, Alexandria, 2021, p. 22.

³² Abdullah Saeed Abdullah Al-Wali, Civil Liability for the Damage of Artificial Intelligence Applications in UAE Law, Dar Al Nahda Al Arabiya, Emirates, 2021, p. 63.

The authors find that the process of accepting the introduction of smart electronic litigation will not be easy for two reasons, the first is the need to make sure that these smart systems are effective, and the second one is that smart litigation will encounter opposition. To solve these two problems, we suggest introducing smart electronic litigation into Jordanian legislation in stages, with the first stage starting with smart applications in litigation and applied in several countries in the world which their efficiency and accuracy were witnessed, and we start with parts of electronic litigation to reach smart electronic litigation, with the possibility of setting time limits to move from one step to another defined by legislation, similar to laws published in the official journal and give a later date for their implementation. Therefore, the authors propose a legal text through the previous legislative proposals, "that the provisions of the smart court be applied after six months of their publication in the official journal."

5-2-2: Gradually-Implemented Smart Electronic Litigation

The use of smart litigation is one of the ways that help judges in legal procedures and reduce expenses³³, so the authors suggest that the introduction of AI legislation to regulate the litigation process should be gradual from multiple directions as follows: -

First: This introduction starts with the simple issues, then to more complex ones.

For example, the (Mabrouk Ma Dabbart) service that was arranged in the UAE, which allows the completion of marriage contracts through a smart robot.³⁴

Second: The implementation should be with certain courts, so the application begins in the Magistrate's Court, then the Civil Courts of First Instance, then the Civil Appeal, then the Criminal Courts, and then the Courts of Cassation.

Third: With regard to the estimated financial value of the case, the jurisdiction of the smart courts for the cases estimated for the value of the case, for example, this can be up to 10,000 Jordanian Dinars, and anything more than this should be considered by the traditional judiciary, and the financial amounts are raised gradually after the success of each stage.

Fourth: The validation of the smart courts should start from commercial cases, and then it can include civil cases, criminal cases, then all cases.

Fifth: Pleading through a smart litigation program in electronic courts. This judiciary is called (Smart Electronic Judiciary), and it has a more specialized section in electronic courts.

The authors also suggest adding a text to allow the presence of a smart electronic judge in police stations, security services, and airports to resolve minor cases and violations immediately, as there are violations that are paid immediately, and the case is closed.

5-3: Identifying the Parties that Deal with Artificial Intelligence Pleading

It is necessary to identify the parties that deal in litigation with AI. These parties should be trained and given certificates for reputable programs determined by the legislator with periodic oversight to ensure its development. Moreover, pleading in the courts cannot be accepted except through law firms licensed for this purpose. The authors propose to organize litigation before smart courts as the following text: "It is not permissible to plead before the smart courts except through a law firm licensed by the Minister of Justice, and the nature of the work and the conditions for establishing, licensing, and supervising these offices shall be determined by a regulation issued for this purpose".

5-4: Allowing the Human Judge to Deal with Certain Cases in Smart Courts

A problem may arise that sometimes the judge, by interviewing the opponents, needs to infer some human expressions through which the spirit of the law can be applied, and these expressions will be lost by litigation

³³ Khaled Hassan Ahmed Lotfy, Artificial Intelligence and its Civil and Criminal Protection, Dar Al Fikr Al Jamii, Egypt, Alexandria, 2021, p. 76.

³⁴ Abdullah Saeed Abdullah Al-Wali, Civil Liability for the Damage of Artificial Intelligence Applications in UAE Law, Dar Al Nahda Al Arabiya, UAE, 2021, p. 70.

through the smart electronic judge. As a result, the authors suggest that the human judge who supervises the case can divert some important testimonies to the realistic court for this purpose as an exception, such as major cases in criminal and financial cases in which the state is a party, and then include the findings of the human judge into the smart program.

5-5: Training of Technical Staff with Legal Professionals

Dealing with the smart court makes it imperative for the state to find legal and technical experts who can transfer the demands of the electronic court that is still in the process of preparation and experimentation, since the clearest and most understandable legal theories are transferred by technologists to computer programming. Building a legal AI system requires legal experts to discuss theoretical issues one by one, depending on the huge evidence and proposing solutions. Therefore, the development of smart legal systems and electronic courts requires close cooperation between technical experts and legal experts to enhance legal development and implementation of existing laws.³⁵

5-6: Smart Electronic Courts That Are Based on Advanced Non-traditional Assistance Programs

Advanced non-traditional assistance programs mean "programs with the ability to understand body language and similar programs that have non-traditional capabilities". These programs assist the judge in cases of witness hearing and investigation. Similar to the laws that oblige banks to provide the strongest protection programs from intrusions, the program must provide capabilities It is similar to human capabilities, and this is confirmed by the (TURING) test.³⁶

Three parties enter into this test, the first party (A) evaluates the smart program, the second party (B) is the human element (the human), and the third party (C) is the robot or the program that works with AI. Each party is put in a different place from the other, with the existence of a direct connection between the first and second parties, as well as between the first and third parties. Evaluating the smart program and its efficiency occurs through the connection of element (A), which is the evaluator of the program, with the human element (B) on the one hand, and its connection with element (C) separately on the other hand. Dialogues and asking questions to both of them begin separately, if the arbitrator cannot find a difference between the answers and outputs of each of them, even by 70%, then the program or the smart robot is considered successful in the test according to the TURING test.³⁷

The authors consider a proposal to adopt such a program, and explain the possibility of reversing this test to ensure the validity of the programs or smart robots intended to be used in the smart court, as follows:

Adoption of the (TURING) test, so that a legal committee is formed in the Court of Cassation from highly experienced judges and they play the role of (A) in the test. Their task is to arbitrate and evaluate the smart program and give the authority to adopt any smart program in the smart court. As for element (B), this will be a traditional judge who performs his judicial work and to consider the cases before him. As for element (C), this is the intelligent judge who is subject to the test. The evaluator (A) will monitor the judgments of the human judge (B) and what will be judged by the element (C). If a match is found with a percentage of 70%, the evaluator (A) will approve the program and consider it valid to initiate electronic litigation.

The authors also support the proposal to monitor the work of AI by providing smart robots with (the black box) to monitor the accuracy of the work conducted by the smart judge. ³⁸

³⁵ Aini, G. (2020) A Summary of the Research on the Judicial Application of Artificial Intelligence. *Chinese Studies*, **9**, 14-28. doi: <u>10.4236/chnstd.2020.91002</u>.

³⁶ Matheson Turing, a British scientist in mathematics, computers, logic and cryptanalysis, who had an impact on the development of theoretical computer science, and formalized the principles of algorithms, which are the basis for all computers that use Artificial Intelligence and developed many principles in Artificial Intelligence. He came up with the idea that machines could be as smart as humans.

³⁷ Ammar Karim Al-Fatlawi and Ali Al-Mashhadi, Civil Responsibility for Complex Artificial Intelligence Technology, Durob Al Maarifah for Publishing and Distribution, Arab Republic of Egypt, Alexandria, 2022, p. 87. Cited by Patrick Blackburn, Turing et intelligence articielle., pp. 87-88.

³⁸ Amr Taha Badawi Muhammad, previous reference, p. 180.

Conclusion

After discussing this study with its detailed aspects, which was entitled "The Legal Regulation of the Smart Electronic Court in Jordanian Courts", The authors concluded results such as the need to switch from the traditional judicial system to the electronic litigation system because the latter provides many advantages represented in speed, judgment without emotions, and other matters that have been explained in this research. To implement this, the authors proposed the establishment of a legal system that is flexible and capable of continuous development, paving the way for the development of the legal environment to become capable of creating fully smart electronic courts within stages and foundations of an organization that elevate justice and transparency to advanced levels regionally and internationally.

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