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Guidelines on electronic court filing (e-filing)
and digitalisation of courts
– perspective of the Council of Europe
*Wytuczne w sprawie elektronicznego składania
dokumentów sądowych (e-filing) i cyfryzacji sądów
– z perspektywy Rady Europy*

Abstract

In December 2021, the Council of Europe adopted a document entitled “Guidelines on electronic court filing (e-filing) and digitalisation of courts”. The guidelines are based on the assumption that a new digital justice system should create a space that allows interaction and exchange of data and e-documents between the courts and their users (i.e. litigants, legal professionals, witnesses (experts) and/or other actors involved in court procedures). Such a concept requires a change involving not only the use of the latest technology to support the judicial system, but also a reflection on the legal, organisational and socio-cultural conditions that affect the functioning of the justice system. The guidelines will be presented in terms of the needs and possibilities of their implementation by the European governments. The guidelines of the Council of Europe and their possible adoption in the daily functioning of the judiciary are treated as a challenge to be met.

Keywords: *Artificial Intelligence, e-filing, digitisation of court procedures, digitalisation, Council of Europe*

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Streszczenie

W grudniu 2021 r. Rada Europy przyjęła dokument zatytułowany „Wytyczne w sprawie elektronicznego składania dokumentów sądowych (e-filing) i cyfryzacji sądów”. Wytyczne opierają się na założeniu, że nowy cyfrowy system wymiaru sprawiedliwości powinien stworzyć przestrzeń umożliwiającą interakcję i wymianę danych oraz e-dokumentów między sądami a ich użytkownikami (tj. stronami procesowymi, przedstawicielami zawodów prawniczych, świadkami/biegłymi i/lub innymi podmiotami zaangażowanymi w procedury sądowe). Taka koncepcja wymaga zmiany obejmującej nie tylko wykorzystanie najnowszych technologii do wsparcia systemu sądownictwa, ale także refleksji nad warunkami prawnymi, organizacyjnymi i społeczno-kulturowymi, które wpływają na funkcjonowanie wymiaru sprawiedliwości. Wytyczne zostaną przedstawione pod kątem potrzeb i możliwości ich wdrożenia przez rządy państw europejskich. Wytyczne Rady Europy i ich ewentualne przyjęcie w bieżącym funkcjonowaniu wymiaru sprawiedliwości traktowane są jako wyzwanie, któremu należy sprostać.

Słowa kluczowe: sztuczna inteligencja, elektroniczne składanie dokumentów, cyfryzacja procedur sądowych, cyfryzacja, Rada Europy

1. Introduction

The Council of Europe is one of the oldest continuously existing supra-state political organisation on the continent, founded in 1949. Established for promotion of democracy and protection of human rights and the rule of law in Europe, it comprises of 46 member states with a combined population of over 650 million people¹. The organisation's greatest legislative achievement is represented by the European Convention on Human Rights, which allows individuals to appeal to the European Court of Human Rights in Strasbourg. The Council of Europe has enacted a number of legal instruments named treaties (conventions, charters and agreements).

The latest initiative undertaken by the Council of Europe concerns information technology, including artificial intelligence. The ad hoc Committee on Artificial Intelligence (hereinafter: "CAHAI"), the first formalised structure, whose purpose was to analyse the legal framework for the development, design and application of artificial intelligence based on Council of Europe standards, was established for the period from 11 September 2019 to 31 December 2021. The work of CAHAI resulted in three key documents: 1) "Feasibility study on a legal framework on AI design, development and application based on CoE standards" (accepted in December 2020)², 2) "Towards regulation of AI systems" (accepted in December 2020)³, 3) "Possible elements of a legal framework on artificial intelligence, based on the Council of Europe's standards on human rights, democracy and the rule of law" (accepted in December 2021)⁴.

Since January 2022, the Committee on Artificial Intelligence (hereinafter: "CAI") – the successor of the CAHAI – has inaugurated its activities. Two meetings of the Committee were held in 2022. Both were strictly organisational in nature.

The activities undertaken by the two committees: CAHAI and CAI have dealt with general issues related to artificial intelligence (health, social issues, democracy, ethics). In terms of activity relating strictly to the administration of justice it is important to note the initiatives undertaken by the European Commission for the Efficiency of Justice (hereinafter: "CEPEJ").

The CEPEJ was established on 18 September 2002 by Resolution Res(2002)12 of the Committee of Ministers of the Council of Europe. The purpose of the CEPEJ is

¹ See more: B. Vayssi re, *Federalists and the Beginnings of the Council of Europe: Converting Institutions and Opinion to Supranationality (1949–1951)*, "Histories", March 2022, Vol. 2, Issue 1, pp. 1–14, available at: <https://doi.org/10.3390/histories2010001> [accessed on: 12 November 2022]; A.O. Pasat, *Comparative study: European Council – Council of the European Union – Council of Europe*, "Perspectives of Law & Public Administration" 2021, Vol. 10, special issue, pp. 180–193.

² Available at: <https://www.coe.int/en/web/artificial-intelligence/-/the-feasibility-study-on-ai-legal-standards-adopted-by-cahai> [accessed on: 10 December 2022].

³ Available at: <https://edoc.coe.int/en/artificial-intelligence/9656-towards-regulation-of-ai-systems.html> [accessed on: 10 December 2022].

⁴ See more: D. Leslie, C. Burr, M. Aitken, M. Katell, M. Briggs, C. Rincon, *Human Rights, Democracy, and the Rule of Law Assurance Framework for AI Systems: A Proposal*, 19 September 2021, available at: <https://ssrn.com/abstract=4027875> or <http://doi.org/10.2139/ssrn.4027875> [accessed on: 1 December 2022]; A. Mantelero, *Beyond Data: Human Rights, Ethical and Social Impact Assessment in AI*, Berlin 2022, available at: <https://doi.org/10.1007/978-94-6265-531-7> [accessed on: 2 November 2022].

defined as an improvement of the efficiency and functioning of the administration of justice in Council of Europe member states. The CEPEJ's manifold assignments, on the other hand, mainly encompass collecting and analysing data, developing benchmarks, preparing reports, guidelines, action plans, and developing relationships with external stakeholders.

One of CEPEJ's crucial endeavours is to conduct research on improving the efficiency of the judiciary through the application of information technology (hereinafter: "IT") solutions. On the one hand, the new digital possibilities may be considered as an opportunity to improve its efficiency, on the other hand, they pose a challenge to the legal and ethical principles developed so far (including the adversarial principle, protection of fundamental rights and liberties, the role of the judge).

In December 2019 the CEPEJ decided to establish a new working group: Working Group on Cyber Justice and Artificial Intelligence (hereinafter: "CEPEJ-GT-CYBERJUST"). The CEPEJ entrusted the group with the assignment of developing solutions for the application of artificial intelligence mechanisms and other digital solutions in the justice system, in order to improve its efficiency and quality. The group's work should be carried out in coordination with other structures in this field. The CEPEJ-GT-CYBERJUST has been tasked with developing training programs in the field of cyberjustice and artificial intelligence⁵.

In addition to the many ongoing activities, CEPEJ-GT-CYBERJUST has commenced work on the issue of electronic (remote) filing of court applications/claims (e-filing)⁶. In the end, the outcome of the working group was broader and included the digitisation of the courts. The group's experts recognised that the implementation of digital solutions (including those involving AI) in the judiciary leads always to a systemic reform that reaches far beyond mere technological issues. Electronic filing of lawsuits/applications should be part of a comprehensible, superior, holistic strategy that transforms the way the justice system serves the public⁷. In December 2021, the CEPEJ adopted a document entitled "Guidelines on electronic court filing (e-filing) and digitalisation of courts"⁸.

⁵ See: J.T. Johnsen, *The European Commission for the Efficiency of Justice (CEPEJ) – Reforming European Justice Systems – "Mission Impossible?"*, "International Journal for Court Administration" 2012, Vol. 4, Issue 3, pp. 1-19, available at: <https://doi.org/10.18352/ijca.83> [accessed on: 17 November 2022].

⁶ In developing the guidelines, it was assumed that e-filing system is going to be limited to communication between courts and court participants and does not include integration processes between systems and the exchange of data and e-documents between systems implemented by criminal justice actors (i.e. courts, prosecution offices, law enforcement agencies).

⁷ Another practical assumption made throughout the development of the guidelines is that each participating country has already envisaged (or at least taken measures to ensure) what measures need to be taken to set up the necessary infrastructure, including the network, hardware, software necessary to operate the e-filing system.

⁸ The guidelines are based on a report adopted by the group in April 2021 "Analytical overview of the state of play in electronic court filing (e-filing) in selected member states of the Council of Europe". See more: F. Contini, D. Reiling, *Double normalization: When procedural law is made digital*, "Oñati Socio-Legal Series" 2022, Vol. 12, No. 3 "Norm, normal and disruption: The role of law, knowledge and technologies in normalising social life", pp. 654-688, available at: <https://doi.org/10.35295/osls.iisl/0000-0000-0000-1305> [accessed on: 18 November 2022].

The guidelines are based on the assumption that a new digital justice system should create a space that allows interaction and exchange of data and e-documents between the courts and their users (i.e. litigants, legal professionals, witnesses (experts) and/or other actors involved in court procedures). Such a concept requires a change involving not only the use of the latest technology to support the judicial system, but also a reflection on the legal, organisational and socio-cultural conditions that affect the functioning of the justice system.

The e-filing process should lead to bringing the justice system closer to the people, improving the speed of response and efficiency of services, thereby increasing confidence in the justice system⁹.

According to the Council of Europe, an e-filing system should:

- a) serve as a tool of improving access to justice;
- b) be consistent with applicable international rules and standards;
- c) be implemented in an efficient, effective, and timely manner, making the best use of available resources;
- d) be designed in accordance with the principles of transparency, taking cognisance of the unique institutional, legal and technological frameworks of each country;
- e) be designed to last against any changes, and be continuously updated;
- f) embedded in the unique institutional, legal, and technological framework of each country;
- g) based on a clear and well-defined legal framework (the successful implementation of an e-filing system requires certain prerequisites: a reliable and secure network, sufficient technology skills and competences, and an open infrastructure to facilitate data exchange and operational coordination with other national/cross-border systems).

The Guidelines outline a framework for e-filing system in two areas:

- a) enabling a party to commence legal proceedings by issuing and receiving electronic documents, exchanging procedural documents with other parties involved in the proceedings and with judges/prosecutors, sending and/or receiving notices and summonses electronically, paying court fees online and/or accessing a secure repository for all procedural documents within a document management system; and
- b) providing a common, efficient, and effective data processing system.

According to the experts of the Council of Europe, the guidelines that have been developed have their origins in well-established existing legal principles:

- 1) the rule of law – any (new) legislation on digitisation should be explicit, transparent, and predictable and take into account the possibility of disputes as a consequence of digitisation, while at the same time ensuring protection for all participants of digital justice;

⁹ See: T. O'Connor, *E-filings: making courts more accessible*, "GP, Solo & Small Firm Lawyer" 1999, Vol. 16, No. 4, pp. 38–41.

- 2) independence of the judiciary – an essential principle providing the rule of law (rules, regulations and practices resulting from (and/or needed for) digitisation should not adversely affect or threaten this independence);
- 3) fair trial guarantees – changes to the rules resulting from the digitisation of proceedings should be made with accordance to the right to a fair trial;
- 4) prohibition of discrimination in the design and implementation of digital court proceedings;
- 5) access to an effective remedy;
- 6) data protection (including quality and security of judicial data processing);
- 7) “digital by default” – a preference for digital services (the assumption here is that digital services are so simple and convenient to learn, that all who can use them do so, while those who cannot or do not want to are not excluded)¹⁰;
- 8) inclusion and accessibility – essential dimensions of effectiveness towards execution if the principle “digital by default”;
- 9) openness and transparency – integration processes require access to information;
- 10) information efficiency, security and integrity – along with data protection during the phase of design – a key role in information sharing;
- 11) data management and information protection;
- 12) interoperability – the ability to support the effective and efficient exchange of data and to enable the sharing of information and knowledge.

The guidelines under discussion are divided into three dimensions:

- a) strategic dimension to build a complete ecosystem of electronic court services,
- b) organisational dimension to support the development of the system from a user perspective,
- c) technical dimension.

In this article, the guidelines will be presented in terms of the needs and possibilities of their implementation by the European governments. The guidelines of the Council of Europe and their possible adoption in the daily functioning of the judiciary are treated as a challenge to be met. The concluding part will include *de lege ferenda* remarks.

2. Strategical dimension

The discussion on the issue of effective digitisation of judicial procedures is going to be commenced with a review of the existing legislation. It seems that the legislation should aim at simplification and uniformity of processes, maintaining the right balance between technical specifications and flexibility for specific application cases. It should be taken for granted that it cannot be excluded that new technological solutions will emerge in the future or that the rules covering the procedure before the court will have to be amended. It must also be stated that a regular review and evaluation of

¹⁰ See: J. Schou, A. Svejgaard Pors, *Digital by default? A qualitative study of exclusion in digitalised welfare*, “Social Policy & Administration”, May 2019, Vol. 53, Issue 3, pp. 464–477, available at: <https://doi.org/10.1111/spol.12470> [accessed on: 23 November 2022].

the existing rules in order to reflect existing needs must be considered unavoidable. It is also worth mentioning that the entity responsible for such reviews should be clearly identified.

Where digitisation will involve the application of new technologies (e.g. artificial intelligence systems or blockchain technology, and where the nature of the technology imposes limitations on its control once it has been implemented), new rules should, according to Council of Europe experts, be introduced with caution¹¹.

An effective and efficient justice transformation program requires firm political will, a comprehensive approach and stakeholder engagement. It seems that the implementation of the strategy and the imposition of obligations should be managed through a variety of solutions. For example, electronic notifications or interactive publications of official court statistics are worth mentioning¹². Such a range of measures should take into account the medium- and long-term objectives, which are going to be achieved. These measures should be accompanied by reasonable and measurable key performance indicators to ensure that the effectiveness, efficiency, and timeliness of the proposed changes are properly monitored (cost management, human resources savings, and return on investment, among others, should be evaluated). The above-mentioned measures should be continuously adapted to the needs of the various actors in the justice system, both internal and external participants.

It seems that numerous participants should be involved in the digitisation process to allow all stakeholders to provide feedback in order to optimise the shift implementation strategy. It can be conjectured that the creation of a user-centred system is a necessity for a successful digitisation initiative of the judiciary. This implies a bottom-up collaborative approach and broad stakeholder involvement¹³.

If we take the above suggestions at face value, consequently deducing, one must conclude that a culture open to experimentation should be promoted, given the long-term benefits of experimental sampling mechanisms (proof of concept, prototyping, piloting, etc.) and the added value in terms of involving stakeholders, promoting co-optation, and facilitating user acceptance of tools. The establishment

¹¹ See: Z. Wang, *The Supreme People's Court of China has embraced blockchain, built online courthouses, and moved to digitalize court systems in a bold embrace of technology. Here's how it's going*, "Judicature" 2021, Vol. 105, No. 1, pp. 37–47; D. Szostek, *Blockchain and the Law*, Baden-Baden 2019, available at: <https://doi.org/10.5771/9783845298290> [accessed on: 19 December 2022].

¹² See more: T. Allard, L. Béziaud, S. Gams, *Publication of Court Records: Circumventing the Privacy-Transparency Trade-Off* [in:] *Lecture Notes in Computer Science*, Vol. 13048, *AI Approaches to the Complexity of Legal Systems XI-XII. AICOL AICOL XAILA 2020, 2018, 2020*, V. Rodríguez-Doncel, M. Palmirani, M. Araszkievicz, P. Casanovas, U. Pagallo, G. Sartor (eds.), Cham 2021, pp. 298–312, available at: https://doi.org/10.1007/978-3-030-89811-3_21 [accessed on: 15 December 2022].

¹³ A mechanism to include a wide range of users, builds confidence in the proposed changes. The above can be achieved by creating: a) a community of end-users (internal and/or external) who will participate in the design and implementation of the new system; or b) working groups consisting of internal users and/or representatives of external parties who will be involved in the organisational measures, the development, testing and implementation phases of the e-filing system, the resolution of practical or legal issues, the provision of feedback and/or the testing of various functions before their adoption, etc. The ongoing involvement of end-users, especially representatives of the legal profession, is considered an essential factor in the successful implementation of a new system.

of experimental laboratories to support the design and development of an electronic filing system could prove to be of great use depending on the size and timeframe of the project.

Both strategy and legislation should take into account the principle of “digital by default”, while taking into account the existing culture, the readiness of society to adopt digital tools and the overall level of digital skills (both within professionals and from the end user perspective, namely the citizens)¹⁴. Supporting the development of digitisation through mandatory measures can only be beneficial if the appropriate support measures and infrastructure (including network, hardware, software) already exist. In countries where such measures are lacking, a step-by-step approach to adoption may be preferable.

In addition, it seems appropriate to assume that digital delivery of court services is the preferred option, with other channels remaining open to those who, by choice or necessity, do not have access to these services. In this regard, the exchange of data (such as individuals’ identification data and social status, business data, property data, etc.) with external systems should be seen as a necessity rather than a requirement when setting up an e-filing system. It is therefore probably fair to say that semi-automatic or limited integration with external systems can only be envisaged as a temporary solution.

In conclusion, the digitisation of judicial procedures, with the imposition of legal obligations to facilitate this type of reform, should be properly aligned with available technology, human and financial resources. Funding should be secured independently of external sources.

3. Organisational dimension

Having analysed various elements of the organisational dimension, there seems to be a legitimate need to focus not only on the provision of adequate and sufficiently numerous technology teams, but also on the proper and long-term involvement of both judicial experts and legal practitioners (with knowledge of the exact procedural rules and needs from the inside), as well as experts in organisational transformation, change management, communication, etc., who could support the judiciary in shaping new concepts, using the right collaborative tools and developing trust by communicating change in a way that is most relevant to the audience. In this regard, it seems unjustified to neglect the provision of adequate resources for project management.

When it comes to implementing a digitalisation system, it is worth considering a phased approach. During project planning, the prioritisation of (sub)activities may be based on various factors related to the expected impact, value for money and risk management. In some cases, priority may be given to services provided directly to citizens and businesses. The organisational transformation of the back office of

¹⁴ See: W. Furmanek, *Analfabetyzm cyfrowy wyzwaniem dla dydaktyki informatyki [Digital illiteracy challenge for the teaching of computer science]*, “Dydaktyka Informatyki” 2015, Vol. 10, pp. 49–62, available at: <https://doi.org/10.15584/di.2015.10.6> [accessed on: 28 November 2022].

judicial bodies should complement any judicial digitalisation project. The application of continuous improvement methodologies and techniques and impact management could be beneficial to achieve holistic and sustainable change.

The effective digitisation of court procedures and the implementation of electronic filing requires the reconfiguration or redesign of core court processes to achieve improvements in efficiency, cycle time, and quality, rather than simply replicating them by electronic means. The design of the future state for each process should be encouraged without regard to current limitations.

Automated operations (e.g., automated case assignments¹⁵, summonses, notifications, case tracking, schedules, reports, etc.) and features that minimise workload effort (e.g., introduction of variable content templates, pre-filled data, etc.) should not be seen as complementary measures, but embedded into the e-filing design.

“User-centric” as a way of delivering services is a strategy that is based on putting the user at the centre of attention. This requires not only anticipating users’ needs, but also creating processes that are designed to support their experience from the outset. Applying this very strategy during the design of an e-filing system will lead to positive results in the implementation process.

The implementation of the “one-stop-shop” principle to provide a single platform for the provision of e-services by the judiciary, including the electronic filing of documents, must be considered of utmost importance.

Digitisation of justice requires an effective communication strategy to engage main target groups. Given the number of all participants and the diversity of their needs, successful implementation of e-filing requires reliable communication of the benefits of digitisation, including the possibility to automate onerous tasks, especially when more complex processes are introduced¹⁶. To achieve the full potential of the e-filing system, it would be beneficial to reinforce the incentives towards potential users. The communication needs of the public require the use of simplified language and terminology.

Achieving the proper level of digital skills by users is considered the most crucial and most challenging issue of a digitalisation strategy. It is worth designing an e-filing system in such a way that no end-user assistance is needed to use its functionality. To this end, it seems that efforts to provide ongoing multi-level support, training and technical assistance would be useful. Various tools may be used, but the provision of online training, a helpdesk with extended hours, and on-demand remote technical support would be considered most relevant.

¹⁵ For example: The System of Random Allocation of Cases (SLPS) in Poland.

¹⁶ Both the concept and the operation of the mechanisms of new technologies in proceedings can be explained to the public in an easily understandable language. The public should understand the implications of its use and have the conviction that such proceedings lead to good and fair results, and therefore an effective communication strategy and policy promoting the use of new technologies, including press releases, video broadcasts or publications on social media, must be created and carried out. Member States can promote the advantages of this type of proceedings, such as not having to be physically present in court, saving travel costs to court, the possibility of filing documents electronically, ensuring confidence, lower stress levels for those giving evidence remotely.

4. Technical dimension

When discussing the technical dimension of the electronic filing of court documents, it should first be mentioned that, in order for this system to work properly, these court documents should be processed only in electronic form (as e-documents), respecting authenticity, integrity, and confidentiality. Therefore, it seems that e-documents that are legal acts (e.g. pleadings, declarations, orders, decisions, etc.) should be created and made available in open formats (e.g. PDF). The e-filing system should provide irrefutable proof of service including an electronic time stamp issued by the receiving judicial authority.

It is worth considering measures to facilitate the process of reading and studying documents, especially in the case of long text files. The inclusion of links to legislation or case law, for example, could be considered a good practice.

Based on the above assumptions, it should be concluded that the e-document sent to the judicial authority by an external user should contain (potentially also in the form of an attachment) structured data, i.e. metadata, allowing the case data to be automatically filled in or updated and allowing automatic or semi-automatic processing within the case management system, thus avoiding manual data entry and possible errors. Metadata provided by external users should be subject to mechanisms that automatically verify the quality and completeness of the data entered, e.g. validation of personal data against an external database, internal data inconsistencies, discrepancies with text in the e-document, etc.¹⁷

Consequently, to ensure the authenticity and integrity of e-documents, the use of qualified electronic signatures (or equivalent services) will become inevitable. An alternative to a qualified electronic signature could be a qualified electronic seal, as this is automatically applied by the system.

Moreover, available solutions for the online payment of court fees (“e-payments”), allowing the choice of the preferred payment method (i.e. credit card, debit card, bank transfer, etc.), should be considered essential¹⁸. Online payment solutions must be designed and implemented to ensure that the transfer of money is secure throughout the process. The e-payment process should be properly integrated into the system so that the e-payment uniquely refers to a specific task, e.g. by generating a unique operation identifier. The e-payment system could provide for automatic calculation of court fees where these are fixed or based on known parameters (e.g. type of proceedings). In such cases, a ready-made template with pre-filled payment data should be made available. Where an automatic calculation is not possible, the user should be notified by email when the exact amount may be or is already determined.

¹⁷ See more: B. Oręziak, M. Świerczyński, *Electronic Evidence in the Light of the Council of Europe’s New Guidelines*, “Comparative Law Review” 2019, Vol. 25, pp. 257–275, available at: <https://doi.org/10.12775/CLR.2019.009> [accessed on: 14 December 2022].

¹⁸ See: The Supreme Court (SC) of the Philippines inaugurated in March 2022 pilot-test its Judiciary Electronic Payment Solution (JEPS) in 20 first-level courts nationwide, available at: <https://sc.judiciary.gov.ph/25001/> [accessed on: 12 December 2022].

The concurrent e-payment system should be designed with a high degree of transparency and accountability with regard to its operation, procedural flow, and decision-support processes.

Particular attention and regular needs assessment can be envisaged regarding keeping channels open for those who are disconnected from the system (by choice or necessity). In such cases, paper documents should be accepted by courts and prosecutors' offices, which should convert them into digital form in order to maintain the completeness of the digital documentation. For scanned documents, an electronic signature (or equivalent service) should be introduced to certify conformity with the paper original.

Users should be able to personalise templates for documents created at different stages of court proceedings (e.g. decisions, announcements, court minutes, etc.).

A particularly important postulate for a well-designed e-filing system would be the creation of a unique repository of data and documents at a national level to avoid duplication of information between judicial authorities, especially those using the same data and documents in different instances (courts of first and second instance). This would be essential to ensure more efficient, effective, and easy to develop search and analysis capabilities. The only thing that could change throughout the life cycle of an e-document would be the access permissions. A repository designed in this way would therefore ensure that e-documents are stored to maintain (and be able to prove) their integrity at each stage of their lifecycle.

For the presentation of video evidence (e.g. interrogation), open standards should be defined and specific streaming solutions developed to ensure the best quality of the recording. Cloud-based solutions with appropriate security features may be considered here.

Given these considerations, it seems that databases should be designed so that court statistics are collected and compiled automatically on an ongoing basis, thus avoiding – or at least minimising – human effort. In addition, a more comprehensive approach to business analytics should be introduced, adopting state-of-the-art Big Data technologies, applied to structured and unstructured data, to enable data correlation (including with internal and external databases), effective search, analytical functions (beyond court statistics) or to perform clustering and predictive analyses, providing useful interfaces for different types of users and responding effectively to central and local decision support needs. It would also be useful to integrate into the e-filing system specific procedures for correcting errors committed by court staff.

The public availability of court decisions should also be considered essential. Automatic or semi-automatic methods of anonymisation may be necessary to address privacy constraints, creating a public version of each decision. Case-related decisions and documents can then be uniquely identified according to an officially recognised standard¹⁹.

¹⁹ This would make it easier to cite case law and reduce the time spent searching and navigating it.

A well-designed e-filing system will feature the ability to be used remotely from any device and without the need to install additional software. Web-based applications that can be run from a normal browser would be appropriate. The e-filing system should properly manage temporary interruptions, e.g. resuming state at the time of interruption, without loss of data. Appropriate solutions should be found for the back-office functionality of the e-filing system to allow internal users to work off-line, i.e. in the absence of an internet connection, in particular for studying and drafting documents. The system could allow one- or two-way synchronisation on a strictly defined basis via a separate system function; uncontrolled downloading and/or uploading of e-documents should not be enabled.

Another fundamental feature of a properly developed e-filing system would be that it would be designed in such a way that it provides easy and swift access to real-time information stored in databases and document (or case) management systems. This means that fast response times (measured in seconds) should be provided for at least the most frequently used functions, e.g. displaying search results, viewing detailed data, opening a document, etc. Accordingly, key performance indicators in a well-designed system would be proactively reviewed.

It also seems that an action continuity plan should not be neglected to be established in place with the aim of achieving minimal or zero data loss in the event of a data failure or corruption. This last parameter is the most critical, as data gaps can be problematic and may require a great deal of human intervention (and time) to achieve structured data and document integrity.

E-identification of natural or legal persons should be based on a strong authentication mechanism, for example – following the example of today’s technologies – through so-called “two-factor authentication”²⁰, especially when accessing the e-filing system from an external network (e.g. via a web portal). In order to properly manage the identity of internal users and regulate user access, the e-filing system should also be integrated with an identity and access management system. The latter should be unique to the court domain (i.e. used by all applications, not just the e-filing system).

Nonetheless, in the problem of setting up an e-filing system, adequate security against cyber-attacks cannot be overlooked, especially for functions exposed on the Internet (e.g. web portals). Such security is in principle guaranteed by periodic vulnerability testing in accordance with international standards (e.g. OWASP for web applications²¹).

²⁰ Two-factor authentication (2FA) is a method of establishing access to an online account or computer system that requires the user to provide two different types of information: N. Nguyen, *You Need Two-Factor Authentication, but Some Types Are Safer Than Others*, “The Wall Street Journal”, April 2022, available at: <https://www.wsj.com/articles/you-need-two-factor-authentication-but-some-types-are-safer-than-others-11648930708> [accessed on: 17 November 2022]; R. Omwoyo, J. Kamau, M. Mgala, *A review of Two Factor Authentication Security Challenges in the Cyberspace*, “International Journal of Advanced Computer Technology” 2022, Vol. 11, No. 5, pp. 1–6, available at: <https://www.ijact.org/index.php/ijact/article/view/112> [accessed on: 19 December 2022].

²¹ The Open Web Application Security Project (OWASP) is a nonprofit foundation that works to improve the security of software, available at: <https://owasp.org/> [accessed on: 21 November 2022].

To ensure data confidentiality, especially for certain types of sensitive information (e.g. names of defendants), solutions should be in place to encrypt data and documents. This information should also be protected from direct access through the operating system (e.g. by the system administrator), storage devices, and backup media. An important factor to consider is the correct management of the encryption/decryption key(s), which also raises a number of organisational issues.

As far as remote working cases are concerned, it is worth mentioning that it is necessary to put in place adequate safeguards to guarantee the confidentiality of e-documents containing sensitive data processed on the device(s) in question.

Furthermore, it becomes inevitable to implement a solution for such data segregation to ensure that only e-document users have access to their data, according to their privileges, while privileged system users (e.g. database or system administrators) cannot read or update data.

To conclude, the e-filing system should be designed in such a way that it is ready to interact with external systems, ensuring maximum compatibility at the national level for efficient and effective data exchange with other authorities (e.g. land and commercial registries, law enforcement agencies, etc.) This should facilitate the work of the judge in terms of timely and comprehensive e-receipt of requested documents through the established digital channels.

5. Conclusions

The recent activity of the Council of Europe towards the legal structuring of the area of new technologies, with particular reference to artificial intelligence, deserves to be noted. Apart from the European Union²², there is no other regional organisation that has so comprehensively attempted to outline a legal framework for a reality that is not only still emerging, but above all, unrecognized²³. It should be noted that of all the technological revolutions experienced by the mankind to date, the digital revolution not only covers the largest territorial scope but affects almost every sphere of human activity. At present, it is uncertain whether the balance of benefits we are experiencing thanks to the IT revolution will not turn out to be too small in relation to the risks we do not perhaps yet identify. Nevertheless, it is clear that the digitisation process that has begun cannot be halted. Therefore, it seems that the development of further guidelines by the Council of Europe is an appropriate action. A legal framework

²² See: S. Borsci, V. Lehtola, F. Nex, M. Ying Yang, E.-W. Augustijn, L. Bagheriye, C. Brune, O. Kounadi, J. Li, J. Moreira, J. Van Der Nagel, B. Veldkamp, D.V. Le, M. Wang, F. Wijnhoven, J.M. Wolterink, R. Zurita-Milla, *Embedding artificial intelligence in society: looking beyond the EU AI master plan using the culture cycle*, "AI & Soc" 2022, Vol. 38, available at: <https://doi.org/10.1007/s00146-021-01383-x> [accessed on: 3 December 2022]; B. Carsten Stahl, R. Rodrigues, N. Santiago, K. Macnish, *A European Agency for Artificial Intelligence: Protecting fundamental rights and ethical values*, "Computer Law & Security Review" 2022, Vol. 45, available at: <https://doi.org/10.1016/j.clsr.2022.105661> [accessed on: 5 November 2022].

²³ Council of Europe and Artificial Intelligence web portal, available at: <https://www.coe.int/en/web/artificial-intelligence> [accessed on: 11 November 2022].

for the development of new technologies is being created, based on a foundation of human rights that is widely recognised by European states.

The presented guidelines of the Council of Europe on the e-filing system and the digitisation of the judiciary, of all those published recently and concerning the latest technologies, seem to be of fundamental importance. From this point of view, they represent a challenge for the member states. Previous Council of Europe guidelines on justice covered a certain selected section of issues (e.g. electronic evidence²⁴ or videoconferencing²⁵). The guidelines under discussion, apart from the specific issue of e-filing, already deal with issues as fundamental as the digitisation of justice. Taking on this challenge is not a task that all European countries will be able to accomplish in the short term. Digitisation of the justice system is a process which, in my opinion, should proceed in the spirit of evolution rather than revolution.

The basic postulate for legislators is to develop national solutions based on the guidelines developed within the Council of Europe. It must be emphasised that the guidelines are soft law regulations and it is solely up to the Member States to what extent they adopt them into their legal order. Nevertheless, in a situation where we are dealing with such a dynamically changing reality, it seems worthwhile to refer to the *acquis* developed within the framework of collegiate bodies. On the basis of national solutions, the widest possible consultation between the legislator and all interested parties, especially representatives of the judiciary and developers of technological solutions, should be called for. Digitisation of the judiciary is going to represent a fundamental shift, which without proper, i.e. correct communication will not be effectively implemented. Digitisation must constitute a process carried out transparently, in consultation with numerous stakeholders.

One of the oft-repeated arguments for the widespread use of innovative technologies in the administration of justice is to improve access to justice. However, it seems that more cautious approach is advised here. It is necessary to take into account the needs of the digitally excluded, for whom digitisation must not turn out to be a restriction of the fundamental right, which is the right to a fair trial. The above confirms the postulate that the digitisation process must proceed in an evolutionary and non-discriminatory manner.

References

1. Allard T., Béziaud L., Gambs S., *Publication of Court Records: Circumventing the Privacy-Transparency Trade-Off* [in:] *Lecture Notes in Computer Science*, Vol. 13048, *AI Approaches to the Complexity of Legal Systems XI-XII. AICOL AICOL XAILA 2020*,

²⁴ Electronic Evidence in Civil and Administrative Proceedings and Explanatory Memorandum: Guidelines Adopted by the Committee of Ministers of the Council of Europe on 30 January 2019, available at: <https://www.coe.int/en/web/cdcj/digital-evidence> [accessed on: 20 December 2022].

²⁵ *Guidelines on videoconferencing in judicial proceedings (2021)*, available at: <https://edoc.coe.int/en/efficiency-of-justice/10706-guidelines-on-videoconferencing-in-judicial-proceedings.html> [accessed on: 20 December 2022].

- 2018, 2020, V. Rodríguez-Doncel, M. Palmirani, M. Araszkievicz, P. Casanovas, U. Pagallo, G. Sartor (eds.), Cham 2021, available at: https://doi.org/10.1007/978-3-030-89811-3_21.
2. Borsci S., Lehtola V., Nex F., Ying Yang M., Augustijn E.-W., Bagheriye L., Brune C., Kounadi O., Li J., Moreira J., Van Der Nagel J., Veldkamp B., Le D.V., Wang M., Wijnhoven F., Wolterink J.M., Zurita-Milla R., *Embedding artificial intelligence in society: looking beyond the EU AI master plan using the culture cycle*, AI & Soc 2022, Vol. 38, available at: <https://doi.org/10.1007/s00146-021-01383-x>.
 3. Carsten Stahl B., Rodrigues R., Santiago N., Macnish K., *A European Agency for Artificial Intelligence: Protecting fundamental rights and ethical values*, Computer Law & Security Review 2022, Vol. 45, available at: <https://doi.org/10.1016/j.clsr.2022.105661>.
 4. Contini F., Reiling D., *Double normalization: When procedural law is made digital*, Oñati Socio-Legal Series 2022, Vol. 12, No. 3 (Norm, normal and disruption: The role of law, knowledge and technologies in normalising social life), available at: <https://doi.org/10.35295/osls.iisl/0000-0000-0000-1305>.
 5. Furmanek W., *Analfabetyzm cyfrowy wyzwaniem dla dydaktyki informatyki [Digital illiteracy challenge for the teaching of computer science]*, Dydaktyka Informatyki 2015, Vol. 10, available at: <https://doi.org/10.15584/di.2015.10.6>.
 6. Johnsen J.T., *The European Commission for the Efficiency of Justice (CEPEJ) – Reforming European Justice Systems – “Mission Impossible?”*, International Journal for Court Administration 2012, Vol. 4, Issue 3, available at: <https://doi.org/10.18352/ijca.83>.
 7. Leslie D., Burr C., Aitken M., Katell M., Briggs M., Rincon C., *Human Rights, Democracy, and the Rule of Law Assurance Framework for AI Systems: A Proposal*, 19 September 2021, available at: <https://doi.org/10.2139/ssrn.4027875>.
 8. Mantelero A., *Beyond Data: Human Rights, Ethical and Social Impact Assessment in AI*, Berlin 2022, available at: <https://doi.org/10.1007/978-94-6265-531-7>.
 9. Nguyen N., *You Need Two-Factor Authentication, but Some Types Are Safer Than Others*, The Wall Street Journal, April 2022, available at: <https://www.wsj.com/articles/you-need-two-factor-authentication-but-some-types-are-safer-than-others-11648930708>.
 10. O'Connor T., *E-filings: making courts more accessible*, GP, Solo & Small Firm Lawyer 1999, Vol. 16, No. 4.
 11. Omwoyo R., Kamau J., Mgala M., *A review of Two Factor Authentication Security Challenges in the Cyberspace*, International Journal of Advanced Computer Technology 2022, Vol. 11, No. 5, available at: <https://www.ijact.org/index.php/ijact/article/view/112>.
 12. Oręziak B., Świerczyński M., *Electronic Evidence in the Light of the Council of Europe's New Guidelines*, Comparative Law Review 2019, Vol. 25, available at: <https://doi.org/10.12775/CLR.2019.009>.
 13. Pasat A.O., *Comparative study: European Council – Council of the European Union – Council of Europe*, Perspectives of Law & Public Administration 2021, Vol. 10, special issue.

14. Schou J., Svejgaard Pors A., *Digital by default? A qualitative study of exclusion in digitalised welfare*, *Social Policy & Administration*, May 2019, Vol. 53, Issue 3, available at: <https://doi.org/10.1111/spol.12470>.
15. Szostek D., *Blockchain and the Law*, Baden-Baden 2019, available at: <https://doi.org/10.5771/9783845298290>.
16. Vayssière B., *Federalists and the Beginnings of the Council of Europe: Converting Institutions and Opinion to Supranationality (1949–1951)*, *Histories*, March 2022, Vol. 2, Issue 1, available at: <https://doi.org/10.3390/histories2010001>.
17. Wang Z., *The Supreme People's Court of China has embraced blockchain, built online courthouses, and moved to digitalize court systems in a bold embrace of technology. Here's how it's going*, *Judicature* 2021, Vol. 105, No. 1.