

The Nature of Technology and Technical Means Used in Justice

Mohamed AYACHE *

Laboratory public services and development
Djilali Liabes University - Sidi Bel Abbas
Algeria
redaaek83@gmail.com

Soraya CHAIB

Laboratory public services and development
Djilali Liabes University - Sidi Bel Abbas
Algeria
schaib2001@yahoo.fr

Date of submission: 21/05/2025 - Date of acceptance: 17/06/2025 - Date of publication: 29/07/2025

Abstract: The recent development of the world in the field of information and communication technology has caused a major transformation, because it requires the use of this virtual technology that is compatible with the time of speed, especially since it had a great impact. it is no longer just a tool or means, but has become a necessity because of the data and informatics it provides for communication across networks.

Keywords: inforamtics, communication, technology.

*Corresponding author: Mohamed AYACHE.

Introduction:

The technological revolution has led to contemporary techniques in the virtual world thanks to invention and innovation. the objective was to modernize performance and services in a smart environment for facilities and structures, relying on electronic and digital means, devices and equipment, information systems, data, software, and networks.

The justice sector has worked on use material and technical means such as computers, their systems, databases, programs, and modern communication networks, after legally framing and effectively applying this technology and electronic and technical means in judicial work.

The importance of the topic lies in exploring the possibility of integrating modern technology for computer media, equipment, software, and media with internal and external wired and wireless communication networks, or via the internet and satellites, into judicial work.

The objectivel is to study the subject while being aware of what justice has achieved and how it has been practically embodied through the use of information technology, means, and communication networks.

To analyze the study topic on electronic, digital, and technological means, we must address the reliance on the descriptive method by understanding the technical nature of these means, their components, and how to use them, in addition to the analytical method by examining the practical application and analyzing what the law has stipulated regarding the modernization of justice.

And thus, the following issue was raised:

The most important technological and modern technical means that have contributed in justice?

TITLE 1: INFORMATICS SYSTEMS IN JUSTICE

Its about all dominant development in modern technology especially in the field of electronics, after the emergence of the computer and an information system made up of data, after the computer was only tools consisting of a screen and keyboard.

The keyboard now contains many features that have been introduced, such as scanner, printer, and the external and international communication network known as the internet. Judicial systems have sought to undertake research on how to benefit from these technologies and integrate them into justice.

The communications revolution and modern technology have affected countries' activities. The information system is operating at rapid pace and depends on sectors.

by defining an information system, through what they have achieved, we find that the french law calls it an *systeme informatique* ,a computer system, as any means related to manufacturing, storage, creation and processing with a display function, that requires the use of electronic means¹ .

¹ Nassif Jassim Mohamed Abbes Elkaraoui ,justiciable à distance, halabi Publications droit , first Edition 2017,p75

The Nature of Technology and Technical Means Used in Justice

And in the arab laws, including the iraqi law, which considered it as a group of devices and equipment consisting of electrical, magnetic, optical or electromagnetic tools used to create, process and store information, and in the bahraini law, which states that the information system is the electronic system from which we can extract, deliver, receive and store or sending information, as in the emirates arabes unis law, the information system refers to a set of devices and equipment for processing or creating data and stored information with the ability to extract, receive and send , the united states legislator has stated that the informatics system includes data, words, messages, images, sounds and computer programs placed on disks and everything about the data ².

We may consider informatics to be ideas or facts exchanged through means of communication. The data must be virtual technical entries represented by numbers and quantities of symbols and statistical packets that are entered into the computer for translation and processing to obtain results in the form information. readable and audio.

Among them is the so-called informatics law and its relationship to the existence of a law because of its connection with computer crimes and information security and protection, and among them, there is what is related to the legal protection of intellectual property of information.

In another definition, the right of information considers everything that is related to the law of computer networks, the syberlaw, and this is through the author Gibson William Sibar Spice.

Its spread is not limited to information crimes, but rather to the benefits and uses it has had in the financial, economic and commercial fields. however, there must be information system law to regulate the use of this type of data and information by law, There is a relationship between computer crimes and computer crimes, as stipulated in article 2 of the Algerian law for the prevention of information crimes 09-04 of 2009³.

The law on information includes rules resulting from the use of computers with communication networks and the information network through the internet⁴.

We need to look at the nature of the computer, that is, its relationship with numbers. it becomes clear that the computer is a set of integrated devices that aim to operate internal data input/data with the proyra program to obtain results.it is also defined as a set of common and overlapping factors subject to stored instructions, and it is high-speed computing machine.in data processing.

As for the organic definition, it considers it to be an electronic device that performs several mathematical operations and processes internal data and stored according to logical mathematical operations and processes internal data and stored according to logical commands.

The term computerized information is also used, which is often called computer information system⁵.

² Nassif Jassim Mohamed Abbas Elkaraoui,op,cit,p76

³ Algerien law N° 04-09 on 2009 about prevention with informatics crimes

⁴ Hakim Sayab , inforamtics and law,wael publication ,firdt edition, 2014,p87-88

⁵ Khaled Mamdouh Ibrahim,litigation a distance,house university,first edition,2008,p297

For the approach definition, computing is considered as a set of symbols, facts concepts and commands that can be disseminated, communicated and processed using electronic systems and means that play a role in processing and modifying their form. it is information in a virtual world that cannot be touched, seen, heard or felt. complex processes may occur until it becomes readable and audible⁶.

The algerian legislator, relies on this type of information. an informatics systems directorate has been established for the department of justice and electronic document certification. this technology contributes to processing of services, as it is intended for the public, certificate of citizenship, or request for correction while ensuring more data protection⁷.

Adoption of a central informatics system for the automated processing of data relating to judicial activity. the aim is to develop a unified informatics system so that it can be operated in a safe, harmonious and compatible manner with the aim of facilitating judicial work⁸.

Its importance can highlight the role of the informatics system in speed of realization, access to required information and data and their documentation, because using the computer it becomes faster, the information system is also characterized by precision in performance and ability to avoid errors that were in traditional procedures through the use of computer, in addition to the least effort through research and processing facilitate the service provided with the ability to retrieve information as for the amount of information stored, its size varies according to the computer's memory, which allows it to accommodate a large percentage of the coil containing stored data that is accessible and processable⁹.

The computer system contains :

- Provide required data, all types of data and some information retrieved are placed as a program in the computer system and processed by means including keyboard, mouse and scanner.

Processing means processing the data and converting it from its original form, raw material, into readable, understandable and usable results, this is based on what is called processing, which is the basis of the computer system.

- Provide output and data are transferred to the central unite CPU for decision making and use until they reach the printer screen.

Feedback, which is the set of data that comes out of the computer and is recombined with other data from the computer's memory for other output purposes¹⁰.

First Subtitle: Computers in The Informatics Systems

The computer and its technology are considered to be one of the electronic devices by which inforamtics science is used. the computer is defined as a mathematical machine that

⁶ Khaled Mamdouh Ibrahim, op, cit, p305-308

⁷ Mokhtar Kheniche , Djilali Ben Abou, The path of digital transformation in the Algerian justice sector, vol26 issu 7, 2022, p307

⁸ <https://www.mjustice.dz/ar/modernisation-2-2-2> friday 02 may2025 at 22 :00

⁹ Nassif Jassim Mohamed Abbes Elkaraoui, op, cit, p83

¹⁰ Khaled Mamdouh Ibrahim, op, cit, p298

The Nature of Technology and Technical Means Used in Justice

executes programmed decision-making processes and relies on logic, a set of data and numerical controls by electronic means such as stored programs¹¹.

It was agreed that a computer is an electronic device containing data directed by commands and instructions, it contains physical components, including the input unit, control unit, main memory and output unit, such as screen and printer. the computer also has a digital, standard, hybrid or mixed computer¹².

As is well known, the computer is a device operated by a human being, who is the main worker who programs and provides him with the necessary information, commands and data called dataput and output information. Therefore, the agreed definition is that the computer is an electronic device that operates according to programs, operations and commands, in particular mechanisms through informatics, for data analysis and processing. it extracts and stores logical information, which is characterized by its accuracy and speed.

The computer has become a necessary means of modern technology through the role it has come to play in facilitating judicial tasks. it performs work for almost a human being, and is characterized by the fact that it processes virtual information and data which is characterized by speed and is equipped with instructions and programs called programs or software with which it works¹³.

After defining the computer, it is necessary to know its types as well as the steps of its development, mentioning in particular its beginning, which is during the first generation, between 144 and 1959.

Then the ENIAC computer appeared, then researcher Newman's EDMAC computer in 1946, then another computer systems program called edsac in 1948, then the UINFAC computer appeared in 1951, then the IBM computer appeared in 1955.

The second generation extends from 1960 to 1965, when electronic calculationse electronic accounts began to operate the transistor and could control a large number of data and applications.

The third generation, from 1966 to the early 1990s, when computers began operating with transistor and print circuits capable of operating, storing and processing.

The fourth generation : it appeared in the early seventies it relied on integrated printed circuit boards (circuits), then different types of these appeared for the laptop.

Fifth generation: after the Tokyo conference in 1981 and the announcement by Japan of the fifth generation of electronic computers and its development with artificial intelligence and intelligent calculations¹⁴.

Aamong the computer components, we find the so-called hardware components, and they include all the materiel components and things used and the rest of the devices associated with

¹¹ Mohamed El Vayoumi, Introduction to accounts and small account operations, Modern university library, Alexandry, 1998, p7

¹² Nahla Abdelkader Elmoumni, informatics crimes ,culture house publication and distributions ,first edition ,2008, p24-28

¹³ Nassif Jassim Mohamed Abbes Elkaraoui, op, cit, p61-63

¹⁴ Khaled Mamdouh Ibrahim, op, cit, p 295

them, such as the media and things on which data is recorded, tangible objects among the most important of these components are computers, they are classified according to the nature of their work in standard computers and digital computers, the main components are divided into three sections, input units, such as disk drive, keyboard, mouse, and the scanner, the second part consists of the central processing units, whose most important components are the memory, the computing and control unit, and the third part the output units, which are the means of output the most important of these methods are the screen, monitor and printer and headphones.

As for the use of computer systems, there are many including general and limited systems, some of which are used in administrative, commercial, and others are used for a specific process, such as programs banking systems, websites or each means of information is dedicated¹⁵.

The computer informatics system involves a set of activities, whether electronic or manual, including data entry, which means that all data and information are entered and can be retrieved by means of entry such as keyboard.

Then processing, that is to say processing the data and conversion into raw material until they become understandable.

Then the output provides the information needed to make a decision and is transferred to any central processing units cpu is an appropriate extraction method, such as a computer monitor screen or printer.

About storage units, we can find two types :

Direct storage units are magnetic disks, like floppy disk and hard disk.

The second is dependent storage units, which can access any recorded reading by reading a tape from the desired location¹⁶.

In addition to other technical components, such as complex technical means which are material media stored by data and information, including the internal storage location in memory or on a floppy disk or hard drive, software, or as it is called software¹⁷.

The algerian ministry of justice has modernized justice by creating a central directorate for informatics and communications technologies and developing by plan to integrate communications technologies into its all sector and structures by providing the necessary material and technical equipment from automated means such as computers and its equipment with communication networks and informatics systems¹⁸.

Therefore, he established the backup headquarters for automated media systems. it adopted this facility for justice because of its importance in organizing data, information and data. there was a need to create an automated system of protection. a backup site was created to protect the core data center on 3 may, 2015. the backup site allows for continuous flow of

¹⁵ Khaled Mamdouh Ibrahim, op, cit, p 299

¹⁶ Djamil Beni Younes, The legal nature of a computer program, in civil law, legal library wafaa, first Edition, 2014, p80-81

¹⁷ Haidar Chaker El Barzanji, Mohamed Hassen Jomaa, Information technology and systems in contemporary organizations, books house documentaion, N°181, 2014, p112-1-112

¹⁸ https://www.mjustice.dz/wp-content/themes/twenty十九/orgchart/pdfAR/new/dgm_j_org_5.pdf

The Nature of Technology and Technical Means Used in Justice

services. it provides justice regardless of the central location located in al-qudsqasabyar, algiers, and therefore blind during disasters or crises it works immediately and without interruption in service.

Thus, this development is qualitative towards e-justice given the intense aspirations, especially the judicial system, the ministry's objective was to modernize the justice sector by integrating technology into the judicial field and achieving quality. quality and speed by modern means, adding a kind of character modernization of the justice sector, adopting a special system for the administration of justice.

The department of justice's decentralized information system was developed to serve justice and the public and provide data in an intangible virtual world¹⁹.

Second a computer is an electronic device, but to operate it special programs must be available, at instructions and commands, to perform its tasks so that the results are correct.

Computer programs are defined as commands and instructions written and programmed in a special virtual technical language so that they can achieve the desired results and operates them.

It is also protected by systems of protection, including the copyright or patent system. the 1984 us law on copying computer programs provides for special conditions and is stipulated in the 2001 jordanian law, which considered computer programs among the innovative works benefiting from protection.

As far as english law is concerned, his view on protection programs was in the 1985 law, if he referred to it as one of the literary works of english copyright, since the arab countries had introduced it into their laws in the area of copyright, patent, intellectual property for programs and other rights²⁰.

Software defines a program as a set of instructions that allow the informatics system to use it directly or indirectly to obtain a result. this is what makes the information system work and it is divided into basic logic systems programs and application software, which contain all directives and instructions. it is known as the instructions for a technical system used to obtain results by programming data and the informatics system²¹.

The database is considered as one of the technologies for processing and managing traditional files by working on its development and use, its importance lies in the coordination and organization of data to serve applications while reducing errors.

Going back to the concept of a database, despite the similarity between data and information, there is a clear difference that starts with translation because the data differs in terms of processing and use, so that the data are linked to the computer, which has storage and return property and can be defined by a rule that expresses the foundation, media and data are idiomatically defined as a system that provides all means of storage, of data and information management and processing to be easily applied.

¹⁹ Mokhtar Kheniche ,Djilali Ben Abou,op,cit,p65-66

²⁰ Mokhtar Kheniche ,Djilali Ben Abou,op,cit,p68-69

²¹ Djamil Beni Younes,op,cit,p81-83

The researcher defines the « alter » as anything composed of data stored electronically and that can be controlled by computer systems.

« obrien's » definition sees a stock of raw data on electronic media that requires processing by computer systems.

the procedural definition by several authors sees it as a logical and orderly set of data that is characterized by interconnection and requires special systems to process it in order to obtain information and data²².

The data also has several characteristics, including :

- independence from programs
- flexibility in trading data.
- avoid duplication of data.
- centralization of data.
- non-contradiction of data
- security and confidentiality of data against illegal entries.

For the information to be understandable by the computer's system, it must operate according to the value system of (0) to (1).

Information or data is exchanged through communications between two or more persons, or between two different places and times. the closest definition is that data is information and facts in the form of direct or indirect symbols linked to numbers in the form of a numerical language which is processed by a computer²³.

This data can be in any form, including digital data, which is a valuable asset in transactions because it effectively secures information. as a result, programs and applications for informatics systems have been adopted to manage the databases to ensure their follow-up the implementation and coordination with the information communication network so that they can be operated and stored²⁴.

Several databases have also been integrated into the algerian justice system, including :

- database on concerning the nationality certificate.
- database on jornal the criminal record.
- database for electronic document management.
- database for arrest warrants and notifications.

²² Haidar Chaker El Barzanji, Mohamed Hassen Jomoaa, op, cit, 181-181

²³ Tarik Ibrahim Eldasoukki ,informatics security, house university publications, 2009, p87

²⁴ https://www.mjustice.dz/wp-content/themes/twenty十九/orgchart/pdfAR/new/dgmj_org_7.pdf

The Nature of Technology and Technical Means Used in Justice

- database for authenticating documents.
- punitive public management database.

The database for electronic monitoring and the electronic bracelet²⁵.

Second Subtitle: Software And Database Systems

A computer is an electronic device, but to operate it special programs must be available, at instructions and commands, to perform its tasks so that the results are correct.

Computer programs are defined as commands and instructions written and programmed in a special virtual technical language so that they can achieve the desired results and operates them.

It is also protected by systems of protection, including the copyright or patent system. the 1984 us law on copying computer programs provides for special conditions and is stipulated in the 2001 jordanian law, which considered computer programs among the innovative works benefiting from protection.

As far as english law is concerned, his view on protection programs was in the 1985 law, if he referred to it as one of the literary works of english copyright, since the arab countries had introduced it into their laws in the area of copyright, patent, intellectual property for programs and other rights²⁶.

Softawre defines a program as a set of instructions that allow the informatics system to use it directly or indirectly to obtain a result. this is what makes the information system work and it is divided into basic logic systems programs and application software, which contain all directives and instructions.it is known as the instructions for a technical system used to obtain results by programming data and the informatics system²⁷.

The database is considered as one of the technologies for processing and managing traditional files by working on its development and use, its importance lies in the coordination and organization of data to serve applications while reducing errors.

Going back to the concept of a database, despite the similarity between data and information, there is a clear difference that starts with translation because the data differs in terms of processing and use, so that the data are linked to the computer, which has storage and return property and can be defined by a rule that expresses the foundation, media and data are idiomatically defined as a system that provides all means of storage, of data and information management and processing to be easily applied.

The researcher defines the « alter » as anything composed of data stored electronically and that can be controlled by computer systems.

« obrien's » definition sees a stock of raw data on electronic media that requires processing by computer systems.

²⁵ Mokhtar Kheniche ,Djilali Ben Abou,op,cit,p308

²⁶ Mokhtar Kheniche ,Djilali Ben Abou,op,cit,p68-69

²⁷ Djamil Beni Younes,op,cit,p81-83

The procedural definition by several authors sees it as a logical and orderly set of data that is characterized by interconnection and requires special systems to process it in order to obtain information and data²⁸.

The data also has several characteristics, including :

- independence from programs
- flexibility in trading data.
- avoid duplication of data.
- centralization of data.
- non-contradiction of data
- security and confidentiality of data against illegal entries.

For the information to be understandable by the computer's system, it must operate according to the value system of (0) to (1).

Information or data is exchanged through communications between two or more persons, or between two different places and times. the closest definition is that data is information and facts in the form of direct or indirect symbols linked to numbers in the form of a numerical language which is processed by a computer²⁹.

This data can be in any form, including digital data, which is a valuable asset in transactions because it effectively secures information. as a result, programs and applications for informatics systems have been adopted to manage the databases to ensure their follow-up the implementation and coordination with the information communication network so that they can be operated and stored³⁰.

Several databases have also been integrated into the algerian justice system, including :

- database on concerning the nationality certificate.
- database on journal the criminal record.
- database for electronic document management.
- database for arrest warrants and notifications.
- database for authenticating documents.
- punitive public management database.

²⁸ Haidar Chaker El Barzanji, Mohamed Hassen Jomoaa, op, cit, 181-181

²⁹ Tarik Ibrahim Eldasoukki Informatics security, house university publications, 2009, p87

³⁰ https://www.mjustice.dz/wp-content/themes/twentytwentyone/orgchart/pdfAR/new/dgmj_org_7.pdf

The Nature of Technology and Technical Means Used in Justice

- the database for electronic monitoring and the electronic bracelet³¹.

TITLE 2 : The Role Of Communication Networks In Justice

Telecommunications networks, it represents the technology of communication and transformation of the communication network with a change in the infrastructure that allows the transfer of communication of information and data, these networks may work to connect devices between users and exchange with the global network of the internet.

There are types of communication network, including :

Lan is used to connect devices between a limited geographical area such as a house.

Wan wide area network is used to connect local communication networks across wide geographical areas such as cities or countries that rely on advanced communication technologies such as fiber optics and satellite.

Maw communication network is a communication network that uses fiber optic technologies covering an urban area such as a city and is usually used by large in.

Pan are usually used to connect personal devices within a narrow range, such as a room that uses smartphones, mobile devices, and computers. they also rely on bluetooth or wifi technology with a network stitutions and departments³².

Networks, including international communication networks, the internet, and the extranet, which has become a pioneer in facilities management, transforming them into electronic department.

Networks are considered fields of communication, as computers network concept is considered an electronic transfer of information through communication tools, mobile and fixed telephone networks, and optical fibers³³.

It contains means of communication including:

Wired means that use cables and wires to transmit data and communicate, including coaxial cables, twisted pair wires, and then fiber optics.

Wireless media, including microwaves via an electronic magnetic wave.

Satellites are used on ground stations operating across the space³⁴.

³¹ Mokhtar Kheniche ,Djilali Ben Abou,op,cit,p308

³² Djalal Mohamed Elzoghbi ,Oussama Ahmed El Mennassa, Technical crimes, electronic information systems,culture house publications and distributions,first edition,2010,p34

³³ <https://academy.hsoub.com/devops/networking/%D8%A3%D9%86%D9%88%D8%A7%D8%B9-%D8%B4%D8%A8%D9%83%D8%A7%D8%AA-%D8%A7%D9%84%D8%AD%D8%A7%D8%B3%D8%A8/>

³⁴ Haidar Chaker El Barzanji, Mohamed Hassen Jomoaa,ob,cit,226-232

Communication, which is every technology via a device, enables the transmission of images and sound via wired or wireless cables connected to networks with all other electronic and digital devices³⁵.

First Subtitle: Internet Communication Network

The Internet is considered a virtual global network that emerged as an engine for technological transformation focusing on the field of communication. It is part of the advanced research project, satellites, and technological excellence programs « Paul Barn » is considered the famous communications researcher who proposed the establishment of the communication network.

The beginning was in 1969 between the advanced research projects agency (Arpa) and a company with a proposal to create and transform the switch and establish the advanced research projects agency network (Arpa Net).

In 1982, the first e-mail program was developed, and then the arpa research agency turned into the defense agency for the advanced research project, using the official communication protocol ncp network control protocol.

In 1983, a protocol called IP/TCP was developed, which allows connecting devices that operate systems and networks that operate with different protocols. In 1984, the word internet was used for the first time at a conference on TCP protocols.

The ethernet protocol is for internal networks using coaxial cables and local area network.

Arpa net was divided in 1984 into a part affiliated with military applications called mil net, and civilian agencies continued to use the existing arpa net network. The national authority for scientific research (NSF), in cooperation with IBM, established in 1985 the engineering and technical coordination unit for the internet, engineering task force.

In 1988, the academy of scientific research established a high-speed network called ti, which has a speed of up to 544.1 fixed megabytes. In 1990, it changed from Ti to Ts, which has a speed of up to 45 fixed gigabytes, and type text was adopted.

The World Wide Web also appeared in 1992 and was called the World Wide Web with the abbreviation WWW. An International Internet Society was established, which is the body responsible for managing and organizing work on the Internet. Tetscape was created³⁶.

The internet is an abbreviated word consisting of two words: international and network. Thus, the internet becomes the global network for communication and information³⁷.

The internet appeared as a result of a combination of communication technology that began in the 19th century in 1944 and computing technology that appeared in the mid-20th century in 1945, which belong to the electronics family.

³⁵ Alaa Abderezak El Sallemi, informatics technology, oman manahij house, 2009, p19

³⁶ Djamil Beni Younes, ob, cit, p105-109

³⁷ Nahla Abdelkader Elmoumni, ob, cit, p34

The Nature of Technology and Technical Means Used in Justice

The internet contains a connected server sites that operate on the windows system. internet users can access the site by connecting the internet to computers, and it allows viewing any site by knowing its address with abbreviations of the three letters URL.

He came up with linking the web to the internet with what is called a protocol, symbolized by HTTP, which is an abbreviation for Hyper Text Transfer Protocol, and another symbolized by HTML, which is an abbreviation for the term Hyper Text Markup³⁸.

Isp internet service platforme been created on 2003, providing justice with a high-quality internet network, generalizing access to data and information, and facilitating the work of justice with their partners remotely. a website for the ministry of justice has been created, which is available via the internet according to the link www.justice.dz³⁹, it was established in late 2003 and was reviewed after the modernization of justice project, which was issued in law 03/15⁴⁰. an internal sectoral network was also established at the level of judicial authorities, which entered on 20 january 2014⁴¹.

Second Subtitle: Use of Telex And Fax in justice

Telex and fax are technical communication devices that can be used in procedures litigation is not the same as the internet, as it works to facilitate sending and receiving documents and communication.

Although its role decreased with the advent of the internet and the world wide web for communication, it is still used⁴².

The inventor of the fax machine was « Alexander Bain », who obtained a patent in 1843. then developments occurred in the device made by « Arthur Korn » in the year 1902 and his introduction of the photodior system to develop the scanning and data transfer process.

The american telecommunications company tand at adopted the technology development of the fax in 1924 and called it a project called technology for sending documents with a telephone and designed a transmitter called the telephotos graphy machine that sends photographs. the fax machine turned the analog data transmitter into digital data.

There are types of these devices, including:

- Type G1 6-minute transmission
- Type G2 in less than two minutes
- Type G3 transmission transmission 3 minutes.
- Type G4 transmission, 10 seconds.

The fax machine is one of the communication devices and has the technology of sending and receiving documents and images via a thermal electrical signal that transmits signals over

³⁸ Hakim Sayab, ob, cit, p61-66

³⁹ [https:// www.mjustice.dz](https://www.mjustice.dz) officiel website of Algerian Ministry of Justic

⁴⁰ Loi 03/15 du 2015 modernisation of justice algerien

⁴¹ Mokhtar Kheniche , Djilali Ben Abou, ob, cit, p309-311

⁴² Alaa Abderezak El Sallemi, ob, cit, p19

the telephone line, which in turn transmits communication⁴³.the website of the ministry of justice may have the ability to contact their interests via fax⁴⁴.

As for telex, it is one of the means of communication, a virtual world that enables the sending and receiving of data, information, and documents in audio and video via satellites according to digital electronic media connected to the network.

A printer device that enables the sender to communicate with any subscriber around the world via a satellite station.it is considered one of the most widely used official means.it differs from the fax and is similar to some parts of the computer and printing machine through its availability on the keyboard, paper, printing tape, and the transmitter unit.telex is characterized by several advantages, the most important of which is:

Speed of transmission and transfer of documents and information with a larger amount of text and words.telex also provides the exchange of national and international transmitters of documents between government departments⁴⁵.

In 1916, telex from the chicago markworm company invented the first device that directly sent written text to the reception center in the form of printed letters in 1928, this system became widely used and published under the name telex.in 1931, telex was wireless, that is, using a sending dish and a receiving dish.telex entered the field of mail and transportation, and seven years after the invention of the fax and the telex device, samuel morse, whose technology relied on sending data using signals.morse the components of the device are very similar to computers, as it consists of a keyboard and a sending and receiving unit, which in turn can be used in the judicial field through judicial notifications and sending judicial documents⁴⁶.

Telex is one of the means of communication in a virtual world that enables the sending and receiving of data, information and documents in audio and video wirelessly via satellites according to digital electronic media connected to the network⁴⁷.

Tthus, it is a technical transportation device that sends data, files, and paper documents electronically according to a protocol with the receiver device at a speed of 300 broadcasts per second, while sending the receiver's stid identity.

Conclusion

Technology has played an important role in developing and changing the traditional pattern of managing the state's public and private facilities and providing services to individuals that are characterized by speed and effectiveness commensurate with the era Therefore.

It was necessary to exploit these technologies and rely on the field of information and communication, including means, devices and networks, which had an effective role in managing, improving and coordinating with oversight of the proper functioning of facilities and state structures and their modernization, which was among its priorities that were planned to provide what is best through framing.Legal, Material and human resources, and work to actually integrate them in a gradual manner that is compatible with the contemporary global level and

⁴³ Nassif Jassim Mohamed Abbes El Elkaraoui,ob,cit,p115

⁴⁴ <https://www.mjustice.dz/ar/اتصل-بنا/> venndredi 02may 2025 at 22 :00

⁴⁵ Haidar Chaker El Barzanji, Mohamed Hassen Jomoaa,ob,cit,p219-220

⁴⁶ Phelipe Atelin, reseau informatique , Edition Eni , 3 edition, 2009, p10

⁴⁷ Haidar Chaker El Barzanji, Mohamed Hassen Jomoaa,ob,cit,208-210

The Nature of Technology and Technical Means Used in Justice

provides according to the nature of each society. This technology has played a role in information and communication with programs and systems. In modernizing and developing the sectors, despite some logistical and technical shortcomings, it was able to succeed in partial integration into some sectors, such as the justice sector, which integrated some electronic, technical and artistic means into judicial work by providing remote services and the possibility of remote litigation and searching for information through. Adopting an information system, databases, and a communication system across various networks, which played a role in linking coordination and management.