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Development history of the telecommunication device system

"The beginning is the most important part of work."
Plato

Introduction

We are all aware that today the achievements of computer technology are considered essential tools in most professions. However, society is still able to reach a new level of development by expanding their range of applications, utilizing computers, the Internet, or other machines in more and more places. The development of technology can also be seen in action in the justice system. The trace of this is found in Act XIX of 1998 the Code of Criminal Procedure (hereinafter: old CCP) a private telecommunications network, while Act XC of 2017 the Code of Criminal Procedure (hereinafter: CCP) in the chapter on the use of telecommunication device. But how was this device system created?

The beginnings

As I have already presented in my previous study, the operation of the telecommunication device system requires the joint operation of several different devices in order for it to be functional.[2] For this reason, we have to start the examination of the topic with the discovery of the telephone device that transmits sound, the string telephone, in 1672. This was followed in 1876 when Thomas Bell patented the first telephone. The next milestone was when the first TV broadcast appeared in 1926, followed by the videophone and the "iconophone" four years later, and with the help of the latter, the parties to the conversation could see and hear each other in real time.[3] It is interesting to think that today's modern computers were originally formed from calculators, because while machines suitable for "long distance communication" also developed, so did electronic calculators. Its first incarnation can be attributed to Vincent Atanasoff and his assistant Clifford Berry in 1939, who designed a digital-based calculator consisting of only electronic units, the Atanasoff–Berry Computer (ABC). We also consider this to be the world's first computer.[4] Also in this year in Germany, Zuse also further developed his previous programmable calculator Z2, then in 1941 Z3.[5] The latter can be considered the first freely programmable, fully program-controlled computer. Finally, the first fully automatic computer in the United States of America, the Automatic Sequence Controlled Calculator (ASCC), also known as the Mark I, was created under the leadership of Howard Aiken at Harvard University in 1939–1944. Unlike its predecessors, the invention already counted in the decimal number system.[6] The last step, which is significant from the point of view of the history of development, is connected to the development of the Internet, the roots of which go back to the 1960s. This is because it was at this time that the need arose in the USA for low-vulnerability computer network whose remaining parts would remain operational in the event of a nuclear attack. President Eisenhower ordered the creation of the Defense Advanced Research Project Agency (DARPA).[7] As a result, a multi-center, packet-switched (where data is transmitted in smaller packets) network communication system (the NCP protocol) was developed, which can be considered the ancestor of today's TCP/IP standard. ARPANET[8] began to operate on this principle in 1969, and in addition to military uses, packet-switched data transmission was used for further research, but researchers at some universities, military bases, and government laboratories also used it for electronic correspondence, file exchange, and remote login between each other's computers.[9]

In my opinion, the goal of the legal profession is increasingly not only to have up-to-date legal knowledge, but also to have a proficient knowledge of modern telecommunication tools that are part of the process, regardless of the profession. That is why I considered it important to first show how the tools, which are necessary for the operation of the tool system,

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[2] Péter Lajos Kovács: The opportunities for the development of the telecommunications "device system" for the future Péter Lajos Kovács[1]: The opportunities for the development of the telecommunications "device system" for the future | Büntető Törvénykönyv (új Btk.) a gyakorlatban (ujbtk.hu) (downloaded: 2021. 12. 21.).

[3] A távközlés története dióhéjban http://www.urvilag.hu/lassuk_es_halljuk_egymast/20160518_a_tavkozles_tortenete_diohejban (downloaded: 2021. 11. 6.).

[4] A számítógép története A számítógép története | doksi.net (downloaded: 2021. 11. 6.).

[5] István Katona: A számítógép története Számítógép-történet (skole.hr) (downloaded: 2023. 11. 19.).

[6] A számítógép története A számítógép története | doksi.net (downloaded: 2021. 11. 6.).

[7] Az internet fogalma és története http://www.infoszabo.com/az-internet-fogalma-es-tortenete/ (downloaded: 2021. 11. 6.).

[8] ARPANET = Advanced Research Project Agency Network dvanced Research Project Agency Network.

[9] Az internet fogalma és története http://www.infoszabo.com/az-internet-fogalma-es-tortenete/ (downloaded: 2021. 11. 6.).

were developed separately, and now that we are aware of this, let's examine its development in the field of law.

The device system in law

The first step in the development of the device system – in the field of law – was witness protection. In connection with witness protection in our country, in the late 1990s and early 2000s, the idea first arose that the creation of a legal framework is not enough, that the appropriate logistical background, infrastructure and – above all – human resources are needed for the implementation of legislation, and to create witness protection tools.[10] To help with this, pre-trial detention sessions were first conducted via a private telecommunications network, and then, based on Act I of 2002, from July 1, 2003, this type of interrogation is possible throughout the criminal proceedings.[11] It should be noted here that, like all beginnings, this one also had a difficult start, because the use of this system was very time-, and cost-consuming, as well as difficult, since the courts did not have built-in private telecommunications networks. A total of two of the mobile devices required for this piece – and a spare – owned by the National Judicial Council, which could be claimed after a long procedure.[12] Placing and assembling this structure on site took at least 4 hours, so it had to be assembled the day before the trial.[13]

Subsequently, as part of the modernization of public administration, the Ministry of the Interior decided to implement a centralized video conference platform, which uses the most advanced technology to speed up administrative procedures and reduce travel costs, keeping in mind the strictest data security requirements. In the first phase, video conference rooms were set up in courts, penitentiaries, the Prime Minister's Office, government agency, government offices and the Immigration and Asylum Office.

In 2015, the "Electronic solution for the development of the work organization and communication of public administration in different geographical locations", i.e., the VIKI project, was launched. By 2018, the VIKI project had helped to set up remote consultation rooms in 215 locations, with the courts having the largest number of endpoints.[14] On November 13, 2015, NISZ signed a contract with T-Systems Hungary on the creation of the video communication endpoint structure of the KÖFOP-1.0.0–VEKOP-15-2015-00003 project.[15] As the winner of the negotiated public procurement procedure, T-Systems Hungary contracted for the construction of the structure of the video endpoints for a net value of HUF 1,599,120,095. The total budget of the VIKI project is HUF 3 billion.[16] The project was realized as part of the Széchenyi 2020 program, and the main beneficiary is the NISZ.[17] The NISZ informed me that the basic goal of the national video conference system they developed was to minimize the security risks and costs associated with transportation, primarily for courts and penal institutions. In addition, this solution also enables citizens to not have to travel long distances by using telehearing points, and they can connect to distant court hearings via telehearing at the court endpoint closest to their place of residence.

Thanks to improvements made in recent years, the NISZ has 817 endpoints in its national videoconferencing service, of which 458 are equipped for remote listening. The table below shows in detail how the construction of endpoints suitable for remote listening has developed in recent years.[18]

	NAJ National Office for the Judiciary	PI Penitentiary Institute	INO Imigration and Nationality Office	GPO General Prosecutor's Office	NTCO National Tax and Costums Office	NPH Natioanl Police Headquarters	Total
2017	3	0	0	0	0	0	**3**
2018	72	39	17	1	1	185	**315**
2019	182	59	17	2	1	192	**453**
2020	184	62	17	2	1	192	**458**

As it can be seen in the table, compared to 2017, the number of rooms equipped with telecommunication device system increased by 105 times in 2018. This development has not stopped in the following years, and has continued to increase, although not by a huge leap, it should be added, as the number of rooms equipped with a telecommunication device system has increased 151-fold by 2019 compared to initial year 2017. These data also confirm that there is a huge potential in this system of tools to assist the procedure and not only in the courts, police stations, and penal institutions, which we can also learn about from the daily news, but also at the Immigration and Nationality Office and the National Tax and Customs Office, as well as at the General Prosecutor's Office.

The former president of the Metropolitan Court stated in 2016 that "The demand for telehearing is increasing year by

[10] Anett Erzsébet Gácsi: Büntetőtárgyalás tartása zártcélú távközlő hálózat útján http://acta.bibl.u-szeged.hu/56965/1/juridpol_forum_007_002_005-024.pdf (downloaded: 2020. 03. 16.).

[11] VIKI Projekt https://videokonferencia.nisz.hu/ (downloaded: 2020. 10. 13).

[12] Linda Pető – Zsolt Czékmann: A távmeghallgatásos eljárások tapasztalatai a büntetőeljárásban, különös tekintettel a COVID-19 járványra Pető Linda – Czékmann Zsolt: A távmeghallgatásos eljárások tapasztalatai a büntetőeljárásban, különös tekintettel a COVID–19 járványra – 2022/2. (79.), 21–25. o. | Infokommunikáció és Jog (infojog.hu) (downloaded: 2023. 11. 19.).

[13] OIT Regulation NO 1/2006 on the rules for the use of the system for the recording, transmission and management of images and sound of court proceedings, 3. § (4).

[14] Tárgyalótermi kép- és hangrögzítés: folytatódik az új eszközök telepítés https://birosag.hu/hirek/kategoria/ugyfeleknek/targyalotermi-kep-es-hangrogzites-folytatodik-az-uj-eszkozok-telepites (downloaded: 2020. 03. 16.).

[15] The call for tenders for the Video Communication Endpoint Structure was published in the Official Journal of the European Union (TED) in September 2016.

[16] The project is financed by the European Social Fund and the Hungarian budget under the "Reduction of Administrative Burdens" scheme of the Operational Program for the Development of Public Administration and Public Services and the Operational Program for a Competitive Central Hungary.

[17] Aláírták az országos videókonferencia-rendszer legnagyobb szerződését https://www.itbusiness.hu/archive/fooldal/hirek/Technology/Alairtak_az_orszagos_videokonferencia-rendszer_legnagyobb_szerzodeset (downloaded: 2020. 10. 20.).

[18] Based on responses to a quastionmaire sent to NISZ.

year in the Hungarian court system." This can be explained by the many advantages, among which the cost-effectiveness can be mentioned, since the accused do not have to be produced from the penitentiary, the witnesses do not have to travel from another city to the place of the trial, and even people living abroad can be heard with its help. The courtrooms can be connected – with an audiovisual system – not only to other courts and domestic partner institutions, but also to foreign courts suitable for remote hearings. It is not only suitable for saving the time and costs associated with appearing before the court, but also for guaranteeing greater security.[19]

The modern video communication technology was installed for the first time in the country in the building of the Eger Court and was presented in the context of a simulated trial on May 24, 2018. On May 28, 2018, the telehearing system was used for the first time, it was used in a sentence enforcement case initiated in the context of parole. After establishing a video conference connection with the Heves County Penitentiary, the judge heard the convict staying in the penitentiary. The audition took place in perfect picture and sound quality.[20]

To get to know the practical experiences of the application of the telecommunications device system in the courts, in 2020 I contacted the Court of Debrecen, but due to the epidemic, I was not able to conduct research in person. Instead, I was able to send my questions as a questionnaire and the results of some of their answers are illustrated below. The following diagram shows the proportion of individual procedural actors in the telecommunications proceedings conducted at the Court of Debrecen in September 2020. (Data was also received for participants in non-criminal proceedings – i.e., defendant, plaintiff – I only display this on the diagram for the sake of completeness.)

It is interesting to observe from these data that the court primarily applies the procedure with the telecommunications device system against the accused and the suspects, which can be considered a significant development, since, as I wrote above, this system was originally created for the protection of witnesses. However, this also proves the development compared to the beginnings, which can be expected in the 21st century from an electronic device system.

According to the data of the questionnaire filled out for me by the Court of Debrecen, there were 191 telehearings in 2019, while in 2020 there were 761 telehearings until October 26, 2020, which shows a huge increase compared to the previous year. From this, it can be concluded that the courts consider this system of tools to help the conduct of the procedure to be a suitable method and are happy to use it. Furthermore, they prefer to use it even after quarantine, since they produced an extraordinary increase from May, when the court employees could start working again. The head of the Penal Board answered my question about the opinion of the criminal case judges about the telecommunication device system and said that "it is completely positive and in my opinion, there are no disadvantages to this device system".[21]

Among the anonymized decisions found on bórászka.hu, the system found 174 decisions for the term telecommunications device. Of these, 75 (and another 8) were decisions in criminal cases. What is interesting is that there was no decision related to an offense law[22] or the execution of a penalty. Upon closer examination, however, it can be stated that only a small part of these 83 decisions used a telecommunication device system – or a private telecommunication network, as it was called in the old CCP. The results were issued by the system because the crime was committed with the help of a telecommunication device in several places. Regarding the procedure to be carried out with this tool system, the result was 12. At the same time, from the point of view that these negotiations are all part of the CCP and took place under its scope, it shows a positive picture that the courts really like to use this tool system.[23]

Summary

As we have seen, the composition of the tool system is not complicated, but the use of the term tool system is well-founded. Looking at the historical development of the telecommunication device system, we can say that the device system is increasingly trusted and – thanks to its many advantages – it has been implemented in several places and not only in the courts, police stations and penal institutions – which we may know about from the news – but also at the Immigration and Nationality Office, the National Tax and Customs Office, as well as at the General Prosecutor's Office. Based on the figures received from NISZ, compared to 2017, by 2019, the number of rooms equipped with the device system has seen a 151-fold increase in the country, which is still growing. Regarding the number of cases, according to the data of the questionnaire filled out for me by the Court of Debrecen, there were 191 telehearings in 2019, while in 2020 this figure was already over 700, which supports my statement that there is a surge in confidence in the system of tools that help to conduct this kind of procedure.

At the same time, in my opinion, in many situations regarding the application of the telecommunication device system, uniformity, additions to the rules, and development of the device system would be necessary, because this system is not yet perfect. However, I will expand on this topic in my next study.

[19] Anna Kiss: A bírósági távmeghallgatásé a jövő https://jogaszvilag.hu/szakma/a-birosagi-tavmeghallgatase-a-jovo/ (downloaded: 2020. 07. 6.).

[20] Jogászvilág: Távmeghallgatás: bírósági tárgyalások határok nélkül https://jogaszvilag.hu/napi/tavmeghallgatas-birosagi-targyalasok-hatarok-nelkul/ (downloaded: 2022. 09. 5.).

[21] Antal Nagy, Judge and Head of the Criminal College of the Court of Debrecen.

[22] The Act II of 2012 on infractions, infraction procedure and the infraction records system already contains rules on the telecommunication device system. These rules are set out in Act CXXI of 2018. was incorporated by § 94 of the Act. The rules contained in the Code of Criminal Procedure – as well as the Code of Criminal Procedure – show a close connection with the criminal procedure at several points, so this also confirms and can also predict the rise of the telecommunications device system.

[23] Anonimizált határozatok – UIR (birosag.hu) (downloaded: 2020. 11. 3.).