

## PART IX

### THE DIGITAL REVOLUTION

#### CHAPTER 3

#### ICT TOOLS TO ENHANCE PERFORMANCE OF THE CIVIL JUSTICE SYSTEM (I) – ELECTRONIC MANAGEMENT OF PROCEEDINGS

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## 1 INTRODUCTION

- 1 Chapter 3 deals with the use of information and communication technologies (ICT) in the management of judicial proceedings. In many jurisdictions that have a developed ICT infrastructure, the implementation of digital technology for the court administration and legal proceedings began in earnest in the late 1980s or 1990s with the advent of personal computers and the internet<sup>1</sup>, and with the idea of the ‘new public management’ that emphasized the efficient judicial administration. Since then, the judicial digitization has been gradual and varied under the different legal cultures, budget, and dynamics of each judiciary. COVID-19 has dramatically accelerated the trend of digitization, and even jurisdictions that have long been hesitant to adopt ICT in judicial proceedings for cultural reasons are now changing their attitudes. At the current stage, advanced systems mostly use the Case Management Systems (CMS), e-filing and e-service. Other countries with lesser ICT infrastructure also have at least started pilot programs.<sup>2</sup> Some have adopted the e-enforcement system. Furthermore, multiple judiciaries have already implemented AI in certain aspects of judicial proceedings or have launched research projects.<sup>3</sup>
- 2 Section 2 reviews the overall aspects of CMS. It classifies CMS into 4 categories (case management tools, judicial support tools, procedural communication tools, and access to justice tools) and examines how these tools are used in the civil proceedings. It further delves into challenges in adopting new technologies for the judicial proceedings. It presents commonly found aspects and factors of judicial digitization, and studies guidelines and recommendations for the digital transformation of the judiciary, eg, the Guidelines of the European Commission for the Efficiency of Justice (CEPEJ) or the Conclusions by the Council of European Union (EU).<sup>4</sup>
- 3 Many judiciaries are also exploring AI to improve the efficiency of the case management and judicial proceedings. Some have already implemented auto-transcription or auto-

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<sup>1</sup> Eg, Administrative Office of the US Courts (AOUSC), ‘CM/ECF Path Analysis’ (31 March 2021), Public Version 15 [https://www.uscourts.gov/sites/default/files/18f\\_path\\_analysis\\_on\\_us\\_courts\\_cmecf\\_march\\_2021\\_opa\\_0.pdf](https://www.uscourts.gov/sites/default/files/18f_path_analysis_on_us_courts_cmecf_march_2021_opa_0.pdf) accessed 6 January 2022; A Han, ‘ICT Tools to Enhance Performance of the Civil Justice System (I) – Electronic Management of Proceedings’ (2024) CPLJ pt IX ch 3.

<sup>2</sup> Eg, in the Kurdistan Region of Iraq, the Sulaymaniyah Appellate Court among the four appellate courts adopted a pilot e-court system. R K Ahmed, K H Muhammed, I Pappel, and D Draheim, ‘Challenges in the Digital Transformation of Courts: A Case Study from the Kurdistan Region of Iraq’ (2020) Seventh International Conference on eDemocracy & eGovernment (ICEDEG) 74, 76 ff.

<sup>3</sup> For various judicial AI projects in EU, see European Commission, ‘Digitalisation of justice in the European Union: A toolbox of opportunities’ (2020) Commission Staff Working Document Accompanying the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 111-142 [eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0540&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0540&from=EN) accessed 18 April 2022.

<sup>4</sup> CEPEJ, ‘Toolkit for supporting the implementation of the Guidelines on how to drive change towards Cyberjustice’ (2019)7, as adopted at the 32nd plenary meeting of the CEPEJ 13 and 14 June 2019 <https://rm.coe.int/cepej-toolkit-cyberjustice-en-cepej-2019-7/168094ef3e> accessed 20 June 2022; The Council of European Union, ‘Access to justice – seizing the opportunities of digitalisation’ (2020) Council Conclusions (2020/C 342 I/01).

anonymization algorithms, and others are exploring the possibility of using AI in assisting judges' decision-making.<sup>5</sup> Still, it requires special caution for judges to use algorithms or even predictive coding in making their final decisions. Although controversies and possible regulatory measures over the use of AI in judicial proceedings will mainly be discussed in Chapter 4, this chapter will also mention these issues in light of the general digitization of civil proceedings.

- 4 Section 3 reviews the digitization of official communications among participants of judicial proceedings. As crucial legal effects such as the initiation of proceedings, default judgments or *res judicata* are based on notices from a party to the court, from the court to a party, or between parties (or their counsels), it is of great significance for any judiciary to have accurate and well-functioning filing and service systems to resolve legal disputes in a timely manner without sacrificing parties' procedural rights. E-filing, or the electronic submission and management of documents, and e-service, or the digitization of communications among participants of judicial proceedings, are two of the main tools of paperless proceedings. They are gaining more importance since the outbreak of the COVID-19 pandemic.
- 5 It is undebatable that e-filing and e-service can save time and costs of in-person submission and delivery immensely. Still, to achieve fairness and efficiency simultaneously, many details should be considered in the implementation of e-filing and e-service: whether it should be mandatory; whether it is allowed only to legal professionals; on what terms e-service would be effective; whether the service of documents that initiates the proceedings can be conducted electronically; and whether a special platform should be built, etc. Laws and practices of frontrunners will give valuable insights. One key issue is e-filing and e-service in cross-border litigations. The e-CODEX (e-Justice Communication via Online Data Exchange)<sup>6</sup> scheme and the new e-CODEX regulation<sup>7</sup> used for EU's European Payment Order<sup>8</sup>, European Small Claims Procedure<sup>9</sup>, the EU Service Regulation<sup>10</sup>, etc would be the most prominent examples in this area and therefore worth more detailed review.

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<sup>5</sup> European Commission, Directorate-General for Justice and Consumers, 'Study on the use of innovative technologies in the justice field: final report' (2020) European Commission Publications Office, 118-142 <https://data.europa.eu/doi/10.2838/585101> accessed 10 May 2022.

<sup>6</sup> For a general introduction of e-CODEX, see M Velicogna and G Lupo, 'From drafting common rules to implementing electronic European Civil Procedures: the rise of eCODEX' (2019) [https://www.e-codex.eu/sites/default/files/2019-08/Velicogna\\_Lupo-2016-From\\_drafting\\_common\\_rules\\_to\\_implementing\\_elect\\_0.pdf](https://www.e-codex.eu/sites/default/files/2019-08/Velicogna_Lupo-2016-From_drafting_common_rules_to_implementing_elect_0.pdf) accessed 7 March 2022.

<sup>7</sup> Regulation on a computerised system for the cross-border electronic exchange of data in the area of judicial cooperation in civil and criminal matters (e-CODEX system), and amending Regulation (EU) 2018/1726, 2022/850 of 30 May 2022 (EU).

<sup>8</sup> Regulation creating a European order for payment procedure, 1896/2006 of 12 December 2006 (EU).

<sup>9</sup> Regulation establishing a European Small Claims Procedure, 861/2007 of 11 July 2007 (EU).

<sup>10</sup> Regulation on the service in the Member States of judicial and extrajudicial documents in civil or commercial matters (service of documents) (recast), 2020/1784 of 25 November 2020 (EU).

- 6 Section 4 deals with the impact of ICT in the judicial enforcement. Digital technologies have transformed the enforcement procedures from the electronic disclosure of debtor's assets to online registration of enforceable instruments to online judicial auctions. Electronic communications between enforcing authorities and other institutions such as the real estate registration bureau or banks have facilitated the discovery of debtors' assets, and many jurisdictions have deployed legal instruments to help the process. Judicial e-auction platforms where advertisements, notifications and biddings are all conducted electronically are expanding in many countries, especially since the COVID-19 Pandemic.<sup>11</sup> These developments in electronic enforcement affect a broad range of people and require considerations of a variety of issues, including privacy, efficiency of enforcement, transparency and fairness, cost savings, and procedural rights of the parties.

## 2 DIGITIZATION OF CMS

### 2.1 Definition and Scope

- 7 CMS generally refers to applications that support the administrative and judicial tasks of judges and judicial officials, but there exists no clear definition. For example, in Cordella and Contini's 2020 report on the digitization of justice commissioned by the Inter-American Development Bank, the term of CMS is used both narrowly (meaning only digitization of case administration such as case registration, case tracking and office automation) and broadly (including judicial support system, e-filing, public access system and beyond).<sup>12</sup> Sometimes CMS are inseparable from e-filing and dubbed together, as can be seen in the US federal judiciary's Case Management and Electronic Case Files (CM/ECF) system.<sup>13</sup> Effective management and disclosure of judicial data is also gaining significance and thus now being treated as an important part of the case management and judicial administration.<sup>14</sup> For the purpose of this chapter, CMS should be analysed from the viewpoint of how they have and will influence the efficiency and fairness of judicial proceedings. In that regard, diverse aspects of digitization should be included in CMS.

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<sup>11</sup> CEPEJ, 'Guide on Judicial E-auctions' (2023)11, Document adopted at the 40th plenary meeting of the CEPEJ, 15 and 16 June 2023 para 49-51 <https://rm.coe.int/cepej-2023-11-en-guide-on-judicial-e-auctions-1/1680abb674> accessed 10 July 2023.

<sup>12</sup> A Cordella and F Contini, 'Digital Technologies for Better Justice - A Toolkit for Action' (2020) Inter-American Development Bank, 10, 16, 17.

<sup>13</sup> United States Courts 'Electronic Filing (CM/ECF)' <https://www.uscourts.gov/court-records/electronic-filing-cmecf> accessed 2 April 2022.

<sup>14</sup> CEPEJ, 'Guidelines on electronic court filing (e-filing) and digitalisation of courts Document' (2021)15, Document adopted at the 37th plenary meeting of the CEPEJ, 9 December 2021, para 71-80 <https://rm.coe.int/cepej-2021-15-en-e-filing-guidelines-digitalisation-courts/1680a4cf87> accessed 8 May 2022.

## 2.2 Structure and Elements of CMS

### 2.2.1 Structure of CMS

- 8 Various judiciaries have their own unique CMS according to their own judicial tradition, level of digital infrastructure and urgent demands. Still, it is possible to extract common elements of CMS and generalize their structure.
- 9 In the CEPEJ's 'Guidelines on how to drive change towards Cyberjustice' (2016), member states of the Council of Europe reported that they have deployed diverse digital tools to improve the performance and efficiency of their judicial systems.<sup>15</sup> Based on their answers, the above 2016 Guidelines classified cyberjustice tools to i) access to justice tools for parties and the public, ii) communication tools between courts and professionals, iii) tools that assist judges and judicial staff, and iv) court administration tools.<sup>16</sup> CEPEJ's 8th Evaluation Report on European Judicial Systems classified them as three categories: i) decision support technologies; ii) court and case management systems; and iii) communication between courts, professionals and/or court users.<sup>17</sup> In Cordella and Contini's 2020 report, technologies for cyberjustice were classified as back-office and front-office technologies: the former are applications used inside the judicial offices and consist of case registration, document drafting, and case and procedural management; and the latter are tools used for interactions between courts, parties and lawyers and consist of e-filing, e-service and public access systems.<sup>18</sup> As many tools have multiple purposes, distinctions are often not so clear.
- 10 This chapter would like to categorize tools related to judicial proceedings according to their characters and underlying values to i) case management tools, ii) judicial support tools, iii) procedural communication tools (between courts, parties, and their attorneys for the civil proceedings), and iv) access to justice tools, basically following the classification by the CEPEJ's above 2016 Guidelines with some modifications. Tools with multiple characteristics, such as e-filing tools as both case management tools and communication tools, or judicial data management tools as both case management and public access tools, will be examined from a different perspective in each related section.

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<sup>15</sup> CEPEJ, 'Guidelines on how to drive change towards Cyberjustice' (2016)13, as adopted at the 28th meeting of the CEPEJ on 7 December 2016, para 1 <https://rm.coe.int/16807482de> accessed 5 April 2022.

<sup>16</sup> Ibid para 11-65.

<sup>17</sup> Council of Europe, 'European judicial systems CEPEJ Evaluation Report 2020 Evaluation cycle (2018 data) Tables, graphs and analyses (Part 1)' 2020 Evaluation Cycle, 99 <https://rm.coe.int/evaluation-report-part-1-english/16809fc058> accessed 9 April 2022.

<sup>18</sup> Cordella and Contini (n 12) 10, 16, 17 f.

### 2.2.2 Elements of CMS and Their Influence on Judicial Values

#### 2.2.2.1 Case Management Tools

- 11 For effective case management, each case should be properly indexed, and its filings and submissions should be registered. Necessary templates should be provided for each step. Each case file folder and documents included in the folder should be handled by the indexed case number and should be easily tracked. There should be mechanisms that enable up-to-date tracking of the status and progress of individual cases. A good scheduling or calendar system should be established. And a good statistics system that reveals meaningful patterns should be built and the information generated from the system should be conveyed to judges and the judicial administration.<sup>19</sup>
- 12 While paper-based systems may meet these expectations with sufficient effort, it is difficult for courts to manually assemble scattered information of each case in a timely manner and make procedural decisions without delay. When ICT was first introduced to the courts, therefore, what many jurisdictions first implemented was the electronic case tracking system. The initial system that simply replaced paper registers with digital ones later evolved to more complex systems that enable effective data collection, monitoring, reporting, warning, and ad hoc control mechanisms.<sup>20</sup>
- 13 Most advanced judiciaries now have internal systems of case tracking tools, scheduling tools and statistics tools.<sup>21</sup> Other digital tools have also been integrated into CMS, eg, judicial support tools for judges and court officials and one-stop service tools connected to banks, post offices or government bureaus.<sup>22</sup> Automatic case allocation systems have been deployed to rule out arbitrary distribution of cases in some countries.<sup>23</sup> Many judiciaries that have completed the digitization of internal CMS have also adopted and integrated e-filing and e-service into CMS, thus enabling the paperless procedure in its true sense.<sup>24</sup> One of the most notable examples is the CMS of the Unified Patent Court,<sup>25</sup> where the CMS platform works as the only official channel to access the Court and to perform all activities with legal validity from March 2023.

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<sup>19</sup> USAID (United States Agency for International Development), 'Case Tracking and Management Guide' (2001) Centre for Democracy and Governance, Bureau for Global Programs, Field Support, and Research USAID, 10-17.

<sup>20</sup> Cordella and Contini (n 12) 17-22.

<sup>21</sup> As of 2020, electronic CMS are available for use by all courts in 23 EU Member States (85%), and partially available in three Member States (11%) and only in one Member State (4%) courts do not use an electronic CMS. European Commission (n 3) 24-25.

<sup>22</sup> Han (n 1) 2.

<sup>23</sup> European Commission (n 3) 25.

<sup>24</sup> Eg, 'CM/ECF' System of the federal courts of the United States, 'e-toimik' of Estonia, and 'eLitigation' of Singapore.

<sup>25</sup> 'A single patent court for Member States of the European Union' <https://www.unified-patent-court.org/en> accessed 1 September 2024.



- 14 These tools not only can save routine efforts made by judges and court officials for individual cases but also enable judicial administration based on statistics and data.<sup>26</sup> They can monitor outcomes of each judge and each court and assist proper distribution of budgetary and human resources to the most urgent areas.<sup>27</sup> Efficiency of judicial proceedings, as far as it does not sacrifice fairness, by itself contributes greatly to justice. Moreover, by allowing public access to the information registered to and generated from CMS, transparency of and trust to the judiciary can be greatly improved.
- 15 Still, there are considerable risks and challenges in deploying digital CMS. System stability, security, and accuracy of the input data are the most basic requirements of CMS, but lots of technological and human efforts should be devoted to achieving these seemingly simple goals.<sup>28</sup> Securing budgets, prioritizing and installing hardware and software, and educating users whenever adopting and upgrading a new tool all demand tremendous efforts. Most of all, even well-functioning CMS might pose a threat to judicial independence by making judges and judicial administration care more about quantitative outcome than the quality of justice.<sup>29</sup> These various difficulties act as constraints on the full adoption and improvement of CMS.

#### 2.2.2.2 Judicial Support Tools

- 16 The use of ICT to assist judges and court officials has been considered from the very early stage of judicial digitization as a solution to ease the judicial backlog problems. There are various applications that support judges' and court clerks' judicial functions such as word-processing, scheduling, legal research, remote working, and videoconferencing. Among these tools, some directly assist judges' and court officials' decision-making and have the potential to influence the substance of judicial decisions, which requires special attention and caution.
- 17 Decision templates are the first tools that have been deployed to automate and facilitate decision-making process, and computerized decision forms or templates are already common in various jurisdictions. In many judiciaries, judges can automatically generate a decision form suited for the specific category of the case, in which all the case data registered into CMS are automatically integrated.<sup>30</sup> In addition to simple forms, computer programs or templates that have embedded functions are used to help judges

<sup>26</sup> For the time management of the judiciary, see CEPEJ, 'Revised Saturn Guidelines for Judicial Time Management (4th revision)' (2021)13, Document adopted at the 37th plenary meeting of the CEPEJ (Strasbourg and online, 8 and 9 December 2021) 3-10.

<sup>27</sup> CEPEJ (n 15) para 56.

<sup>28</sup> CEPEJ (n 15) para 58-60.

<sup>29</sup> CEPEJ (n 15) para 64.

<sup>30</sup> Eg, e-Court system of Azerbaijan (a case management tool coupled with decision templates); Persée of France (a tool that provides assistance with drafting decisions using templates shared with professionals and samples of reasoned arguments among many functions); and JUSTICE (Judge's Unified System for Intelligent Case Management) of South Korea (a system that combines case management and decision drafting). CEPEJ (n 15) 1.3.2; Han (n 1) 7.



calculate damages, interests or other complex calculations by simply ‘filling the blanks’. Eg, *Compensatio* by the private firm Jussystemer offers automatic calculations in questions concerning financial mathematics, tax calculation, compensation for permanent injury with lifetime tables, pension losses, gross capitalization, capitalization, tax disadvantage and default interest. It is used by judges, lawyers and others that work with assessing damages in personal injury cases.<sup>31</sup> Some programs conduct more complicated tasks by reflecting various factors that may influence final results. Eg, MoCAM (Model for the Calculation of Maintenance Allowance) is a model equipped with software through which it is possible to calculate the amount of the maintenance allowance for children in cases of separation, divorce or rupture of a non-marital partnership and, where the conditions exist, of the contribution in favour of the spouse. It is used by both lawyers and judges.<sup>32</sup>

- 18 As well as the above programmes operated by traditional programming methods, tools based on the AI technologies are now introduced to assist judicial decision-making.<sup>33</sup> The EU AI Act defines AI system as

a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments.<sup>34</sup>

In light of the role of AI in providing assistance to a better judicial decision-making, it should rather be called ‘augmented intelligence’ than ‘artificial intelligence’, as indicated in Chapter 1 of this segment. Although numerous experimental initiatives are underway within the judiciary to explore the potential of AI technologies, the majority of legal jurisdictions exercise prudence when it comes to incorporating AI or Machine Learning techniques in judicial decision-making for real-world cases, in contrast to the extensive adoption of AI within private legal markets.<sup>35</sup> Their caution on decision-assisting tools, especially AI/ML, has reasons. On the one hand, cumulated legal

<sup>31</sup> ‘jussystemer’ <https://www.jussys.no/compensatio/> accessed 20 April 2022.

<sup>32</sup> ‘Modello per il Calcolo dell’ Assegno di Mantenimento nei casi di separazione e divorzio’ <http://www.mocam.net/> accessed 20 April 2022. P Comoglio, ‘Legal Tech and Legal Professions: Impact on the Justice System’ (2024) CPLJ pt IX ch 6.

<sup>33</sup> Eg, ‘DataJust’ of France, and ‘Predictive Justice’ of the Court of Appeal, Brescia, Italy. DataJust is an ongoing project to develop a tool predicting the amount of compensation for different bodily injury claims using machine learning, NLP and Information extraction. ‘Predictive Justice’ being developed by the Court of Appeal, Brescia. European Commission, Directorate-General for Justice and Consumers (n 5) 118, 122 <https://data.europa.eu/doi/10.2838/585101> accessed 10 May 2022.

<sup>34</sup> Regulation laying down harmonized rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act), 2024/1689 of 13 June 2024 (EU) Art. 3(1).

<sup>35</sup> European Commission (n 3) 46.

information transformed into algorithms reduces burdens of the judiciary and increases consistency of judicial decisions by introducing good practices and collective intelligence of other judges.<sup>36</sup> These tools can especially lessen the noise or bias inevitable in human nature, thus improving predictability and fairness of the outcome.<sup>37</sup> However, statistical, collective, or ‘average’ auto-recommendations to the judicial decision-making may have negative impacts on judges’ personalized and independent thought process and harm individualized justice and parties’ adversarial rights.<sup>38</sup> Moreover, the ‘autonomous’ and ‘opaque’ nature of the current AI tools cannot guarantee the explainability of the outcome.<sup>39</sup> It is a common understanding so far that there are trade-offs between the explainability and the accuracy of an algorithm.<sup>40</sup>

- 19 As explained in Chapter 1 and will be delved further in Chapter 4, therefore, ethical and procedural considerations are required in using algorithms, especially AI for the judicial decision-making. The ‘European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their environment’ by CEPEJ declared five principles of i) respect for fundamental rights, ii) non-discrimination, iii) quality and security, iv) transparency, impartiality and fairness, and v) ‘under user control.’<sup>41</sup> The EU AI Act also classifies AI systems intended to be used for various aspects to assist a judicial authority in researching and interpreting facts and the law and in applying the law to a concrete set of facts (Annex III 8) as ‘high-risk’ group.<sup>42</sup> The Act provides that these high-risk systems fulfil strict legal requirements in relation to data and data governance, documentation and recording keeping, transparency and provision of information to users, human oversight, robustness, accuracy and security and obligates, and let them go through comprehensive ex-ante conformity assessment (Chapter 4). The ‘Proposal for a Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive)’ by the European Commission in September 2022 establishes ex-post measures such as a broadened disclosure of

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<sup>36</sup> CEPEJ (n 15) para 48.

<sup>37</sup> Regarding influence of judges’ hunger on sentencing, see S Danziger, J Levav & L Avnaim-Pesso, ‘Extraneous factors in judicial decisions’ (2011) 108(17) *Proceedings of the National Academy of Sciences*, 6889-6892.

<sup>38</sup> CEPEJ (n 15) para 47-51.

<sup>39</sup> A D Selbst and Barocas, ‘The Intuitive Appeal of Explainable Machines’ (2018) 87(3) *Fordham Law Review* 1085, 1094.

<sup>40</sup> S N van der Veer et al, ‘Trading off accuracy and explainability in AI decision-making: findings from 2 citizens’ juries’ (2021) 28(10) *Journal of the American Medical Informatics Association* 2128, 2129.

<sup>41</sup> CEPEJ, ‘European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their environment’ (2018) adopted at the 31st plenary meeting of the CEPEJ (Strasbourg, 3 and 4 December 2018) <https://rm.coe.int/ethical-charter-en-for-publication-4-december-2018/16808f699c> accessed 29 March 2022.

<sup>42</sup> The Artificial Intelligence Act, European Union, as of 19 April 2024.

evidence and reduced burden of proof for those seeking compensation for damage caused with the involvement of high-risk AI systems.<sup>43</sup>

### 2.2.2.3 Procedural Communication Tools

- 20 Judicial proceedings can be viewed as a chain of communications between the court and the parties in dispute. The filing of pleadings, the service of documents, and the notification of judicial decisions are all sorts of communications between adversarial parties and between the parties and the court.<sup>44</sup> Digital tools that assist these procedural and legal communications reduce participants' time, efforts and expenses by substituting slow and costly in-person submission, delivery of hard copies and physical attendance. E-filing, e-service, e-discovery, videoconferencing and e-auction tools can all fall into this category. Now many jurisdictions use various methods of electronic communications from simple e-mails or text messages to centralized platforms to replace traditional methods of filing and service for trial proceedings, as we will see in section 3.
- 21 Unlike the internal communications inside the judiciary, official communications exchanged during and for the proceedings have direct legal effects and therefore require specific legal bases. They should also be made by authorized persons with the necessary authentication on the documents through secured channels. These legal and practical limitations define the methods and extent of digitization and hinder timely adaptations of new technologies for judicial communications. E-communication tools, therefore, have not been as prevalent as the digitization of the internal CMS.<sup>45</sup>
- 22 The COVID-19 pandemic and ensuing court lockdowns reminded everyone of the necessity of electronic communications to protect the access to justice and the security of persons.<sup>46</sup> Many jurisdictions afflicted by the disease took emergency measures for remote court proceedings and utilized pre-existing but dormant e-communication

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<sup>43</sup> European Commission, 'Proposal for a Directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive)' Brussels, 28.9.2022 COM (2022) 496 final 2022/0303 (COD) 10-13.

<sup>44</sup> F Gascón Inchausti, 'Electronic Service of Documents: National and International Aspects' in M Kengyel and Z Nemessányi (ed), *Electronic Technology and Civil Procedure: New Paths to Justice from Around the World* (Springer 2012) 137, 141.

<sup>45</sup> According to the European Commission's 2020 survey, a full-version of e-filing (initiation of proceedings by e-filing) was available in only 15 EU Member States (56%), and e-service of official court documents in civil and commercial cases on citizens and businesses in all situations were available in only 12 EU Member States (44%). European Commission (n 3) 12, 23-24.

<sup>46</sup> CEPEJ, 'CEPEJ Declaration – Lessons Learnt and Challenges Faced by the Judiciary during and After the COVID-19 Pandemic' (2020)8rev, Ad hoc virtual CEPEJ plenary meeting 10 June 2020 <https://rm.coe.int/declaration-en/16809ea1e2> accessed 18 April 2022.

solutions to cope with the crisis on an unprecedented scale.<sup>47</sup> It became also evident that judiciaries should have more inclusive e-court systems that ensure online access to all users, especially vulnerable groups who are even more at risk of suffering from the situation. Although many countries are now returning to normal, the digital transition in court proceedings brought by the pandemic will remain permanent to a great extent. It is also getting more urgent to make safeguards for communication tools that can guarantee the legal validity of the communication tools and parties' procedural rights, and this subject will be further discussed in section 3.

#### 2.2.2.4 Access to Justice Tools

- 23 ICT promote access to justice by helping people get judicial information and by giving more specific assistance to persons involved in legal disputes.<sup>48</sup> They also improve transparency and open justice by allowing the public to see the progress and outcomes of cases.
- 24 In providing information to potential litigants, most countries started with simple websites that explained the fundamentals of trial procedures and provided standard legal forms. They've evolved into portals or mobile apps that provide users with more specific and personalized information. Advanced interactive information tools now guide potential litigants through Q&A to the correct procedural steps and provide them with other useful information such as typical documents and evidence to be submitted based on the nature of the case, lawyers and institutions that may be of assistance, and other alternative dispute resolutions that may be appropriate in the case.<sup>49</sup> E-filing, e-service and videoconferencing tools can also be classified into this category, as they can make litigants' access to justice easier and are now integrated into a single digital system. General judicial information portals not directly related to a specific case are also a sort of access to justice tools and are often integrated into a general justice portal. Some judiciaries are also developing chatbots based on machine learning technologies to help self-represented litigants.<sup>50</sup> With the exponential development of Large Language Models (LLM) such as Chat-GPT of Open AI that can interact with a user in a conversational way, judicial chatbots that incorporate this technology and can actually

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<sup>47</sup> For measures taken in member states of the Council of Europe, see CEPEJ webpage on 'National judiciaries' COVID-19 emergency measures of COE member States' <https://www.coe.int/en/web/cepej/national-judiciaries-covid-19-emergency-measures-of-coe-member-states> accessed 6 May 2022; for situations in the state and federal courts of the United States, see M Thompson et al, 'How Courts Embraced Technology, Met the Pandemic Challenge, and Revolutionized Their Operations' (2021) The Pew Charitable Trusts <https://www.pewtrusts.org/-/media/assets/2021/12/how-courts-embraced-technology.pdf> accessed 6 May 2022.

<sup>48</sup> CEPEJ (n 15) para 11.

<sup>49</sup> Ibid para 16.

<sup>50</sup> Eg, Austria and Finland have developed chatbot systems that provide citizens guidance on civil cases or divorce cases. European Commission (n 33) 113, 117

communicate are developed sooner than expected and change the aspect of access to the judicial information fundamentally.<sup>51</sup>

- 25 In the implementation and operation of access-to-justice tools, enhancing their accessibility should be regarded as one of the paramount objectives. As the custodians of access-to-justice systems, governing authorities are responsible for offering essential information in plain language employing appropriate mediums such as text messages, voice-based interactions, videos or interactive AI tools to incorporate an optimal level of humanistic elements.<sup>52</sup> It is crucial to strike a balance between accessibility and accuracy. As people give special trust to information presented by the judicial authorities, and as such information may influence users' procedural rights, conveyance of correct information is more important than seamless and natural conversation skills. In that regard, special caution must be given to the implementation of state-of-the-art machine learning technologies such as LLM, which possess the ability to engage in natural conversations with humans but may occasionally provide false information or 'hallucination.'<sup>53</sup> The role of humans should be maintained both in supervising the information tools and in giving 'human' assistance at the right moment.
- 26 Another important issue regarding access-to-justice tools is the disclosure of judicial information. Ever since case documents, court records and judicial decisions have been digitized and managed electronically, there have been strong demands on digitized judicial data from the public as well as the persons involved in specific cases. In deciding how much judicial data should be made public, the benefits of open justice and transparency should be weighed against the risk of violating privacy. Historically, the judiciaries of common law countries have historically allowed wide access to case documents and court decisions to the public,<sup>54</sup> while civil law jurisdictions have rather been cautious on disclosing even court judgments, which have also influenced each judiciary's tendency for the open judicial data in the digital era. However, more and more civil law countries are now disclosing judicial decisions with a more accessible manner,<sup>55</sup>

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<sup>51</sup> A Souza and Z Zarnow, 'Court Chatbots' (2024) National Center for State Courts.

<sup>52</sup> M L Camello, J D Houston-Kolnik and M Planty, 'Chatbots in the criminal justice system' (2021) National Institute of Justice, Office of Justice Programs, US Department of Justice, 10-11. <https://www.ojp.gov/ncjrs/virtual-library/abstracts/chatbots-criminal-justice-system> accessed 15 June 2023.

<sup>53</sup> 'Hallucination' in Large Language Models is defined as 'the generated content that is nonsensical or unfaithful to the provided source content.' Z Ji et al, 'Survey of Hallucination in Natural Language Generation' (2023) 55(12) ACM Computing Surveys, 3.

<sup>54</sup> Eg, in the Case Management/Electronic Case File (CM/ECF) system of the US Federal Courts, parties, the judge, court staff, and the public can review the case information case file simultaneously while redaction of confidential information in the public version should be made under the submitting party's own responsibility. 'Electronic Filing (CM/ECF)' United States Courts <https://www.uscourts.gov/court-records/electronic-filing-cmecf> accessed 9 May 2022.

<sup>55</sup> Austria is an example of wide disclosure of judicial data, and other countries are also following the trend. For France, see LOI n° 2016-1321 du 7 octobre 2016 pour une République numérique (Act of 7 October 2016 for the Digital Republic) Art 20 and Art 21 of France (allowing full access of court decisions

and the trend of open data is gaining momentum throughout the world.<sup>56</sup> 'Open judicial data' is now rather a matter of the organization of courts, judicial councils and ministries of justice in different jurisdictions than the legal tradition. AI technologies are already widely used in anonymizing personal information,<sup>57</sup> and will further reduce the privacy problem in disclosing judicial information to the general public.<sup>58</sup>

- 27 Meanwhile, special attention should be paid to the abuse of data. One notable approach is the Justice Reform Act 2019 of France Art. 33,<sup>59</sup> which prohibits the reuse of identity data of magistrates and members of the judiciary with the purpose or effect of evaluating, analysing, comparing or predicting their actual or alleged professional practices.

## 2.3 The Challenge of Constant Transformation

### 2.3.1 *Necessities of Transformation*

- 28 As the legacy systems become outdated and new technologies emerge, each judicial authority should constantly carry out CMS upgrade projects to fulfil users' various needs under different cultural, legal, structural and budgetary circumstances. The digital transformation of judicial administration and judicial procedure can never stop, as better technologies emerge every day and users' demands to the systems change accordingly. To conduct updates or replacements of systems, however, authorities should overcome many difficulties caused by various factors such as: a) whether the system is centralized or decentralized; b) who, among the judiciary or the department of justice or the general IT department of the government, has the initiative to conduct the project; c) how sufficient budgets for the projects are; d) whether the transformation requires a complete replacement or partial amendments; and e) how open project leaders and users are to new technologies and changes.
- 29 Advanced judiciaries that implemented digital technologies to CMS as early as the 1980s and 1990s have undergone several major transformations to improve their CMS. We can find common steps of CMS digitization. Initially, the internal CMS is digitized. Then communication tools between legal professionals and courts through a specific secured access are adopted for the judicial proceedings. If these tools work successfully, a more

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to the public with the consideration of privacy); for discussions on the open data of judicial decisions, see Mission d'étude et de préfiguration sur l'ouverture au public des décisions de justice, L'OPEN DATA DES DÉCISIONS DE JUSTICE (2017) [https://www.justice.gouv.fr/sites/default/files/migrations/portail/publication/open\\_data\\_rapport.pdf](https://www.justice.gouv.fr/sites/default/files/migrations/portail/publication/open_data_rapport.pdf) accessed 13 June 2024; and Civil Procedure Code of South Korea (amended 2020) Art 163-2 (mandating full access of all civil judgements in a searchable format after 1 January 2023).

<sup>56</sup> CEPEJ (n 14) para 75-80.

<sup>57</sup> European Commission (n 33) 111-142.

<sup>58</sup> CEPEJ (n 56) para 79.

<sup>59</sup> LOI n° 2019-222 du 23 mars 2019 de programmation 2018-2022 et de réforme pour la justice (1) Art 33.



open and interoperable web-based platform is implemented to provide integrated judicial access to the general public. The next new frontier would be the implementation of AI in judicial proceedings.

### 2.3.2 Several Examples

- 30 To understand what kind of problems have emerged and how they have been solved during the digital transformation, it is worth introducing examples of several jurisdictions that have different legal structures and cultures. The following four examples have been chosen to show the uniqueness and similarities of the difficulties each judiciary has been facing in deploying and transforming the digital CMS.

#### 2.3.2.1 Federal Courts of the United States

- 31 The US Federal Courts CM/ECF service is the oldest, largest, continuous, integrated case management and e-filing system in the world.<sup>60</sup> The legacy CM/ECF has been developed in-house by the US Federal Courts Administrative Office of the US Courts (AOUSC), and thus could reflect demands of federal judges such as decentralization and independent configurability.<sup>61</sup> Since its first implementation in 1996, it has been a great success, and all federal judicial officers and court administrative staff<sup>62</sup> have adopted CM/ECF as the official record and case management system.<sup>63</sup> CM/ECF has fully integrated the opening of cases, the submission of all documents and the creation of docket entries into a comprehensive automated case and document management system. It has also allowed for the electronic filing and dissemination of any case and court information via the Internet through the companion application called Public Access to Court Electronic Records (PACER). The entire US federal court community (court, lawyers, government, public) became comfortable in totally relying on this service.<sup>64</sup>
- 32 Partial updates and expansions of legacy CM/ECF continued from its first implementation through the formal modification request (MR) process or through individual courts' own modifications. However, the incremental and gradual approach was not enough to satisfy users' growing needs and to adopt fast developing new technologies. The US federal courts, therefore, ultimately opted for a more formal, 'waterfall' approach, ie, NextGen. Among alternatives of buying from vendors the NextGen model off the shelf (OTS) and of continuing along the development approach taken by the legacy CM/ECF (CurrentGen) with the AOUSC's own initiative, the AOUSC

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<sup>60</sup> J Brinkema and J M Greenwood, 'E-Filing Case Management Services in the US Federal Courts: The Next Generation: A Case Study' (2015) 7(1) *International Journal for Court Administration* 3, 3.

<sup>61</sup> The AOUSC is the US Judicial Branch agency responsible for all administrative and management support of the lower federal courts.

<sup>62</sup> The Supreme Court of the United States is an exception.

<sup>63</sup> J M Greenwood and G Bockweg, 'Insights to Building a Successful E-Filing Case Management Service: U.S. Federal Court Experience' (2012) 4(2) *International Journal For Court Administration*.

<sup>64</sup> *Ibid* 1, 3-6.



eventually chose the latter, because it did not demand users to completely toss over the familiar legacy system, and it enabled each court to customize according to their separate procedural and administrative needs.<sup>65</sup> In 2012, after several years of developments, the completed NextGen became operational with the new functions of calendar, central sign-on, bankruptcy case opening, workspace, judges review packet, appellate attorney docketing, reports/forms, noticing, bankruptcy claims, bankruptcy order processing, district electronic submission system, district court editing, and district court data exchange. These functions primarily focus on chambers and judicial needs, simplifying access and exchange of information among individuals and organizations, and providing better ad-hoc reporting tools, reflecting more than 10,000 requests from users.<sup>66</sup>

33 Despite the improved functions of NextGen, however, the transition to the new system has been slow. Until 2021, more than 50 federal courts had not yet gone live on NextGen,<sup>67</sup> although the COVID-19 outbreak precipitated the change and as of 2022 all federal courts now offer CM/ECF Login through NextGen.<sup>68</sup> What has delayed the move is ironically the excellence of the old system. Firstly, as CurrentGen was so successful, NextGen did not completely replace the legacy system and instead added new functions based on the existing system. Although this enabled the continuous business of the court, the old foundational technology lingered and made the maintenance and repairment of the system difficult.<sup>69</sup> Secondly, configurability and decentralization have been important design considerations in CM/ECF from the beginning in order to support judicial independence and individual court autonomy. That resulted in more than 200 customized versions of CM/ECF created by different local courts on each court's procedural and administrative needs.<sup>70</sup> It made the system extremely complex and caused instability, high maintenance costs and difficulties in system upgrades. One important reason so many courts had been hesitant on NextGen was that the new system might be incompatible with the local modifications.<sup>71</sup> The unclear distribution of responsibilities of the system software among divisions of the AOUSC, various local courts and contractors made the development and implementation of new software even more difficult.<sup>72</sup>

34 A team of experts commissioned by the AOUSC carried out an 11-week Path Analysis on CM/ECF in 2021 and concluded that current CM/ECF including NextGen is not sustainable anymore, and the AOUSC should build a centralized and open-sourced new

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<sup>65</sup> Brinkema and Greenwood (n 60) 5-6.

<sup>66</sup> Ibid 6.

<sup>67</sup> AOUSC (n 1) 3.

<sup>68</sup> For the current status of NextGen, see <https://pacer.uscourts.gov/file-case/court-cmecf-lookup> accessed 2 October 2022.

<sup>69</sup> Eg, the programming language (Perl) used both for CurrentGen and NextGen has fallen out of favour among programmers. AOUSC (n 1) 16-17.

<sup>70</sup> Ibid 18.

<sup>71</sup> Ibid 19-20.

<sup>72</sup> Ibid 20-24.

system with modern technology and architecture. The team presented a six-year roadmap<sup>73</sup> and it is now up to the AOUSC whether and how to reflect these recommendations.<sup>74</sup> The biggest challenge is, whether each court can back down on judicial independence for the stability of the whole system and the efficiency of upgrades.

### 2.3.2.2 Singapore

- 35 Singapore is one of the frontrunners of cyberjustice and can be a good example of successful digital transformation by the initiative of a small, centralized judiciary. It has a centralized judicial system composed of the Supreme Court and the State Courts (previously the Subordinate Courts) with the common law tradition transplanted from England and Wales. It had been suffering from a serious judicial backlog until the early 1990s despite several reform efforts.<sup>75</sup> As its economy rapidly grew, the need for a more efficient and effective judiciary became more urgent. To solve the problem, Singapore's judiciary developed ambitious modernization strategies since the early 1990s<sup>76</sup>, and after decades of constant endeavour, it became one of the most efficient judiciaries in the world.
- 36 One of the key elements of the Judiciary-led reform was the adoption of technology to improve efficiency of case management and access to justice.<sup>77</sup> For the case management, the judiciary used computerized information technology applications for judicial administration, case management, research, user access, financial controls and reporting, and internal and external communications. It added new features on an annual basis to leverage technology to improve the performance of the system.<sup>78</sup> For the e-filing and e-service, it launched the Electronic Filing System (EFS) in 2000. EFS was an integrated e-filing, e-service, e-extraction of court documents and e-information system that enabled a unified paperless procedure.<sup>79</sup> It incentivized lawyers and law firms to register to the system through differentiated charging and mandated all registered users to file documents to EFS by authenticated login using a 'Smartcard' and a matching card reader. For pro se litigants who were not registered, the service bureaux transformed the filed paper documents to PDF files in order for the courts not to maintain parallel processes in both paper and electronic form. It was generally a huge

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<sup>73</sup> Ibid 42.

<sup>74</sup> AOUSC, 'How to get started building a new CM/ECF. Today.' (2022) AOUSC, 18F Team 3 [https://www.uscourts.gov/sites/default/files/18f\\_experiment\\_and\\_iterate\\_supplemental\\_report\\_2022\\_0.pdf](https://www.uscourts.gov/sites/default/files/18f_experiment_and_iterate_supplemental_report_2022_0.pdf) accessed 12 October 2022.

<sup>75</sup> W H Malik, 'Judiciary-Led Reforms in Singapore: Framework, Strategies, and Lessons' (2007) World Bank 14-17 <https://openknowledge.worldbank.org/entities/publication/2dbd6eee-cb73-5487-979d-7e81b29aab6d> accessed 10 October 2022.

<sup>76</sup> Ibid 33-56, 75-82.

<sup>77</sup> Ibid 54.

<sup>78</sup> Ibid 54, 59.

<sup>79</sup> J Walker and G D Watson, 'New Trends in Procedural Law: New Technologies and the Civil Litigation Process' (2008) 31(1) *Hastings International and Comparative Law Review*, 261-262.

success. The new system enabled lawyers and law firms to file 24/7 and manage documents electronically. It worked as a document management and workflow system for the courts, reducing tremendous space, time and effort for handling paper documents.<sup>80</sup>

- 37 Following the phased implementation of EFS, the Supreme Court set up committees to identify problems and demands from various participants.<sup>81</sup> Based on the recommendations from those committees, it developed and implemented the next generation system called 'The Integrated Electronic Litigation System' (eLitigation, or eLit) in 2013. ELit is a holistic web-based system integrating various internal case management applications and EFS. It discarded 'Smartcard' and adopted a more universal access mode called 'SingPass/CorpPass'.<sup>82</sup> It also widened the use of dynamic electronic court forms in place of PDF for many of the court documents by deploying XML. As it unified case, docket and document management in a single system, courts and court users gained more flexibility in managing the schedule and accessibility of documents.<sup>83</sup> The transition to eLit was successful, and it continues to be refined to this day.<sup>84</sup> Currently, all different solutions, from legal information offerings through digital self-information and self-service legal expert systems, case management, and filing systems to video hearing and cybersecurity infrastructure, are integrated into a single system and work together.<sup>85</sup>
- 38 The judiciary of Singapore is not satisfied with the current state and ambitiously studying and adopting new technologies through its own initiative such as the Courts of the Future (COTF) Framework in 2017 or through the Office of Transformation and Innovation.<sup>86</sup> Among its ongoing projects, AI related ones are especially worth noting. They include the assistance of AI in translation and transcription; building and tagging of heavy evidentiary documents; guidance to litigants and assistance to judicial decision-

<sup>80</sup> Tan Boon Heng, 'E-litigation: The Singapore Experience' (2001) Supreme Court, Singapore <https://v1.lawgazette.com.sg/2001-11/Nov01-focus2.htm> accessed 16 October 2022.

<sup>81</sup> EFS Review Implementation Committee, 'Electronic Litigation in Singapore: A Roadmap for the Implementation of Technology in the Litigation Process' (2004) 2 <http://www.sal.org.sg/digitalibrary/Lists/Papers/Attachments/1/Electronic%20Litigation%20Roadmap%20Paper.pdf> accessed 16 October 2022.

<sup>82</sup> 'Singpass' is Singapore residents' national digital identity that bridges access to over 700 government agencies and private sector services <https://www.singpass.gov.sg/main/> accessed 24 October 2022.

<sup>83</sup> Supreme Court of Singapore, 'The Evolving Role of Electronic Case Management Systems – Fourth Judicial Seminar on Commercial Litigation 2013' (2013) <https://www.supremecourt.gov.sg/Data/Editor/Documents/The%20Evolving%20Role%20of%20Electronic%20Case%20Management%20Systems.pdf> accessed 16 October 2021.

<sup>84</sup> A Abdullah, 'Court technology and the latest developments' (Judicial Policy Research Institute Symposium on Ten Years of Electronic Proceedings: Retrospect and Prospect, Seoul, September 2021) 5-6 <https://jpri.scourt.go.kr/post/postView.do?lang=ko&menuSeq=12&boardSeq=8&search=&searchName=&researchYears=&curPage=10&pageNum=1&seq=1377> accessed 7 November 2022.

<sup>85</sup> D Hartung et al, 'The Future of Digital Justice' (2022) Boston Consulting Group • Bucerius Law School • Legal Tech Association, 11-12 [https://legaltechcenter.de/pdf/Hartung%20et%20al%20\(2022\)%20Digital%20Justice.pdf](https://legaltechcenter.de/pdf/Hartung%20et%20al%20(2022)%20Digital%20Justice.pdf) accessed 8 November 2022.

<sup>86</sup> Abdullah (n 84) 6.

making. AI translation and transcription have been adopted early,<sup>87</sup> and now Generative AI, with the collaboration of American start-up Harvey AI, can potentially guide parties in small claims cases in filing their case, drafting documents, and collating evidence.<sup>88</sup> For judicial assistance, the goal is to identify parallel cases based on facts, specify points made in previous appeals, analyse weaknesses in the present case and eventually collate all of the above matters and get ready for a Judge to integrate into a written judgment or opinion.<sup>89</sup> These projects are led by the judiciary with the cooperation of various stakeholders including the Government Technology Agency, the Ministry of Law, the Attorney-General's Chambers, the Law Society, and the Singapore Academy of Law (SAL).<sup>90</sup>

### 2.3.2.3 South Korea

- 39 South Korea is a civil law jurisdiction with a highly centralized court system where the power of judicial administration and exercise of budget is concentrated in the National Court Administration (NCA) under the Supreme Court. Its digital transformation projects therefore have been conducted and enforced by the NCA top-down. The South Korean judiciary first adopted the internal electronic CMS in late 1990s. As soon as the internal digitization of CMS was complete, the judiciary began to develop an independent platform for the e-filing and e-service and deployed them from 2011 to 2015 with the enactment of necessary legislation. The judiciary's own platform satisfied judges' and court officials' procedural needs comprehensively and allowed the secured access of users and timely addition of new functions. As of 2023, almost 99 percent of all civil cases are filed and managed electronically with a centralized e-filing system and accessible to participants of proceedings. For e-filed cases, service of process except for the one to initiate proceedings is conducted through e-service by electronically notifying the opposing party on the filing of new documents. The system is also connected to various outside systems such as the central post office for the service of paper documents or the banking systems for the payment of filing fees. Users including judges and attorneys are now quite accustomed to the system.<sup>91</sup>
- 40 Still, the early adoption and wide acceptance of cyberjustice has also created problems. As the system has been modified and supplemented for decades without a fundamental change, then cutting-edge technology at the time of the first deployment has become outdated. As subsystems (as many 93 subsystems as of 2019 for the civil proceedings

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<sup>87</sup> L Tang, 'Real-time AI transcribing system, co-working space to be rolled out at new State Courts towers' (2019) *Today* (Singapore, 8 March 2019); Yip Wai Yee, 'Parliament: New AI-powered translation engine aims to raise local translation standards' (2020) *The Straits Times*.

<sup>88</sup> R Chia, 'Generative AI in court? How technology can help enhance access to justice' (2024) *The Straits Times* <https://www.straitstimes.com/singapore/generative-ai-in-court-how-technology-can-help-enhance-access-to-justice?close=true> accessed 14 June 2024.

<sup>89</sup> Abdullah (n 84) 22.

<sup>90</sup> *Ibid* 6-7.

<sup>91</sup> Han (n 1) 2.

only) have been added to the main CMS whenever the need arose, the complexity and the interdependence of systems makes the CMS less stable and hinders the adoption of new technologies such as cloud computing and web-based interoperable system.<sup>92</sup> The current system does not satisfy the users' demands of managing and processing judicial data. The file size of each document is currently limited to 50 MB, but files with photographs and graphics easily exceed such limit.<sup>93</sup>

- 41 The NCA thus has launched a project entitled 'Next-generation E-court Masterplan' to: 1) revolutionize the management of the judicial data and adopt a more open and transparent data policy; 2) improve the public service with a more intelligent and user-friendly interface; 3) improve the judicial support system and CMS by establishing an intelligent court management platform and by simplifying too complex subsystems; and 4) restructure the entire court IT system by adopting a cloud-based architecture thus enabling big-data analyses.<sup>94</sup> However, it took five years only to make the masterplan itself from 2015 to 2019, and it will require an additional five years (2019-2024) to implement the plan in all courts.<sup>95</sup> A recent nationwide system breakdown of the e-filing system, which was caused during a massive file transmission upon establishing two new bankruptcy courts, clearly shows the urgency of the transformation.<sup>96</sup>

#### 2.3.2.4 Germany

- 42 Germany can be an example that the federal judicial system and the judiciary's caution about or even reluctance to all out digitization has hindered the implementation of digital technologies to the judiciary, despite its top-notch technological infrastructure and vigorous private legal tech market.
- 43 According to a study by CEPEJ in 2016 on the use of IT in European courts mainly based on each country's own answers, Germany was positioned as one of the three countries of the Council of Europe member states that belonged to the top phase (which means, almost completed development) in equipment, legal framework and governance of IT in the judiciary (the other two are Austria and Czech Republic).<sup>97</sup> According to Germany's answer, it has deployed tools for the direct assistance to judges and court staff, the administration of the courts and case management, and statistics system for the whole

<sup>92</sup> NCA, 'Request for Proposal for the Next-generation E-court System' (2020) (in Korean) 30.

<sup>93</sup> NCA Next-generation E-court Development Team, 'Introduction to the Next-generation E-court system Project, High Courts Conference' (2019) (in Korean) 3.

<sup>94</sup> NCA (n 93) 10.

<sup>95</sup> NCA (n 93) 4-5.

<sup>96</sup> Y Lee, 'Delayed reorganization of court electronic system... Head of National Court Administration apologizes to the public' Lawtimes 4 March 2023 (in Korean) <https://www.lawtimes.co.kr/Legal-News/Legal-News-View?serial=185780&kind=AA&key=> accessed 5 March 2023.

<sup>97</sup> CEPEJ, 'Thematic report: Use of information technology in European courts' (2016) Council of Europe, 100 <https://rm.coe.int/european-judicial-systems-efficiency-and-quality-of-justice-cepej-stud/1680788229> accessed 8 November 2022.

country covering all stages of actions.<sup>98</sup> It has both a generally used secured e-mail system called 'de-Mail'<sup>99</sup> and a professional communication system between lawyers and courts called 'besonderes elektronisches Anwaltspostfach (beA)'. German Legislator has also taken necessary steps to take the ongoing process of digitation into account. In as early as 2001 the legal ground for e-submission of documents was made by the amendment of Art 130a (1) Zivilprozessordnung (ZPO) by 'Gesetz zur Anpassung der Formvorschriften des Privatrechts und anderer Vorschriften an den modernen Rechtsgeschäftsverkehr.' In 2002, remote hearing was adopted by the amendment of Art 128a (1) ZPO (although it had been dormant for quite some time until the COVID-19 pandemic). In 2005, a legal basis for the electronic court file was established in Art. 298a (1) ZPO. On January 1st, 2018, the 'passive usage obligation' of electronic communications for lawyers came into effect. As of 1 January 2022, the electronic service of documents became mandatory for lawyers, state authorities and public legal entities by the amendment of Art 173 ZPO.

- 44 Despite this nominal high rating, Germany has been slow in actually implementing digital technologies in civil proceedings. For instance, in 2017, only 3% of all civil claims have been submitted before Berlin courts in electronic form. Proceedings have been, in the majority of cases, conducted in the same manner as 20 or 30 years ago.<sup>100</sup> Its CMS was developed over 20 years ago and has not been equipped with electronic storage system that enables full e-filing and electronic management of judicial documents.<sup>101</sup> BeA, run by Bundesrechtsanwaltskammer (the Federal Bar Association of Germany), has been notorious for its defects and insecurity. A joint research conducted by the Boston Consulting Group, Bucerius Law School and Legal Tech Association Germany also gave a harsh evaluation of the state of cyberjustice in Germany. According to the research, technology solutions used in German courts were outdated and inconsistent across individual provinces, courts and subject matter jurisdictions. The level of digitization was lagging 10–15 years behind leading countries. Especially insufficient were hardware and software, as well as budget concerns and an overall perceived incapacity of public institutions.<sup>102</sup>
- 45 The research pointed out several factors as main reasons: the lack of technological capacity of personnel; fear on technology in general and more specifically on collecting, handling and possibly abusing citizens' data; and previous failures of technology projects.<sup>103</sup> Still, many interested parties including the Ministry of Justice, and working groups within the judiciary and private sectors feel the urgency of digitization, especially after the COVID-19 pandemic. Participants of the judicial process are inevitably taking necessary steps, with the entry into force of 'Gesetz zur Einführung der elektronischen

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<sup>98</sup> CEPEJ (n 97) 24.

<sup>99</sup> For the details of De-Mail, see 'De-Mail-Gesetz' (De-Mail Act).

<sup>100</sup> B Laukemann, 'Alternative Dispute Resolution and Artificial Intelligence' (2024) CPLJ pt IX ch 5.

<sup>101</sup> Hartung et al (n 85) 10.

<sup>102</sup> Hartung et al (n 85) 9.

<sup>103</sup> Hartung et al (n 85) 9.



Akte in der Justiz und zur weiteren Förderung des elektronischen Rechtsverkehrs' <sup>104</sup> ('Act on the Introduction of the Electronic File in the Judiciary and on the Further Promotion of Electronic Legal Transactions') that obligates digitization of all court documents from 1 January 2026.

### 2.3.3 Analysis

- 46 The above four examples show the different paths each judiciary has taken according to their size, structure, culture and the authority's initiative toward the digital transformation. The case of Singapore is exemplary in many ways. It has adopted IT solutions most comprehensively, thus improving accessibility and efficiency of justice considerably. It adopted the mandatory e-filing very early and then smoothly moved to a web-based, more universal system. It is now actively developing AI solutions. The key to its success is obvious: the relatively small size of the judiciary and its centralized structure; a highly developed national IT infrastructure and digital-friendly culture; the urgency of digitization and the judiciary's strong initiative for the continuous reformation; the cooperation with the government; and proper incentives for lawyers and thoughtful backup solutions for pro se litigants.
- 47 These factors cannot be easily replicated, though. In the case of the United States, the large size of the judiciary, federalism, and the autonomy of individual courts have delayed the transition to a new system. In South Korea's case, despite the centralized judicial administration with a strong will for digitization, the early success based on the legacy technology and complex additions of subsystems that fulfilled the immediate necessities of the judiciary has hindered the adoption of a web-based, more interoperable system. Germany is an example of a judicial culture that prefers caution and tradition has deterred digitization.
- 48 These examples are not unique. Strong parallels can be drawn with other judiciaries in similar circumstances: eg, between the US, Canada, and Australia (common law countries with Federal legal system and decentralized cyberjustice structure); South Korea, Portugal, and Austria <sup>105</sup> (civil law countries with an advanced level of

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<sup>104</sup> *Gesetz zur Einführung der elektronischen Akte in der Justiz und zur weiteren Förderung des elektronischen Rechtsverkehrs* 2018 (Germany) p 2208.

<sup>105</sup> Austria has one of the most advanced e-filing and e-service systems since it set up the *Elektronischer Rechtsverkehr der Justiz* (ERV, 'the Electronic Legal Communications of the Judiciary') in 1990. Currently ERV allows two channels of e-filing. One is for legal professionals and certain group of companies and institutions, where e-filing and electronic communications are conducted mandatorily via the Transmitting Agency. For others, e-filing via 'ERV für alle' ('ERV for all') is provided, where laypersons can upload documents for a case using the e-signature function of the citizen card free of charge but cannot communicate electronically. For more information, see the ERV webpage [https://www.oesterreich.gv.at/themen/egovernment/moderne\\_verwaltung/elektronischer\\_rechtsverkehr\\_erv.html](https://www.oesterreich.gv.at/themen/egovernment/moderne_verwaltung/elektronischer_rechtsverkehr_erv.html) accessed 1 March 2023.



cyberjustice); Singapore, Estonia<sup>106</sup> (smaller sized jurisdictions with a strong digital drive by both the government and the judiciary and the top level of cyberjustice); and Germany, Japan (civil law jurisdictions with a cautious attitude toward cyberjustice).<sup>107</sup> We can see that a centralized judiciary, a small population, a strong top-down drive, an urgency of change, people's general ITC-friendliness and the governmental support usually help the success of cyberjustice. On the other hand, it is observed that the existence of already well-functioning judicial system, whether it is based on paper or on legacy IT technologies, generally delays further transformations, as the impetus for change is weak in such cases.

- 49 We also cannot overgeneralize the roles various factors are playing in different circumstances in the real world. A factor that helps the digital transformation can later hinder further change, and vice versa. For example, although individual courts' autonomy usually delays the digitization, it demonstrated its merits when each US court swiftly moved to adopt a range of technological tools to keep their court systems available to the public during the COVID-19 outbreak.<sup>108</sup> The federal structure may also be helpful, if one state or province can be a testbed for others, as we can see in the example of British Columbia of Canada,<sup>109</sup> especially their Civil Resolution Tribunal (CRT).<sup>110</sup> Although common law jurisdictions are generally more open to the disclosure of judicial data, whether a judiciary belongs to the common law or the civil law tradition does not decide the level of cyberjustice in itself, as we can find exemplary cases both in common law jurisdictions such as Singapore, Canada and Australia<sup>111</sup> and in civil law jurisdictions such as South Korea, Austria<sup>112</sup> and Portugal<sup>113</sup>. A strong drive by the central government or the central judicial administration is one of the most important factors

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<sup>106</sup> Estonia is in many ways similar with Singapore in their small size, emphasis on e-government, and constant digital transformation. Since its first launch of a rather simple court information system (KOLA) in 2002, Estonia has constantly transformed digital justice system to KIS (1st generation complex court information, case management and electronic communication system launched) in 2006, KIS2 (a second-generation court information system launched) in 2013-2014, the Public e-Portal (web-based e-filing system) in 2015, and recently AI. [https://www.rik.ee/sites/www.rik.ee/files/elfinder/article\\_files/RIK\\_e\\_Court\\_Information\\_System%2B3mm\\_bleed.pdf](https://www.rik.ee/sites/www.rik.ee/files/elfinder/article_files/RIK_e_Court_Information_System%2B3mm_bleed.pdf) accessed 24 November 2022.

<sup>107</sup> Japan is another example of delayed digitization. Despite their cutting-edge technology, Japan has not adopted e-filing and e-service due to the traditional preference for papers. Recently, however, 'the Amendment of the Civil Procedure Act to implement e-filing and e-service and other digital elements' (民事訴訟法（IT化関係）等の改正に関する法律) has passed on 18 May 2022 and will enter into force by 2026.

<sup>108</sup> M Thompson et al, 'How Courts Embraced Technology, Met the Pandemic Challenge, and Revolutionized Their Operations' (2021) Pew Charitable Trusts 1 <https://www.pewtrusts.org/en/research-and-analysis/reports/2021/12/how-courts-embraced-technology-met-the-pandemic-challenge-and-revolutionized-their-operations> accessed 18 November 2022.

<sup>109</sup> Attorney General of British Columbia, 'Court Digital Transformation Strategy 2019-23' (2019) [https://www2.gov.bc.ca/assets/gov/law-crime-and-justice/about-bc-justice-system/justice-reform-initiatives/digital-transformation-strategy-bc-courts\\_2019-23.pdf](https://www2.gov.bc.ca/assets/gov/law-crime-and-justice/about-bc-justice-system/justice-reform-initiatives/digital-transformation-strategy-bc-courts_2019-23.pdf) accessed 20 November 2022.

<sup>110</sup> Civil Resolution Tribunal <https://civilresolutionbc.ca/> accessed 20 November 2022.

<sup>111</sup> For the introduction of e-filing system of the Federal Court of Australia, see <https://www.fedcourt.gov.au/online-services/elodgment> accessed 22 November 2022.

<sup>112</sup> Hartung et al (n 85) 9.

<sup>113</sup> Cordella and Contini (n 12) 48-52.

of the successful cyberjustice, but without enough efforts to form a consensus among interest groups through a democratic process, hastily adopted new technologies might cause risks to procedural fairness, as can be observed from China's full pledged 'smart court' implementation.<sup>114</sup>

- 50 As we can see in the above examples, transitions are tricky. When a system is upgraded in a large scale, it can occasionally result in a system breakdown, as Portugal's CITIUS electronic case management system did in 2014.<sup>115</sup> Procrastination of upgrades, on the other hand, makes the transition harder, as we can see from the example of NextGen of the US federal courts. Any judiciary that has thus far been successful may run into problems when it enters the next phase. Ambitious plans might be eventually frustrated, as can be seen from the Dutch courts when they planned to go completely digital in three years but abandoned the plans in 2018.<sup>116</sup>
- 51 The Failure of court IT projects is usually due to an underestimation of complexity. Different procedures (eg, claims and requests procedures in civil justice) demand different software. Amendments of laws require changes of corresponding digital systems. Actual budgets might far exceed the estimate if the implementation plan is delayed. In many cases expected costs do not reflect the expenses needed to change the organization and the users.<sup>117</sup>
- 52 Considering all the difficulties presented above, the digital transformation should be conducted with careful plans and proper long-term and short-term goals. On this subject, CEPEJ adopted 'Guidelines on how to drive change towards Cyberjustice' in 2016<sup>118</sup> and drew up a 'Toolkit for supporting the implementation of the Guidelines' in 2019<sup>119</sup>. The Guidelines give seven principles. Omitting too technological details, they can be summarized as follows: Improving the quality of justice should be the driving factor behind the deployment of cyberjustice; the needs of the judiciary should be at the centre of change and IT should not be an end but a means; the development and deployment of new tools should be user-centric involving all stakeholders; and resource allocation and budget management are crucial to achieving the goal.<sup>120</sup> The Toolkit gives more practical advice on designing and managing an IT strategy in a justice system and on building a case management system that serves the users,<sup>121</sup> especially with its checklist

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<sup>114</sup> C Shi, T Sourdin and B Li, 'The Smart Court – A New Pathway to Justice in China?' (2021) 12(1) *International Journal for Court Administration* 4.

<sup>115</sup> Cordella and Contini (n 12) 48-52.

<sup>116</sup> D Reiling, 'Court Information Technology: Hypes, Hopes and Dreams' in X Kramer et al (ed), *New Pathways to Civil Justice in Europe* (Springer, 2021) 43, 44.

<sup>117</sup> *Ibid*, 55-56.

<sup>118</sup> CEPEJ (n 15).

<sup>119</sup> CEPEJ (n 4).

<sup>120</sup> CEPEJ (n 15) para 71-121.

<sup>121</sup> CEPEJ (n 4) 10-34.

on the different steps and actions to be taken when designing, developing and implementing an IT project within a justice system.<sup>122</sup>

### 3 E-FILING AND E-SERVICE

#### 3.1 Overview

- 53 E-filing and e-service substitute in-person submissions and notifications in the judicial proceedings. As they are legal actions, they have direct legal effects on the procedure and outcome of the case, unlike informal communications between lawyers and judges or simple guidance provided to the general public. Therefore, fundamental judicial values such as the rule of law, independence of the judiciary, fair trial, non-discrimination and access to an effective judicial remedy, which have been emphasized in CEPEJ's 'Guidelines on electronic court filing (e-filing) and digitalisation of courts'<sup>123</sup>, should be at the centre of implementing e-filing and e-service.
- 54 In the most advanced form of cyberjustice, all submissions by the parties, orders and decisions issued by the court and their service would be unified to a single global e-litigation platform. In this ideal platform, everyone, whether they are legal professionals or pro se litigants, whether they are legal entities or natural persons, whether they are nationals of the jurisdiction or foreigners, would have a secured access to the system. Anyone who would like to make submissions to the court would be obligated to use e-filing. As soon as files are uploaded to the platform, an electronic notification is automatically sent to the other party, and its delivery will have an effect of valid service of process. All the electronic documents stored in a secure cloud storage would be accessible via interoperable methods to the parties, judges and interested persons. They would be electronically searchable and processible, thus reducing the workload of parties and judges.
- 55 E-filing and e-service should be discussed and designed together as a 'one-stop shop' and cannot be separated from a larger electronic judicial ecosystem.<sup>124</sup> More and more judiciaries, common law and civil law alike, are adopting the electronic litigation platform where e-filing and e-service are unified, and the service of documents is substituted with the notification of new uploads on the central platform. We can find such examples in ERV of Austria,<sup>125</sup> ECF of the United States Federal Courts, eLodgment of Australia,<sup>126</sup> eLitigation of Singapore, LexNet of Spain, Electronic Case Filing System ('ECFS') of South Korea,<sup>127</sup> or many others where e-submissions and e-notifications are

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<sup>122</sup> Ibid 35-44.

<sup>123</sup> CEPEJ (n 14).

<sup>124</sup> CEPEJ (n 124) para 45.

<sup>125</sup> See fn 105.

<sup>126</sup> Federal Court of Australia, 'eLodgment' <https://www.fedcourt.gov.au/online-services/elodgment> accessed 1 March 2023.

<sup>127</sup> Han (n 1) 3.

completely or at least partially combined. The recent launch of the CMS of the Unified Patent Court shows how the complete paperless proceedings with e-filing and e-service through the online platform from the beginning to the end can achieve efficiency and speed.<sup>128</sup>

- 56 The establishment of e-filing and e-service should overcome numerous challenges. First, in designing and implementing the e-filing and e-service system, technological, budgetary and administrative issues should be specified clearly and handled with resolution and resilience. This has already been discussed in section 2. Second, e-filing and e-service require legal foundations that outline the prerequisites for their identification, verification, and proper completion. Third, a suitable level of e-filing and e-service should be carefully designed, taking into account the level of digital literacy of legal professionals and laypersons as well as the ITC environment of the jurisdiction. This includes deciding whether e-filing and e-service should be permitted to only legal professionals, obligated to legal professionals and allowed to laypersons, or obligated to all, and in particular whether the service that initiates proceedings can be conducted electronically. If some people are excluded or exempted from using e-filing and e-service, they should also be guaranteed the same level of access to justice. Finally, the efficiency and economy achieved by e-filing and e-service is greatest in cross-border litigations and therefore, it is essential to make a legal and technological system that can harmonize different electronic documents and e-communications among various jurisdictions and allow free flow of digital documents in the legal proceedings with international nature.

### 3.2 Legal Basis for E-filing and E-service

- 57 In order for e-filing and e-service to be treated equally as paper filing and ordinary service in civil proceedings, there needs to be a legal basis that gives them the same legal effects. This legislative foundation may take the form of an amendment to the Code of Civil Procedure (sometimes procedural regulations) or a special act, or regulation on the digitization of civil proceedings, or a general law that gives electronic documents and their electronic transmission equivalent effects as paper documents and their in-person delivery.
- 58 CEPEJ recommended a stand-alone legislation for e-justice.<sup>129</sup> The merits of this separate law are obvious. As stand-alone legislation is usually accompanied by a long-term roadmap for cyberjustice, it includes the various technological and administrative considerations needed to fully implement judicial digitization. It is much easier to amend these special laws or regulations on cyberjustice than to amend the Civil Procedure Code, so it is possible to respond more quickly to changes in the digital environment surrounding the judiciary. We can find such examples in the 'Act on the Use of Electronic

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<sup>128</sup> 'Case Management System of the Unified Patent Court' <https://cms.unified-patent-court.org/> accessed 5 September 2024.

<sup>129</sup> CEPEJ (n 124) para 7.

Documents in Civil Litigations 2009 (E-documents Act)' of South Korea.<sup>130</sup> It may also take the form of rather brief provisions in the Civil Procedure Code and more detailed regulations specializing in e-filing and e-service, eg, Royal Decrees on LexNET of Spain,<sup>131</sup> 'Verordnung der Bundesministerin für Justiz über den elektronischen Rechtsverkehr' of Austria and 'Regulation on Electronic Communication with the Courts 2016' of Norway.<sup>132</sup> England and Wales have also made Practice Directions under the legislative ground of Civil Procedure Rules 5.5 to deploy new cyberjustice schemes such as 'Practice Direction 51O - Electronic Working Pilot Scheme' or 'Practice Direction 51R - Online Civil Money Claims Pilot,' which would facilitate the revision or extension of rules and add agility.

- 59 Nevertheless, separate laws may lead to fragmentation and procedural complexity when cyberjustice enters a more ripe stage. Taking South Korea as an example, the proportion of civil cases that have applied the E-documents Act has risen to around 99% as of 2023, which means electronic document submission, electronic delivery and examination of electronic evidence stipulated in the E-documents Act have become the standard for civil litigation. Still, the Civil Procedure Act contains more detailed provisions than the E-document Act and the two acts contradict each other in some situations, especially on the taking and examination of electronic evidence. Due to this legal ambiguity, lawyers and judges in South Korea have been slow to maximize the potential of electronic evidence, ie, their searchability and processability, and until now the majority of electronic evidence is not fully machine-readable and cannot be processed automatically. For that reason, the Supreme Court of Korea is currently working on the amendment of the Civil Procedure Act to fully incorporate the E-document Act.<sup>133</sup>
- 60 In many jurisdictions provisions on submission or service by electronic means were enacted rather early and preceded the electronic judicial platform. Eg, Spain added a provision on e-service in the Civil Procedure Code in 2000 under the prerequisites that courts and the parties or the addresses have the means to ensure the authenticity of the communication, its content and the exact time of the receipt.<sup>134</sup> Belgium also added a provision on e-service in its Civil Code in 2000.<sup>135</sup> Germany made a legal ground for the

<sup>130</sup> Law No 17354 (entered into force on 24 March 2010).

<sup>131</sup> 'Real Decreto 84/2007, de 26 de enero, sobre implantación en la Administración de Justicia del sistema informático de telecomunicaciones Lexnet para la presentación de escritos y documentos, el traslado de copias y la realización de actos de comunicación procesal por medios telemáticos' and 'Real Decreto 1065/2015, de 27 de noviembre, sobre comunicaciones electrónicas en la Administración de Justicia en el ámbito territorial del Ministerio de Justicia y por el que se regula el sistema LexNET'.

<sup>132</sup> *Forskrift 28. oktober 2016 nr. 1258 om elektronisk kommunikasjon med domstolene* (Regulation 28 October 2016 No 1258 on Electronic Communication with the Courts).

<sup>133</sup> C Chun et al, '10 Years of Civil Electronic Litigation: Achievements and Prospects — Focusing on Civil Lawsuits —' (2022) Judicial Policy Research Institute of the Supreme Court of Korea, 158-161 (in Korean).

<sup>134</sup> Spain, LAW 1/2000, of 7 January, on Civil Procedure (*Ley 1/2000, de 7 de enero, de Enjuiciamiento Civil*) Art 126.

<sup>135</sup> Loi du 20-10-2000 Publie le 22-12-2000 (Art Modifie: 2281) Abrogé par L 2022-04-28/25, art. 62, 2020; En vigueur : 01-01-2023.

submission of electronic files<sup>136</sup> and service by electronic means<sup>137</sup> as early as 2001, at least nominally. Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Macedonia, Romania, Slovakia, the United States, Canada, Australia, New Zealand, etc. also have added e-service or e-submission provisions in their Civil Procedure Codes or Civil Procedure Rules. These provisions, even after a unified e-filing and e-service platform has been established, offer alternative or additional methods of e-service or e-submission for parties who are unable or unwilling to use the platform and, in jurisdictions that do not have such a platform, provide a possible electronic communication channel.

- 61 Most jurisdictions require the consent of the recipient for e-service. The consent may be given expressly by registering to the e-filing and e-service platform or by specifying the methods of e-communications to the court or implicitly by adding an e-mail address to the submitting documents (as in England and Wales).<sup>138</sup> As it is impossible for a defendant to give prior consent to the initiating service in most cases, and as this service has special legal effects, initiating service is generally excluded from e-service. Still, some jurisdictions such as Turkey<sup>139</sup>, Estonia<sup>140</sup>, Spain<sup>141</sup> and South Korea<sup>142</sup> require a certain group of recipients (government entities, public institutions, etc) to be served documents electronically, even including the initiating documents. In some common law jurisdictions such as several courts of Australia<sup>143</sup>, New Zealand<sup>144</sup>, certain courts of Canada<sup>145</sup> and the United States for service to a defendant abroad,<sup>146</sup> the substituted or

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<sup>136</sup> Civil Procedure Code (*Zivilprozessordnung*) 2001 Art 130a through *Gesetz zur Anpassung der Formvorschriften des Privatrechts und anderer Vorschriften an den modernen Rechtsgeschäftsverkehr* (Act on the Adaptation of the Formal Requirements of Private Law and Other Provisions to Modern Legal Transactions) 2001.

<sup>137</sup> *Zustellungsreformgesetz* (reform act on service of documents) 2001 Art 174.

<sup>138</sup> The Law Library of Congress, Global Legal Research Directorate, 'Service of Process' (2020) 2-3 <https://tile.loc.gov/storage-services/service/ll/llgldr/2020720028/2020720028.pdf> accessed 1 March 2023.

<sup>139</sup> The Law Library of Congress (n 138) 118-119.

<sup>140</sup> Estonian Courts, 'The Public e-file Questions and Answers' [https://www.kohus.ee/sites/default/files/tekstidokumendid/the\\_public\\_e-file\\_questions\\_and\\_answers.pdf](https://www.kohus.ee/sites/default/files/tekstidokumendid/the_public_e-file_questions_and_answers.pdf) accessed 1 March 2023.

<sup>141</sup> Spain, LAW 1/2000, of 7 January, on Civil Procedure (*Ley 1/2000, de 7 de enero, de Enjuiciamiento Civil*) Art 273, recently amended (December 2023), establishing the duty of legal persons and entities to engage exclusively in electronic communication with the administration of justice.

<sup>142</sup> Republic of Korea, Rule on the Use of Electronic Documents in Civil Proceedings 2011 Art 25.

<sup>143</sup> The Law Library of Congress (n 138) 12-15.

<sup>144</sup> *Ibid* 94-96.

<sup>145</sup> *Ibid* 32-36.

<sup>146</sup> FRCP Art 4(f)(3) of US; *Rio Properties, Inc. v Rio Int'l Interlink*, No 01-15466, 01-15784 (Court of Appeals — Ninth Circuit, US) Judgment 20 March 2002 [284 F.3d 1007 (9th Cir. 2002)]; *Williams-Sonoma, Inc. v Friendfinder, Inc., et al*, No C06-06572 (District Court, Northern District of California; US) Judgment 17 April 2007 [2007 WL 1140639 (N. D. Cal. 2007)]; *FTC v Pecon Software Ltd.*, No 12-cv-7186 (Federal Court, Southern District of New York, US) Judgment 7 August 2013 [2013 WL 4016272 (S.D.N.Y. 2013)], etc. In the meanwhile, US courts are less positive on e-service of initiating documents to a defendant resident in the United States. Eg, *Joe Hand Promotions, Inc. v Shepard*, 2:2022cv00151 (District Court, Eastern District of Pennsylvania, US) Judgment 13 January 2022 [2013 WL 4058745 (E.D. Mo. 2013)].



alternate service of originating documents by email or other electronic methods may be permitted by the court, if documents sent to a specified email address will come to the attention of the intended recipient or their legal representative and they have been received in a readable form by the intended recipient.<sup>147</sup>

- 62 In multiple jurisdictions, the identification of the sender and the receiver, security of communication, authenticity of the exchanged or submitted documents and the proof of the exact moment of the transmission are also required for the service to be legally effective.<sup>148</sup> Most of these problems can be solved through a centralized platform of e-filing and e-service as explained above.<sup>149</sup> When there is no such platform, professional communication networks with special device for identification, such as ‘Réseau privé virtuel des avocats’ (RPVJ, ‘the Virtual Private Network for Lawyers’) of France or BeA of Germany, can play a significant role by providing secured access to at least legal professionals, which have been the case at the early stage of e-filing in many jurisdictions. For laypersons who cannot have access to the professional network, universal laws and systems on e-signature, e-identification or electronic communications can fulfil the requirements of valid e-service and e-submission. For example, the ‘Regulation on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market’ (‘eIDAS Regulation’) of EU<sup>150</sup> provides the framework for the authentication of documents and qualified electronic registered delivery services across the European Union’s Member States. UNCITRAL Model Law on Electronic Signatures would be another option of a universal e-Signature.<sup>151</sup> ‘De-Mail’ under ‘De-Mail-Gesetz’ provides secure, trustworthy and verifiable electronic communication service in Germany. Singpass operated by the National Certification Authority (NCA) of Singapore provides both the Authentication Certificate and Signing Certificate to the registered users which can be used for accessing eLit, the judicial e-filing and e-service portal.<sup>152</sup>
- 63 There have been efforts to harmonize and facilitate e-filing and e-service at the regional level. The European Law Institute (ELI) and UNIDROIT published ‘Model European Rules

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<sup>147</sup> G Middleton, ‘You’ve Been Served! Substituted Service of Process Online in Australia’ (2016) 132 Precedent 48, <https://perma.cc/SZ6S-H4SA> accessed 30 June 2023; H Tieu, ‘Australia: Substituted Service of Legal Documents Via Facebook: “Like” or “Unlike” by Australian Courts’ (2013) *Mondaq* (Jan. 14, 2013) <https://perma.cc/V6D4-CTWF> accessed 30 June 2023.

<sup>148</sup> Eg, Germany, ZPO, Art. 174; and France, Code de procédure civile, arts.748-6.

<sup>149</sup> As a platform focusing on e-service, see ‘réseau privé sécurisé huissiers’ (RPSH, ‘private bailiffs secure network’) and its platform ‘e-huissier’ adopted by Arrêté du 28 août 2012 portant application des dispositions du titre XXI du livre Ier du code de procédure civile aux huissiers de justice (JORF n°0202 du 31 août 2012).

<sup>150</sup> Regulation on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC, 910/2014 of 23 July 2014 (EU), 73–114.

<sup>151</sup> UNCITRAL Model Law on Electronic Signatures with Guide to Enactment 2001 <https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/ml-elecsig-e.pdf> accessed 10 July 2023.

<sup>152</sup> See <https://www.singpass.gov.sg/main/national-certification-authority/> accessed 1 March 2023.



of Civil Procedure' in 2021 as a result of seven-year efforts.<sup>153</sup> Rule 74 (b) and (c) of the Model Rules include i) service via a designated electronic information system where the addressee has a legal obligation to register with that system (Rule 74 (b)) and ii) service by other electronic means upon the addressee's prior consent or legally obligated registration to an e-mail address for the purpose of service (Rule 74 (c)) as valid methods of service guaranteeing receipt.<sup>154</sup> The above rules allow flexibility by encompassing both consent-based and mandatory electronic methods, and will have significant influence internationally as well as EU wide.

### 3.3 Subjective Scope of E-filing and E-service

- 64 The subjective scope of e-filing and e-service can be varied according to each judiciary's unique situation. There are as many different systems as the numbers of the jurisdiction that have adopted it. There can be several options: a) permitting e-filing to a certain designated group (lawyers, legal persons, designated institutions, etc.) but prohibiting it to others; b) mandating it to a certain group but prohibiting it to others; and c) mandating it to a certain group and permitting it to others. No jurisdiction has yet mandated all individuals to register to the e-filing system so far, as it might violate people's fundamental right to a fair trial. The Judicial Review and Court Act 2022 of the United Kingdom also emphasizes the same point by stipulating in Art 19 (6) that

Online Procedure Rules must also provide that, if the person is not legally represented, the person may instead choose to [initiate, conduct or progress proceedings, or to participate in proceedings] by non-electronic means.

- 65 Who may or should use the e-filing system varies significantly across different jurisdictions. Typically, legal professionals representing parties are the primary group required or permitted to register for and utilize these systems. In some judiciaries, they remain the sole users granted access to e-filing. In others, while these professionals are obligated to use e-filing, others may also do so, either fully or partially, on a voluntary basis. For example, in Singapore, the eLitigation platform, which facilitates e-filing and e-service, is exclusively available to registered law firms and certain government agencies. Self-represented litigants, whether they are individual or legal entities, must submit their documents in person at the Service Bureau. The Bureau then converts these paper documents into electronic format and uploads them to the eLitigation system.<sup>155</sup> In the United States, the 2018 amendment to Federal Rule of Civil Procedure 5(b)(3) mandates e-filing for individuals represented by attorneys, while the decision to allow

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<sup>153</sup> ELI-UNIDROIT, 'Model European Rules of Civil Procedure - from Transnational Principles to European Rules of Civil Procedure' (2021) <https://www.unidroit.org/english/principles/civilprocedure/eli-unidroit-rules/200925-eli-unidroit-rules-e.pdf> accessed 1 March 2023.

<sup>154</sup> ELI-UNIDROIT (n 153) 181-184.

<sup>155</sup> See [https://www.elitigation.sg/\\_layouts/IELS/HomePage/Pages/SubscriptionAndForms.aspx](https://www.elitigation.sg/_layouts/IELS/HomePage/Pages/SubscriptionAndForms.aspx) accessed 1 March 2023.

unrepresented individuals to use e-filing is left to local rules or court orders.<sup>156</sup> Similarly, the United Kingdom's Electronic Working Scheme (CE-file) requires e-filing only for legally represented parties.<sup>157</sup> In Spain, for cases involving amounts exceeding 2000 euros, parties must be represented by a *procurador*. A *procurador* is a legal professional responsible for managing communications between the litigant, the court, and the opposing party. These *procuradores* are required to use the Spanish e-filing and e-service system known as LexNet.<sup>158</sup>

- 66 There exist other variations. In ERV system of Austria, notaries, credit and financial institutions, Austrian insurance companies, social security bodies, pension institutions, the Construction Workers' Leave and Severance Pay Fund, the Pharmaceutical Salary Fund, the Insolvency Compensation Fund, IEF-Service GmbH, the umbrella organization for social security bodies, the office of the Lawyer and Legal Advisor to the Republic of Austria, etc as well as lawyers are required to file and communicate electronically via ERV, while all other citizens have access to submission-only 'ERV für alle' service.<sup>159</sup> In South Korea, the e-filing and e-service system is accessible to everyone on a voluntary basis, regardless of whether they are represented by legal counsel or acting on their own behalf or they are legal entities. In the meanwhile, the national government, local governments, and certain designated government or public institutions are required to register and use this system.<sup>160</sup> Turkey is exceptional. It has an e-service and e-filing system called the National Electronic Service System (UETS) that covers legal notifications and service of documents, including lawsuit petitions initiating process, made in connection with judicial or administrative proceedings taking place before Turkish authorities under the Notifications Law No 7201<sup>161</sup> and the Regulation on Electronic Service of Documents (RESĐ).<sup>162</sup> Electronic filing and service of documents via this UETS, even the service of the originating documents, is mandatory for a very wide range of persons and entities including all legal persons established under private law as well as lawyers and public administrative bodies or institutions.<sup>163</sup> Therefore, if the

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<sup>156</sup> Before the 2018 amendment, FRCP had the legal ground for e-filing but did not obligate the e-filing to lawyers and left it to local rules. The new rule reflects most local rules that require electronic filing to a person represented by an attorney. Committee Note - 2018 Amendment.

<sup>157</sup> Practice Direction 51O – 'The Electronic Working Pilot Scheme.' Justice on GOV.UK. In this scheme, litigants in person may use the Electronic Working Scheme if they wish, but they do not have to.

<sup>158</sup> F Gascón Inchausti, 'Digital Revolution and Procedural Law: Spain' (2024) CPLJ pt IX ch 4.

<sup>159</sup> Electronic legal transactions (the ERV system) [https://www.oesterreich.gv.at/en/themen/egovernment\\_moderne\\_verwaltung/elektronischer\\_rechtsverkehr\\_erv.html#centres](https://www.oesterreich.gv.at/en/themen/egovernment_moderne_verwaltung/elektronischer_rechtsverkehr_erv.html#centres) accessed 5 March 2023.

<sup>160</sup> Republic of Korea, Regulations on the Use of Electronic Documents in Civil Proceedings 2011 Art 25.

<sup>161</sup> Tebligat Kanunu, Law No 7201, Official Gazette [O.G.] No 10139, Feb 19, 1959, <https://perma.cc/MX8T-L224> (in Turkish). Tebligat Kanununun Uygulanmasına Dair Yönetmelik, O.G. No 28184, Jan. 25, 2012 <https://perma.cc/YGS6-HVLZ> accessed 1 March 2023.

<sup>162</sup> Elektronik Tebligat Yönetmeliği, O.G. No 30617, Dec. 6, 2018 (in Turkish) <https://perma.cc/58ZN-WQN7> accessed 1 March 2023.

<sup>163</sup> The Law Library of Congress (n 138) 113-119.

plaintiff is represented by an attorney and the defendant is a corporation, the judicial proceedings would be entirely paperless.

- 67 In summary, many jurisdictions initially design their e-filing systems to be used exclusively by lawyers. This approach is often chosen because legal professionals can more easily and cost-effectively acquire the necessary devices for secure electronic identification and communication. In some instances, government or public institutions and certain specialized corporations may also be included in this initial phase. If the system proves successful over time, e-filing and e-service may become mandatory for lawyers, as seen in Singapore, the United States' Federal Rules of Civil Procedure, and the United Kingdom's Electronic Working Scheme. Furthermore, if a country has a nationwide electronic identification system in place when launching its e-filing system, self-represented litigants might be allowed to register and use the system from the outset.<sup>164</sup> The scope of e-filing implementation is closely linked to the proportion of individuals who are represented by lawyers. In cases where a significant number of parties represent themselves, maintaining both paper and electronic filing systems can be prohibitively expensive and labour-intensive. To address this, it may be more efficient to include self-represented litigants in the e-filing system or to require legal representation for cases involving amounts above a certain threshold. As the general public becomes more familiar with e-filing platforms, and as long as it is ensured that requiring registration does not infringe upon their procedural rights, the requirement to use e-filing could be progressively expanded. This gradual extension could ultimately lead to entirely paperless proceedings.

### 3.4 Users Outside the E-filing Platform

- 68 When self-represented litigants are either excluded from using the e-filing system or are not required to use it and choose not to, it is crucial to establish an effective process for integrating their paper submissions into the e-filing system. Additionally, it is important to ensure that electronically submitted or generated documents are accessible to those who do not use the platform. In jurisdictions that have implemented e-filing, a common practice is to scan and upload paper submissions from self-represented litigants into the e-filing system. This approach enables the maintenance of a completely paperless case docket. However, the specific details of how this is managed can vary significantly across different jurisdictions.
- 69 Take several examples. According to the Electronic Case Filing Rules & Instructions of The United States District Court Southern District of New York<sup>165</sup>, only attorneys can and

<sup>164</sup> Eg, South Korea already had a national e-identification system called 'Public Certificates' used for online banking when the e-filing system was first implemented, so the system could be designed as for self-represented persons to be included as users by registering to the system with the public certificates.

<sup>165</sup> The United States District Court Southern District of New York, 'Electronic Case Filing Rules & Instructions' (1 November 2022, Edition) 2.1.[https://www.nysd.uscourts.gov/sites/default/files/pdf/ecf\\_rules/ECF%20Rules%2020221101%20FINAL.pdf](https://www.nysd.uscourts.gov/sites/default/files/pdf/ecf_rules/ECF%20Rules%2020221101%20FINAL.pdf) accessed 2 March 2023.

should be the filing user of the ECF system,<sup>166</sup> and service of documents to them is provided by a Notice of Electronic Filing (NEF), which is sent automatically by email from the Court.<sup>167</sup> On the other hand, basically all documents filed by pro se litigants must be filed in the traditional manner, ie, in hardcopy. These paper documents are scanned and docketed by the Clerk's Office into the ECF system (with the temporary COVID-19 exception to the non-users on submission by e-mail as will be reviewed later).<sup>168</sup> The service to the parties who are not registered to the ECF system must also be with a paper copy of any electronically filed document.<sup>169</sup> But if a pro se party consents to be a Receiving User (one who receives notices of court filings by e-mail instead of by regular mail, but who cannot file electronically), she will be served only by NEF and will be permitted one 'free look' at the document through PACER by clicking on the hyperlinked document number in the e-mail.<sup>170</sup>

- 70 In the case of Singapore, the Service Bureau handles the paper filing by persons (legal or natural) other than registered law firms. These persons are required to visit The Service Bureau and submit documents in person. This requirement is enforced to facilitate the verification of the filing party's identity, and therefore, alternative methods such as email, fax, or registered mail submissions are not permitted. The person who visits the Service Bureau for filing can request for electronic service of documents (e-service), and if the intended party to be served is a law firm that is eLitigation subscriber, the Service Bureau will e-serve the documents via the eLitigation system. If the receiving party is a corporation or a natural person not represented by a law firm, e-service is not permitted, and the Service Bureau will serve the hardcopy. Although SMS and/or email alert notification service is provided for the non-registrant on an application basis, access to the eLitigation system is not allowed, and the pro se litigant should wait for the document to be served physically or visit the Service Bureau to collect the document.<sup>171</sup>
- 71 In South Korea, while anyone can register for the e-filing system, those who opt not to must conduct all legal communications in paper form; email or other electronic methods are not permitted for these litigants. For example, if a plaintiff is not using the e-filing system, they must submit the initiating documents in hard copy to the court. The court will then scan and upload these documents to the e-filing system. Subsequently, the court will serve these documents to the defendant in hard copy unless the defendant is already registered in the system, in which case e-service will be used. If one party is registered for e-filing while the other is not, the court will automatically transmit the

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<sup>166</sup> Under the Federal Rules of Civil Procedure 5(d)(3) that took effect in 2018, self-represented litigants must file non-electronically unless authorized to do so by court order or local rule.

<sup>167</sup> *Ibid* 9.1.

<sup>168</sup> *Ibid* 'Addendum to Electronic Case Filing Rules & Instructions - Temporary Acceptance of Pro Se Filings by Email' (1 April 2020) 3.

<sup>169</sup> *Ibid* 9.2.

<sup>170</sup> *Ibid* 1.1.

<sup>171</sup> eLitigation FAQs for Service Bureau, [https://www.elitigation.sg/\\_layouts/IELS/HomePage/Docs/FAQSB.pdf](https://www.elitigation.sg/_layouts/IELS/HomePage/Docs/FAQSB.pdf) accessed 1 March 2023.

electronic documents to the postal office, which will then print out and send these documents to the non-registered party through regular mail. The court bears the costs associated with scanning and printing out these documents.<sup>172</sup>

- 72 In Estonia, pro se litigants who have an Estonian ID card or a Mobile ID can be registered to 'e-toimik' ('Public e-file') portal and can submit documents electronically via the portal, but also can submit electronically signed documents via email. If the defendant is not a user of the portal, the court must send documents on paper with post-service. The state bears the expenses for this first dispatch. After the initial service, the person who receives the documents pays the fixed price for every sheet, by which she is induced to be registered to the portal. If a party informs the court accordingly, subsequent court communications with non-users can be carried out via email or other electronic methods as well as via the regular service.<sup>173</sup>
- 73 As evidenced by the above examples, various approaches exist across jurisdictions regarding the procedural treatment of litigants who do not or cannot use judicial e-platforms. Factors to consider include the proportion of self-represented litigants, their familiarity with electronic communication methods, the emphasis on procedural accuracy, the degree to which each jurisdiction strives for digitization, and whether individuals not using electronic litigation tools have been involuntarily excluded or have made a voluntary choice to abstain.
- 74 The question of whether self-represented litigants should be allowed to use email or other alternative electronic methods for submitting documents has recently been a topic of active discussion. Prior to the development of platform-based litigation communication systems, email was one of the first electronic methods considered and incorporated into legal procedures. However, self-represented litigants have not widely adopted email for submissions. Today, many judicial systems have implemented e-filing and e-service platforms as the exclusive means of official electronic communication for legal procedures. These platforms are preferred because they provide secure channels that ensure proper identification, authentication, and security. Nevertheless, even the most inclusive systems still have litigants who are not using the e-filing platform, as demonstrated in the earlier examples. During the COVID-19 pandemic, when litigants were either prohibited from visiting courthouses or faced health risks with in-person submissions, some jurisdictions that had previously restricted e-filing to users of judicial electronic platforms began permitting email submissions from non-registered individuals as a temporary emergency measure. We can find such instances in Belgium, the People's Republic of China, the Netherlands, Poland,<sup>174</sup> and many courts of the

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<sup>172</sup> Cheon (n 133) 41-47.

<sup>173</sup> Estonian Courts (n 140).

<sup>174</sup> IBA Litigation Committee, 'Impact of COVID-19 on Court Operations & Litigation Practice' (22 June 2020) 11, 24, 74, 81.

United States.<sup>175</sup> For example, the US District Court for the Southern District of New York had previously mandated for pro se litigants to be filed on paper, but due to the COVID-19 pandemic, it began to accept filings via email from litigants without e-filing privileges by allowing them to send electronic documents in PDF format to the official court email account and by encouraging them to consent to receive electronic notifications from the ECF system.<sup>176</sup> It is now discussed by the Advisory Committee on Civil Rules whether and how the alternative means of electronic submission other than via the e-platform (CM/ECF) should be introduced permanently into the Federal Rules of Civil Procedure to protect pro se litigants' procedural rights.<sup>177</sup>

- 75 As electronic submission and service become increasingly affordable, efficient and secure, ensuring equal access to justice for pro se litigants through traditional methods is becoming more challenging. In order not to discriminate them with registrants of the e-filing system, it might be necessary to sacrifice strict requirements of valid judicial communication to a certain degree and take a more practical approach. Ultimately, the question of when and to what extent to allow pro se litigants to use email and other alternative electronic submissions would be a matter of striking the right balance between procedural rigor and access to justice.

### 3.5 Cross-border E-filing and E-service<sup>178</sup>

#### 3.5.1 Overview

- 76 The need for e-filing and e-service becomes even more critical in cross-border litigations. Allowing digital submission and service in civil cases involving international elements can greatly reduce the time and effort required by both litigants and courts. It also simplifies the initiation and resolution of international disputes, which would be much more complex under a paper-based system. Moreover, if the recipient's physical location is unknown but their email address is available, service by email can enable the ordinary proceedings of the case to proceed as usual without resorting to service by publication, thus decreasing the likelihood of complications with recognition and enforcement in another jurisdiction.<sup>179</sup> E-filing to a foreign court enables a would-be plaintiff, especially

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<sup>175</sup> United States Courts, 'Court Orders and Updates During COVID-19 Pandemic' <https://www.uscourts.gov/about-federal-courts/court-website-links/court-orders-and-updates-during-covid19-pandemic#district> accessed 3 July 2023.

<sup>176</sup> The United States District Court Southern District of New York (n 168) 40-41.

<sup>177</sup> Advisory Committee on Civil Rules (28 March 2023), 'Pro se e-filing 1161 intercommittee project', 252-253 [https://www.uscourts.gov/sites/default/files/2023-03\\_civil\\_rules\\_committee\\_agenda\\_book\\_final\\_0.pdf](https://www.uscourts.gov/sites/default/files/2023-03_civil_rules_committee_agenda_book_final_0.pdf) accessed 3 July 2023.

<sup>178</sup> For an overview of impact of technology in the international civil judicial cooperation, see CPLJ pt XIV ch 2, 6 and 8.

<sup>179</sup> N L Pimiento, 'From Physical Location to Electronic Address: Omnipresence in the Era of the Internet' in *HCCH a/Bridged Edition 2019: The HCCH Service Convention in the Era of Electronic and Information Technology* (11 December 2019) 90-91 <https://assets.hcch.net/docs/24788478-fa78-426e-a004-0bbd8fe63607.pdf> accessed 10 July 2023.



of a small claim case, to begin litigation that would have been impossible under the paper-based procedure.

- 77 E-filing and e-service in cross-border litigations, however, have their own unique problems in addition to issues that generally arise in domestic e-filing and e-service. As explained above, two methods of e-filing exist: one is via the e-filing platform; and the other is via email or other alternative electronic means. In the latter, even if the national law of the forum permits the submission of judicial documents by email (which is not so common as explained above), it is more difficult for the court to check the identity of the foreign submitter and the authenticity of the electronic documents e-signed under a foreign law in cross-border cases. In the former, many fora with the e-filing platform limit registrants to domestically licensed lawyers or law firms, and in fora where e-filing is open to foreigners, it is still difficult for pro se litigants to register to an unfamiliar foreign system. In the case of the international service of process, difficulties are caused by the different national service rules and workflows, language requirements and other formalities.<sup>180</sup> It would be ideal if both the requesting and the requested states allow direct e-service to and from each other and their e-service systems are interoperable. If not, whether the process is conducted via a diplomatic channel or via the Hague Service Convention regime or via a bilateral or regional treaty, it would be crucial to make each step of the international service of process as digital as possible.

### 3.5.2 *Developments in the EU*

- 78 The EU has made the most prominent achievements in the cross-border e-filing and e-service by establishing and expanding the 'e-Justice Communication via Online Data Exchange' (e-CODEX) that has been developed to facilitate electronic legal communications between the EU Member States.<sup>181</sup> In 2006 and 2007, the EU adopted the European Order for Payment (EOP)<sup>182</sup> and the European Small Claims Procedure (ESCP)<sup>183</sup> respectively as uniform procedures of EU. Both the EOP and the ESCP enable a resident in one EU Member State<sup>184</sup> to get a payment order from a debtor or to sue a defendant in another EU Member State through simplified and standardized steps based on basically written procedures.<sup>185</sup> Both regulations also allow the submission of

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<sup>180</sup> X Kramer, 'Are You Being Served? Digitising Judicial Cooperation and the HCCh Service Convention' in *HCCH a/Bridged Edition 2019: The HCCH Service Convention in the Era of Electronic and Information Technology* (11 December 2019) 44-45 <https://assets.hcch.net/docs/24788478-fa78-426e-a004-0bbd8fe63607.pdf> accessed 10 July 2023.

<sup>181</sup> Velicogna and Lupo (n 6) 1-3.

<sup>182</sup> Regulation creating a European order for payment procedure (EOP Regulation), 1896/2006 of 12 December 2006 (EU).

<sup>183</sup> Regulation establishing a European Small Claims Procedure (ESCP Regulation), 861/2007 of 11 July 2007 (EU).

<sup>184</sup> Among all EU member states, only Denmark has not joined both regulations.

<sup>185</sup> For a general description of the EOP, see European Commission, 'Practice guide for the application of the Regulation on the European Order for Payment' (2011) <https://e-justice.europa.eu/fileDownload>.



documents including an application or a claim form by electronic means acceptable and available to the forum state,<sup>186</sup> and the service of documents by electronic means in accordance with the national law of the State in which service is to be effected.<sup>187</sup> However, the widespread adoption of these uniform procedures has been hindered by several factors. These include the lack of technological interoperability and the absence of robust legal frameworks to support effective communication between courts and parties from different Member States.<sup>188</sup>

- 79 Against this backdrop, the e-CODEX project was launched in 2010 to realize especially the paperless cross-border judicial proceedings and electronic communications between judicial authorities in the EU region.<sup>189</sup> e-CODEX is a decentralized system that enables communications between national and European ICT systems specifically designed to facilitate the cross-border electronic exchange of data in the area of judicial cooperation in civil and criminal matters.<sup>190</sup> It consists of two software elements, a gateway and a connector: the former enables the exchange of messages with other gateways; the latter provides functions such as e-identification and verification of electronic signatures via a security library and proof of delivery.<sup>191</sup> It can connect e-filing platforms of Member States and even can provide the ‘Standalone Connector’ for Member States who don’t have their own national end application.<sup>192</sup> A litigant or a judge can electronically file documents to the service provider of e-CODEX (a preexisting national e-filing system such as ERV of Austria or a separate provider), and a judge or a court staff on the receiving end can access the service provider and manage incoming messages and documents.<sup>193</sup> After the success of multiple pilot projects,<sup>194</sup> other pilot projects such as Me-CODEX, eCODEX Plus and Pro-CODEX have followed to expand the use of e-CODEX.<sup>195</sup>

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do?id=79895a32-067e-4a6e-b7fc-c117d59bf87f accessed 9 July 2023; For the ESCP, see European Commission, ‘A Guide for Users to the European Small Claims Procedure’ (2019) <https://e-justice.europa.eu/fileDownload.do?id=e3ac5fdb-1f3b-4994-b0b0-fd36e7446df3> accessed 9 July 2023.

<sup>186</sup> EOP Regulation Art 7.5; and ESCP Regulation Art 4.1.

<sup>187</sup> EOP Regulation Art 13(d) and Art 14.1.(f); and ESCP Regulation as amended effective of 2017 (Regulation 2015/2421) Art 13.

<sup>188</sup> X E Kramer, ‘Access to Justice and Technology: Transforming the Face of Cross-Border Civil Litigation and Adjudication in the EU’ in K Benyekhlef et al (ed), *eAccess to Justice* (University of Ottawa Press 2016) ch 4.2.

<sup>189</sup> Velicogna and Lupo (n 6) 7-8.

<sup>190</sup> Regulation 2022/850 Recital 7.

<sup>191</sup> Regulation 2022/850 Recital 11.

<sup>192</sup> E-CODEX FAQ <https://www.e-codex.eu/faq-e-codex> accessed 10 July 2023.

<sup>193</sup> Velicogna and Lupo (n 6) 12-13.

<sup>194</sup> Ibid 11-13.

<sup>195</sup> M Velicogna, ‘Cross-border dispute resolution in Europe: looking for a new “normal”’ (2022) 12(3) *Oñati Socio-legal Series* 556, 568-569.

- 80 The recast of the Service and Evidence Regulations<sup>196</sup> (both were adopted in 2020 and entered into force on 1 July 2022) and the enactment of e-CODEX Regulation<sup>197</sup> was another audacious move to achieve the goal of digitization of judicial communications in the EU region through e-CODEX. According to the above Regulations, the decentralized IT system will be an obligatory means of communication to be used for the transmission and receipt of requests, forms and other communication between transmitting and receiving agencies and central bodies from 1 May 2025, and e-CODEX has been designated as this system.<sup>198</sup> As well as the electronic communications between Central bodies, the Service Regulation recast expanded the scope of cross-border e-service by allowing the direct electronic service of judicial documents if the addressee has given prior express consent to the use of electronic means for serving documents and the documents and the channel of transmission satisfy the requirements of technical robustness and security under (EU) No 910/2014 ('eIDAS Regulation').<sup>199</sup> Furthermore, the Commission digitalization of judicial cooperation proposal of 1 December 2021<sup>200</sup> presents a framework that the judicial communications between authorities via e-CODEX should be extended to other areas (Art 3) including Insolvency, Maintenance, Succession and Matrimonial Property (Annex I). It also suggests that the communication between competent authorities and end users can be conducted through a European electronic access point on the European e-Justice Portal (Art 4), thus simplifying pro se litigants' access to justice.<sup>201</sup> In sum, e-codex has become the 'gold standard' in cross-border cooperation and the EU is making the decisive step towards a fully digitalized cooperation, although some Member States have tried to postpone the dates for the mandatory introduction of the new systems.

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<sup>196</sup> Regulation on the service in the Member States of judicial and extrajudicial documents in civil or commercial matters (service of documents) (recast), 2020/1784 of 25 November 2020 (EU); Regulation on cooperation between the courts of the Member States in the taking of evidence in civil or commercial matters (taking of evidence) (recast), 2020/1783 of 25 November 2020 (EU).

<sup>197</sup> Regulation on a computerized system for the cross-border electronic exchange of data in the area of judicial cooperation in civil and criminal matters (e-CODEX system), and amending Regulation (EU) 2018/1726, 2022/850 of 30 May 2022 (EU).

<sup>198</sup> Commission Implementing Regulation laying down the technical specifications, measures and other requirements for the implementation of the decentralized IT system referred to in Regulation (EU) 2020/1784, 2022/423 of 14 March 2022 (EU); and Commission Implementing Regulation laying down the technical specifications, measures and other requirements for the implementation of the decentralized IT system referred to in Regulation (EU) 2020/1783, 2022/422 of 14 March 2022 (EU).

<sup>199</sup> Regulation (EU) 2020/1784 Art. 19 1(a). The requirement of (EU) No 910/2014 may be exempted if the addressee gave prior express consent to the relevant court or authority a specified email address and confirms receipt of the document with an acknowledgement of receipt, including the date of receipt (Art 19 1(b)).

<sup>200</sup> Proposal for a Regulation of the European Parliament and of the Council on the digitalization of judicial cooperation and access to justice in cross-border civil, commercial and criminal matters, and amending certain acts in the field of judicial cooperation, COM (2021)759 final.

<sup>201</sup> X Kramer, 'Digitising access to justice: the next steps in the digitalisation of judicial cooperation in Europe' (2022) 56 *Revista General de Derecho Europeo*, 1-9.

- 81 In line with the European e-Justice Strategy 2024-2028,<sup>202</sup> the new Regulation (EU) 2023/2844 ('e-justice Regulation')<sup>203</sup> and the accompanying Directive (EU) 2023/2843<sup>204</sup> ('Digitalization Package') establishes a uniform legal framework for streamline electronic communications for cross-border judicial cooperation in civil, commercial, and criminal matters. With the implementation of the Digitalization Package, natural or legal persons and their legal representatives will be able to communicate electronically via the 'European electronic access point', and authorities will be able to exchange data on civil, commercial, and criminal matters with cross-border implications through secure and reliable digital channels. Electronic Communications under the Hague Service Convention.

### 3.5.3 International Developments

- 82 Unlike developments in the EU, progress on e-service abroad in the global level has been slower. The Convention of 15 November 1965 on the Service Abroad of Judicial and Extrajudicial Documents in Civil or Commercial Matters (the Hague Service Convention), the most influential international instrument for the cross-border service of process, had not anticipated the advent of new electronic communication methods when it was adopted in 1965.<sup>205</sup> With the rapid development of ICT, the HCCH began to discuss and study the use of electronic means for international service of process in earnest. As it was almost impossible to recast the treaty itself, the HCCH haven gone for soft law and technical solutions. In 2009, the HCCH Special Commission entrusted the Permanent Bureau to conduct research on the electronic service under the Hague Service Convention.<sup>206</sup> The findings of the research were discussed and approved at a special committee held in 2014<sup>207</sup> and later included in the Practical Handbook on the Operation of the Service Convention. The Permanent Bureau primarily emphasizes the concept of 'functional equivalence' between traditional physical service and electronic service. They maintain a favourable stance towards electronic communications, as long as these

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<sup>202</sup> Council of the European Union, 'European e-Justice Strategy 2024-2028', Brussels, 17 November 2023 (15509/23) <https://data.consilium.europa.eu/doc/document/ST-15509-2023-INIT/en/pdf> accessed 15 June 2024.

<sup>203</sup> Regulation on the digitalization of judicial cooperation and access to justice in cross-border civil, commercial and criminal matters, and amending certain acts in the field of judicial cooperation, 2023/2844 of 13 December 2023 (EU).

<sup>204</sup> Directive (EU) 2023/2843 of the European Parliament and of the Council of 13 December 2023 amending Directives 2011/99/EU and 2014/41/EU of the European Parliament and of the Council, Council Directive 2003/8/EC and Council Framework Decisions 2002/584/JHA, 2003/577/JHA, 2005/214/JHA, 2006/783/JHA, 2008/909/JHA, 2008/947/JHA, 2009/829/JHA and 2009/948/JHA, as regards digitalization of judicial cooperation.

<sup>205</sup> Hague Conference on Private International Law (HCCH) permanent Bureau, *Practical Handbook on the Operation of the Service Convention* (4th edn, 2 HCCH Publications 2016) 169.

<sup>206</sup> HCCH, Conclusions and Recommendation No 39 of the 2009 Special Commission, HCCH (n 205) 174-175.

<sup>207</sup> HCCH, 'Conclusions and Recommendation of the Special Commission on the practical operation of the Hague Service, Evidence and Access to Justice Conventions No 36 of the 2014 Special Commission', <https://assets.hcch.net/docs/eb709b9a-5692-4cc8-a660-e406bc6075c2.pdf> accessed 10 July 2023.

methods can be considered functionally equivalent to the physical delivery of documents.<sup>208</sup>

- 83 Under the Hague Service Convention, two types of communications are recognized. The first type involves communications between Central Authorities, such as the transmission of requests and certificates. The second type pertains to the service of process to the intended recipient. The former can be conducted electronically without needing to amend the Convention, as these communications do not directly impact the procedural rights of the person being served.<sup>209</sup> Still, the procedural safeguards of identification, authentication and the security of communication are required, and for that purpose, an electronic platform has been considered as well as secure email and distributed ledger technology.<sup>210</sup> The benefits of an e-platform for international judicial cooperation include the standardization of procedures, promotion of communication and accountability, as well as efficiency and speed. However, the development of the platform is hindered by different views on the service of process, varied compositions of the Central Authorities, requirements for written requests in some Member States, and technological and legal difficulties in establishing a uniform e-ID and e-signature.<sup>211</sup>
- 84 A pilot tool called 'iSupport' initiated by the Permanent Bureau of the HCCH is worth noting. iSupport is a secure case management and communication system to initiate, process, follow-up and provide status reports on outgoing and incoming applications for the cross-border recovery of maintenance obligations under the EU 2009 Maintenance Regulation and the 2007 Hague Child Support Convention.<sup>212</sup> It adopted e-CODEX as the supporting electronic communication technology for the official communications between Central Authorities.<sup>213</sup> iSupport projects have involved non-EU jurisdictions such as the United States and Brazil as well as multiple EU Member States.<sup>214</sup> Now in its fourth project, it is being used by the state of California, in a piloting capacity, and Portugal since 2016, and is expected to present a model of e-platform for worldwide cross-border judicial cooperation.
- 85 Regarding the service of process to an addressee, the Special Commission of the HCCH concluded that the formal service (Art 5(1)(a) of the Hague Service Convention) may be

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<sup>208</sup> HCCH (n 205) 171.

<sup>209</sup> Ibid.

<sup>210</sup> K V Ossenova, 'Use of an Electronic Platform for Communication and Transmission Between Central Authorities in the Operation of the HCCH Service Convention' in *HCCH a/Bridged Edition 2019: The HCCH Service Convention in the Era of Electronic and Information Technology* (11 December 2019) 15 <https://assets.hcch.net/docs/24788478-fa78-426e-a004-0bbd8fe63607.pdf> accessed 10 July 2023.

<sup>211</sup> Ibid 15-18.

<sup>212</sup> HCCH, 'General Description of the iSupport Project' (2014) <https://assets.hcch.net/docs/27a09699-3030-48ef-81be-fccaca9ea4a9.pdf> accessed 10 July 2023.

<sup>213</sup> HCCH, 'Welcome to the iSupport Section – Introduction' <https://www.hcch.net/en/projects/post-convention-projects/isupport1> accessed 10 July 2023.

<sup>214</sup> HCCH, 'iSupport - Third successful EU Action Grant Application' (2018) HCCH News Archive <https://www.hcch.net/en/news-archive/details/?varevent=608> accessed 10 July 2023.

conducted by electronic means if the national law of the requested state allows it.<sup>215</sup> It also opined that as far as it is not incompatible with the law of the state of the addressee, e-service is possible as ‘a particular method requested by the applicant’ (Art 5(1)(b)) or with an addressee’s voluntary acceptance (Art 5(2)).<sup>216</sup>

- 86 What matters is a direct e-service from an authority (or a competent person) of a Contracting State to an addressee in another Contracting State. While Contracting States of the Hauge Service Convention have expressed mixed views on whether electronic channels are ‘functionally equivalent’ with postal channels and thus covered by Art 10(a),<sup>217</sup> the Permanent Bureau supports direct e-service by the post office as a valid alternative means, as far as e-service is permitted and meets all the requirements of the forum state, and the Requested State has not made a declaration to oppose to the Art. 10(a)<sup>218</sup> (same logic would also apply to Art 10(b)). However, many Contracting States including Egypt, the Czech Republic, India, Norway, Poland, South Korea, Switzerland, China and Germany have objected to the methods described in Art 10, therefore, direct e-service to and from these states would not be permitted. This significantly attenuates the usefulness of Art 10 as a legal basis for direct e-service.
- 87 In common law jurisdictions where e-service is permitted as a substitute or alternative method, subject to their national laws, aligning the domestic practices with the Hague Service Convention can be particularly complex, especially in the US. While some courts in the US said that direct e-service under the Hague Service Convention is only permissible to Contracting States that have not opposed to Art 10,<sup>219</sup> many courts have determined that unless a Contracting State explicitly prohibits e-service under Art 10, process service can be executed electronically (such as by email or social media messages) according to the Federal Rules of Civil Procedure Rule 4(f)(3), to an addressee located in a Contracting State that has opposed to Art 10 generally. Some courts considered only the requirements of domestic law, entirely skipping the application of the Convention.<sup>220</sup> This approach can lead to complications, as other jurisdictions may view these judgments as violating the Hague Service Convention or their own national laws, potentially refusing to recognize and enforce such judgments.

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<sup>215</sup> HCCH (n 205) 176.

<sup>216</sup> Ibid 176.

<sup>217</sup> Ibid 177.

<sup>218</sup> Ibid 178.

<sup>219</sup> Eg, *Williams-Sonoma, Inc. v Friendfinder, Inc., et al* (n 146); *Agha v Jacobs*, C 07-1800 RS (District Court, Northern District of California, US) Judgment 13 May 2008 [2008 WL 2051061 (N.D. Cal. 2008)].

<sup>220</sup> *Gurung v Malhotra* (District Court, Southern District of New York, US) Judgment 22 November 2011 [279 F.R.D. 215 (S.D.N.Y. 2011)]; *FTC v PCCare247 Inc.* (District Court, Southern District of New York, US) Judgment 7 March 2013 [12 Civ. 7189 (PAE) (S.D.N.Y. 2013)]; *WhosHere, Inc. v Orun*, Judgment (District Court, Eastern District of Virginia, US) 20 February 2014 [Civil Action No. 1:13-cv-00526-AJT-TRJ, 1, 6 (E.D. Va. 2014)]. It is in line with the *Schlunk* decision by the Supreme Court of the United States. *Volkswagenwerk Aktiengesellschaft v Schlunk*, No 86-1052 (Supreme Court, US) [486 US 694, 699 (1988)].

- 88 It is extremely difficult to amend the Convention itself. Making a protocol to facilitate the digitization of service of process is less difficult, but still hard to achieve. Establishing a soft law such as the 'Practical Handbook' or a 'Guide to Good Practice' or expanding the possible scope of e-service through the interpretation of the Convention can be a viable option, but it is up to each Contracting State to follow them.<sup>221</sup> Ultimately, the 'free electronic flow of legal documents' will only be achieved by accumulated efforts at national, regional, and international levels from legal, technological, and diplomatic dimensions.

### 3.6 Future Developments

- 89 E-filing and e-service are increasingly becoming essential components of judicial proceedings. Initially, access to these services was limited to a select group of legal professionals equipped with specialized devices, but advancements in e-identity, e-authentication and e-signature tools, relevant legislative development, budget allocations, and continuous judicial initiatives have made these services available to the general public through a single platform. Looking ahead, the judiciary's primary focus should be on maintaining and enhancing e-filing platforms to ensure their stability and security, keeping pace with emerging technologies and meeting the evolving needs of users. How to expand the scope of judicial e-platform users and how to provide equal access to non-users will be always at the core of the judicial transformation and will be the continuous responsibility of the judiciary. Additionally, the judiciary will face challenges related to the disclosure of judicial data and the protection of personal information stored within e-filing systems. As data technologies and AI continue to grow exponentially, the demand for electronic judicial data will intensify, leading to increased concerns about privacy and data ownership. Moreover, the efficiency and cost savings achieved through e-filing and e-service in cross-border litigations highlight the need for a bilateral or a regional treaty or the development of new international instruments that can supplement or substitute the Hague Service Convention in facilitating cross-border electronic judicial cooperation.

## 4 DIGITIZATION OF ENFORCEMENT PROCEEDINGS<sup>222</sup>

### 4.1 Overview

- 90 All persons who receive a final and binding court judgment have the right to its enforcement. The delay or failure of its enforcement is a violation of this right.<sup>223</sup> The

<sup>221</sup> L E Teitz, 'Is the Service Convention Ready for Early Retirement at Age Fifty-Five? Or Can It Be "Serviceable" in a World Without Borders?' in *HCCH a/Bridged Edition 2019: The HCCH Service Convention in the Era of Electronic and Information Technology* (11 December 2019) 60-63 <https://assets.hcch.net/docs/24788478-fa78-426e-a004-0bbd8fe63607.pdf> accessed 10 July 2023.

<sup>222</sup> For an overview of enforcement proceedings, see CPLJ pt XIII.

<sup>223</sup> Council of Europe, 'Recommendation (2003) 17 of the Committee of Ministers to member states on enforcement' 9 September 2003, 1 [https://uihj.com/archive-uihj/en/ressources/21628/65/council\\_of\\_europe\\_recommendation\\_17\\_on\\_enforcement.pdf](https://uihj.com/archive-uihj/en/ressources/21628/65/council_of_europe_recommendation_17_on_enforcement.pdf) accessed 11 July 2023.



court's decision would lose its meaning if it cannot be executed quickly and efficiently while keeping costs reasonable, as stated in 'CEPEJ Guide on Judicial e-Auctions'.<sup>224</sup> Digital technologies can be used in each step of enforcement proceedings to fulfil those goals, and e-enforcement is now a major subject of interest as a means to promote efficiency, fairness and transparency.<sup>225</sup>

- 91 The implementation of digital technologies in enforcement proceedings involves different areas and a wide range of stakeholders. E-filing and e-service are as important in enforcement proceedings as in litigation proceedings. E-enforcement platforms that integrate e-filing, e-service and additional functions, eg, electronic discovery of debtors' assets<sup>226</sup> or e-auction bidding, are already playing an essential role in many jurisdictions. Enforcement in its broader sense includes insolvency, and insolvency proceedings are one of the fields most in need of digitization and going increasingly electronic, with its collective nature and strong need for efficiency.<sup>227</sup> Enforcement also includes not only the enforcement of judgments but also the foreclosure of secured assets, and in this regard, the electronic registration of security interest on movables as well as immovables has been discussed and implemented.<sup>228</sup> Furthermore, digital assets with the distributed ledger technologies (DLT) present novel challenges throughout the whole enforcement procedure, from the classification of various digital assets to their seizure and liquidation according to their nature. 'Smart contract,' by which decentralized execution of contracts are conducted without further judicial intervention, has also been discussed as a new breakthrough for automatic enforcement.<sup>229</sup>
- 92 Impacts of digital technology on enforcement are related to various interdepartmental areas. Issues surrounding the enforcement of digital assets are largely about the substantive nature of digital assets. A smart contract is a matter of contract law as much as it is a matter of automatic enforcement. Facilitating enforcement through the

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<sup>224</sup> CEPEJ (n 11).

<sup>225</sup> Y Shapovalova and V Bradautanu, 'Enforcement of Court Decisions and the Way Forward to Digital Enforcement' (2022) *Law in Transition Journal 2022* (European Bank for Reconstruction and Development) 38-39 <https://www.ebrd.com/documents/ogc/law-in-transition-2022-enforcement-of-court-decisions-pdf.pdf> accessed 26 December 2023.

<sup>226</sup> Eg, Poder judicial Espana, 'punto neutro judicial' of Spain <http://www.poderjudicial.es/cgpj/es/Temas/e-Justicia/Servicios-informaticos/Punto-Neutro-Judicial/> accessed 27 December 2023.

<sup>227</sup> L Coutinho, A Kappeler and A Turrini, 'Insolvency Frameworks across the EU: Challenges after COVID-19' (2023) European Commission Directorate-General for Economic and Financial Affairs, Discussion Paper 182 (February 2023) 36 [https://economy-finance.ec.europa.eu/system/files/2023-02/dp182\\_en\\_0.pdf](https://economy-finance.ec.europa.eu/system/files/2023-02/dp182_en_0.pdf) accessed 2 August 2023; For electronic insolvency registry adopted by various EU countries, see for example, Central Solvency Register (Registre Central de la Solvabilité / Centraal Register Solvabiliteit) of Belgium <https://www.regsol.be/>; National Insolvency Register of Croatia <https://nesolventnost.pravosudje.hr/registar>; Insolvency Proceedings Bulletin implemented in Romania (BPI) <http://www.bpi.ro/>; Public Insolvency Register (Registro Público Concursal) of Spain <https://www.publicidadconcursal.es/>; National Debtors Register of Poland [www.prs.ms.gov.pl](http://www.prs.ms.gov.pl), etc.

<sup>228</sup> See the UNCITRAL Guide on the Implementation of a Security Rights Registry (2014), especially para 82-106.

<sup>229</sup> R Koulu, 'Blockchains and Online Dispute Resolution: Smart Contracts as an Alternative to Enforcement' (2016) 13(1) *SCRIPTed* 40, 53 ff.



electronic registration of varied assets, encompassing immovables, movables, and other proprietary rights, implicates both the judicial and administrative spheres. The ongoing UNIDROIT 'Best Practices for Effective Enforcement' Project also addresses comprehensive interdisciplinary issues of digital impacts on enforcement, including electronic asset tracing, online auction procedures, digital communication protocols among auction participants, electronic registration modalities for enforceable instruments, enforcement mechanisms germane to digital assets, and the incorporation of 'smart contracts' and other DLT as new tools of enforcement.<sup>230</sup>

- 93 Although the above topics are all worth discussing, this section would like to focus on procedural issues, ie, on how the enforcement proceedings can be better managed and improved by the implementation of digital technology, as this chapter's theme is 'ICT tools to enhance performance of the civil justice system.' In implementing digital technology to enforcement proceedings, as well as common principles of cyberjustice, unique conditions and situations inherent in judicial enforcement such as the balancing between creditors' and debtors' rights, enforcement agents' role in the proceedings, ex officio nature of the procedure (in civil law jurisdictions) in relation to party autonomy and emphasis on the efficiency and economy<sup>231</sup> should also be taken into considerations.
- 94 This section first reviews the basic principles that should govern the electronic enforcement. It then introduces various electronic mechanisms that facilitate the discovery and seizure of debtor's assets and other enforcement procedures. Thirdly, it focuses on the recent developments in electronic auctions, especially the 'Guide on Judicial e-Auctions' by CEPEJ.

## 4.2 Guiding Principles of E-enforcement

- 95 A digitized enforcement system should fulfil both the requirements of cyberjustice and fair and swift enforcement. Consequently, the general guidelines and principles related to cyberjustice in civil proceedings, as discussed in Sections 2 and 3,<sup>232</sup> are broadly applicable to the implementation of these tools in enforcement proceedings. However,

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<sup>230</sup> UNIDROIT Working Group on Best Practices for Effective Enforcement, UNIDROIT 2021 Study LXXVIB – W.G.2 – Doc. 6 (June 2021) <https://www.unidroit.org/wp-content/uploads/2022/02/Doc.-6-Draft-Report-third-session-of-the-WG.pdf> accessed 10 July 2023; UNIDROIT 2023 Study LXXVIB – W.G.5 – Doc. 7 (January 2023) <https://www.unidroit.org/wp-content/uploads/2023/06/Study-LXXVIB-W.G.6-Doc.-7-Report.pdf> accessed 10 July 2023; UNIDROIT 2023 Study LXXVIB – W.G. 6 – Doc. 2 (March 2023); <https://www.unidroit.org/wp-content/uploads/2023/06/Doc.-2-Update-on-intersessional-work-and-status-of-the-project-Secretariats-Report.pdf> accessed 10 July 2023.

<sup>231</sup> R Stürner, 'Effective Performance Principles in Transnational civil procedure: Preliminary feasibility study on possible additional work on the development of Principles of Transnational Civil Procedure relating to effective enforcement' (2016) UNIDROIT 2016 Study LXXVI – Doc. 1 6 ff s-76-01-e.pdf (unidroit.org) accessed 26 December 2023.

<sup>232</sup> Especially, CEPEJ (n 4) and CEPEJ (n 123).

it is crucial to adapt and refine these principles to suit the particular characteristics of enforcement processes.

- 96 The 'CEPEJ Guidelines for a Better Implementation of the Existing Council of Europe's Recommendation on Enforcement'<sup>233</sup> and the CEPEJ's 'Good practice guide on enforcement of judicial decisions'<sup>234</sup> present the following principles and good practices to achieve fair, transparent, effective and swift enforcement: Enforcement should strike a balance between the needs of the claimant and the rights of the defendant. Enforcement agents should be well qualified and be bestowed with necessary authority and responsibilities to manage impartial, flexible and efficient procedures. Information on debtors and their assets should be accessible to creditors and enforcing authorities while protecting debtors' privacy and lives. Each step of enforcement proceedings should be disclosed and notified to various stakeholders as well as debtors and creditors. Communication mechanisms between courts, enforcement agents, debtors, creditors and other stakeholders should be established. Information on auction should be easily accessible to potential buyers, and centralization of the procedure is desired.
- 97 Although e-enforcement has not been discussed as intensively as the digitization of main proceedings until recently, the necessity of digitization has been mentioned in early international efforts to draw guidelines and best practices for judicial enforcement,<sup>235</sup> and later began to be emphasized as important factors contributing to speedy and fair enforcement proceedings:<sup>236</sup>

The dematerialisation of enforcement procedures helps to save time in the implementation of certain protective or enforcement measures and increases the potential number of purchasers at public auctions. It could therefore be encouraged by the member states, provided that it is combined with all the precautions guaranteeing optimum legal certainty ... For instance, arrangements could be made to protect the confidentiality and the integrity of any information passed on, while the identity of the person serving the document must be checked and it must be ensured that documents are received by the actual persons to whom they are addressed (for example by setting up a system of acknowledgment of receipt for example).

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<sup>233</sup> CEPEJ, 'Guidelines for a Better Implementation of the Existing Council of Europe's Recommendation on Enforcement' adopted by the CEPEJ at its 14th plenary meeting (Strasbourg, 9 – 10 December 2009)' (2009)11Rev2 <https://rm.coe.int/16807473cd> accessed 26 December 2023.

<sup>234</sup> CEPEJ, 'Good practice guide on enforcement of judicial decisions' as adopted at the 26th CEPEJ Plenary Session 10-11 December 2015' (2015)10 [rm.coe.int/european-commission-for-the-efficiency-of-justice-cepej-good-practice-/16807477bf](https://rm.coe.int/european-commission-for-the-efficiency-of-justice-cepej-good-practice-/16807477bf) accessed 24 December 2023.

<sup>235</sup> Council of Europe (n 223); CEPEJ (n 233) para 40-44, 66.

<sup>236</sup> CEPEJ (n 234) para 44.

- 98 So far, the most notable principles on e-enforcement would be the 'Global Code of Digital Enforcement' by the International Union of Judicial Officers (UIHJ) in 2021.<sup>237</sup> The Code comprehensively addresses both substantive and procedural aspects related to the utilization of digital technologies in enforcement procedures. In the realm of enforcement procedure, the code emphasizes the following key principles: ensuring the proportionality of digital enforcement measures to the enforcement claim, furnishing enforcement agents with requisite digital tools to augment their activities, integrating secure online dispute resolution systems within the enforcement process, fostering digital literacy among enforcement agents, establishing electronic infrastructure for streamlined information exchange about the debtor with pertinent institutions, maintaining flexibility in transitioning between digital and non-digital enforcement methods, developing regulatory frameworks for the adoption of AI in enforcement proceedings, guaranteeing debtors physical access to enforcement agents, and ensuring that the costs associated with digital enforcement are reasonable, transparent, well-defined, and do not surpass the costs of non-digital enforcement.<sup>238</sup>
- 99 The UNIDROIT 'Best Practices for Effective Enforcement' Project also deals with various aspects of e-enforcement. Although the project has been delayed from the original plan of 2020-2022 and the final results have not been published yet,<sup>239</sup> the presentation on the impact of new technologies on enforcement made by Professor Teresa Rodriguez de las Heras Ballell at the UNIDROIT International Programme for Law and Development on 29 June 2023<sup>240</sup> introduced the key discussions regarding e-enforcement at the project. Firstly, access to information on debtor's assets should be enhanced and expanded through digital mechanisms such as central electronic register, interconnected registers and databases, DLT schemes, cloud storing models and use of online platforms for auctions and sales. Secondly, procedural actions (notices, attachments, etc) should be automated and streamlined with the proper human supervision and compliance with laws and principles on automated decision-making. Thirdly, self-executing enforcement mechanisms such as automated fund transfers, freezing orders and starter interruption should be adopted.<sup>241</sup> Furthermore, as guiding principles of e-enforcement, it is recommended to establish online auctions on any type of assets, end-to-end data-driven

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<sup>237</sup> UIHJ, 'Global Code of Digital Enforcement' November 2021

<sup>238</sup> Shapovalova and Bradautanu (n 225) 39-40.

<sup>239</sup> The project so far had its 7th Working Group Meeting as of December 2023. For the current development of the project, see <https://www.unidroit.org/work-in-progress/enforcement-best-practices/#1644493658788-9cb71890-334f> accessed 27 December 2023.

<sup>240</sup> 'Civil Procedure and Enforcement projects discussed at the UNIDROIT International Programme for Law and Development' <https://www.unidroit.org/civil-procedure-and-enforcement-projects-discussed-at-the-unidroit-international-programme-for-law-and-development/> accessed 27 December 2023.

<sup>241</sup> T R de la Heras Ballell, 'Impact of Technologies on Traditional Civil Procedures and Enforcement of Creditor'S Claims' (2023) presentation at UNIDROIT International Programme for Law and Development on 29 June 2023, 4-11 <https://www.unidroit.org/wp-content/uploads/2023/06/29.06-IPLD-Impact-of-technologies-enforcement-T.-Rodriguez-de-las-Heras-Ballell.pdf> accessed 27 December 2023.

procedures interoperable with e-justice system, and automated enforcement with proper complaint-handling mechanisms.<sup>242</sup>

### 4.3 Use of Digital Technology to Facilitate Enforcement Proceedings

#### 4.3.1 Diversity of Enforcement Systems and Different Adoptions of ICT

- 100 Enforcement proceedings reveal a plethora of differences between common law and civil law traditions and even in jurisdictions sharing similar legal traditions and historical backgrounds.<sup>243</sup> They can be controlled by the court, a specialized public official, a specialized private agent, or a mix of above. They are strongly path-dependant following each jurisdiction's history, and any specific system cannot in itself guarantee the efficiency and fairness of enforcement.<sup>244</sup>
- 101 Common law jurisdictions have judgment enforcement systems mainly based on party autonomy while civil law jurisdictions conduct enforcement proceedings ex officio by the court or enforcement agents. In the United States, seeking out the information on the judgment debtor and her assets is largely up to the judgment creditor with the assistance of private service providers or with the discovery methods basically similar to those for obtaining evidence.<sup>245</sup> Only after the successful location of the assets, court officers give assistance in freezing, attaching and seizing assets through various orders upon the application of the creditor.<sup>246</sup> The sale of assets can be conducted through private sale by the judgment creditor<sup>247</sup> as well as through the public auction by the sheriff<sup>248</sup> or marshal.<sup>249</sup> In other common law jurisdictions such as England and Wales or Canada, the structure of the enforcement proceedings are basically similar, although the extent to which public authority is involved and other details are varied.<sup>250</sup>

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<sup>242</sup> Ibid 18.

<sup>243</sup> F Gascón Inchausti, 'Towards More Effective Enforcement Proceedings Through More Effective Asset Discovery' in M Deguchi (ed), *Effective Enforcement of Creditors' Rights* (Springer 2019), 267, 270.

<sup>244</sup> H Gramckow, 'Court Auctions: Effective Processes and Enforcement Agents' (2012) World Bank Justice and Development Working Papers Series (WPS) 18/2012 5-8.

<sup>245</sup> R Marcus, 'America's BYO Approach to Enforcing Money Judgments' in M Deguchi (ed), *Effective Enforcement of Creditors' Rights* (Springer 2019), 122-124.

<sup>246</sup> Ibid, 123.

<sup>247</sup> 14 M.R.S. 5 3131.

<sup>248</sup> N.Y. CPLR 5236 (a).

<sup>249</sup> 28 US Code (Federal Debt Collection Procedures Act) § 3203 (g).

<sup>250</sup> In England and Wales, the judgment creditor generally locates the judgment debtor privately through inquiry agents. She then applies for the information hearing to acquire information from the debtor about their assets. With the acquired information on debtor's assets, she applies for the writ of control on the specific assets from the court, which bestows a High Court enforcement officer (HCEO) or a bailiff power for further proceedings. J O'hare and K Browne, *Civil Litigation* 20th ed, Sweet & Maxwell 2021) 643-646. Canada's Uniform Civil Enforcement of Money Judgments Act is a mixture of English, American and Canadian influence. British Columbia Law Institute, 'Report on the Uniform Civil Enforcement of Money Judgments Act' (2005) BCLI Report No. 37 March 2005, 3-21.

- 102 In civil law jurisdictions, judicial enforcement is mostly conducted by the public or quasi-public authorities, although there are also lots of variations, such as the authority in charge of enforcement, time limitation for enforcement and available remedies to the debtor.<sup>251</sup> It is within the power of the court or the enforcement agent, upon the judgment creditor's application, to find the debtor's location and her assets from public registers, social security agencies and banks, to attach and seize the identified assets, and conduct the sale of the assets.<sup>252</sup>
- 103 As illustrated below, regardless of the legal tradition or enforcement structure in a given jurisdiction, digital technologies can significantly expedite and streamline communications, asset discovery, and the effective sale of a judgment debtor's assets throughout the enforcement process. In many civil law countries, the digitization of enforcement is typically driven by the court or public sector initiatives. In contrast, in common law jurisdictions, private actors often play a more prominent role in the digitization efforts.

#### 4.3.2 Digitization of Documents and Communications for Enforcement

- 104 Enforcement proceedings begin when the creditor submits an enforceable title to the enforcement authority, and the submitted documents that initiate enforcement proceedings should be later served on the debtor. The creditor may file for various orders or writs necessary for enforcement, and the debtor may also file for her objections. The enforcement authority may send orders and decisions to the creditor and the debtor, and sometimes to third parties who hold information or interests on debtors' assets. Digitization of these legal communications happening during the enforcement procedure has been recommended as a key measure to save time and costs of enforcement.<sup>253</sup> Although e-filing and e-service in enforcement have not been as vigorously discussed as that of main litigation proceedings,<sup>254</sup> the following several examples show how the e-communications are already working in enforcement.
- 105 Existing judicial e-filing and e-service platforms can offer ready-made solutions for electronic enforcement, provided that certain adjustments are made to enhance accessibility and interconnectivity. Additionally, training for new users will be necessary to ensure effective implementation and use of these systems in enforcement

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<sup>251</sup> F G Inchausti (n 243) 273 ff.

<sup>252</sup> For the enforcement procedures of civil law jurisdictions, esp. finding of debtors' assets, see W H Rechberger, 'Clarification of Facts in Austrian Enforcement' (Austria); B Hess, 'The Effective Disclosure of the Debtor's Assets in Enforcement Proceedings' (Germany); M Deguchi, 'Fact Clarification and Effective Legal Protection in Civil Enforcement Law in Japan' (Japan); S P Baumgartner and M Heisch, 'Finding Defendant's Assets in Proceedings to Enforce Money Judgment in Switzerland' (Switzerland); and M Ho, 'The Problem of the Disclosure of the Debtor's Assets in Enforcement Proceedings' (South Korea) in M Deguchi (ed), *Effective Enforcement of Creditors' Rights* (Springer 2019), 267, 270.

<sup>253</sup> CEPEJ (n 234) para 44.

<sup>254</sup> R Jokubauskas and M Świerczyński, 'Digitalisation of Enforcement Proceedings' (2023) 19(1) *Utrecht Law Review* 20, 21 <https://utrechtlawreview.org/articles/10.36633/ulr.819>.

proceedings. In Estonia, issuance and submission of enforceable title is largely digitized. According to Art 23(6) of the Code of Enforcement Procedure of the Republic of Estonia, 'An application for enforcement and an enforcement instrument may be submitted by electronic means. The application shall bear the digital signature of the sender or be communicated in any other technically secure manner'.<sup>255</sup> The submitted documents can be served electronically through the e-file system ('e-Toimik') if the requirements are met,<sup>256</sup> or to the e-mail address disclosed by the recipient,<sup>257</sup> and a bailiff must register and record enforcement instruments and enforcement actions electronically (Art 33(6) of the Code of Enforcement Procedure). Poland also has similar provisions.<sup>258</sup> In Austria, the e-filing and e-service platform called ERV can be used both for the electronic filing of enforcement application by the creditor and for the service of notifications to parties or third parties, if they are legal professionals or registered users of ERV.<sup>259</sup> In a large majority of territories in Spain, the initiation of enforcement proceedings and the following service of document can be conducted electronically via the e-filing and e-service system called LEXNET.<sup>260</sup>

- 106 Lithuania has established a separate e-portal called the 'Electronic Enforcement File Portal'<sup>261</sup> governed by the State Enterprise Centre of Registers, which enables secure and prompt electronic communication between the bailiff, the creditor, the debtor, and other interested persons for enforcement proceedings.<sup>262</sup> Subject to Art 431(2) of the Law on Bailiffs of the Republic of Lithuania,<sup>263</sup> the parties and the interested persons may submit documents electronically to the above Portal and check their status or actions made by the bailiff real time, and their identities are verified through the login process of the portal. Furthermore, with the recent amendment of Art 650(3) of the Code of Civil Procedure of the Republic of Lithuania (CCP Lithuania), the electronic submission and service of documents for enforcement proceedings is now mandatory

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<sup>255</sup> Code of Enforcement Procedure of the Republic of Estonia (2014), RT I 2005, 27, 198.

<sup>256</sup> See Section 3 of this chapter.

<sup>257</sup> E Vilippus, 'EU Enforcement Atlas : Spain Narrative National Report' (2020) 12 <https://www.enforcementatlas.eu/wp-content/uploads/2021/07/eu-enforcement-atlas-estonia-report.pdf> accessed 30 December 2023.

<sup>258</sup> Art 783 § 3<sup>1</sup> 'The decision to grant a declaration of enforceability of the enforceable title ..., issued in electronic form, is issued without the writing of a separate operative part, by placing a declaration of enforceability in the ICT system and providing it with a qualified electronic signature, a judge or a court referendary, which issues the order.' Polish Code of Civil Procedure.

<sup>259</sup> B Michtner, 'EU Enforcement Atlas : Austria Narrative National Report' (2020) 6 <https://www.enforcementatlas.eu/wp-content/uploads/2021/07/eu-enforcement-atlas-austria-report.pdf> accessed 30 December 2023.

<sup>260</sup> S S Fernández, 'EU Enforcement Atlas : Spain Narrative National Report' (2020) 7-9 <https://www.enforcementatlas.eu/wp-content/uploads/2021/07/eu-enforcement-atlas-spain-report.pdf> accessed 30 December 2023.

<sup>261</sup> See <https://www.antstoliai.lt/vbp/public> accessed 30 December 2023.

<sup>262</sup> For a more detailed explanation of Lithuania's digital enforcement and comparisons with other countries, see Jokubauskas and Świerczyński (n 254) 23-25.

<sup>263</sup> Law on Bailiffs of the Republic of Lithuania, Žin., 2002, Nr. 53-2042.



for the recovery of under EUR 1,000 with some exceptions, and is possible upon written request of the participant concerning over EUR 1,000.<sup>264</sup>

- 107 As we will later see, e-filing and notification functions integrated into the e-auction platform can also save the time and expenses of service immensely.

#### 4.3.3 *Discovery and Seizure of Debtors' Assets*

- 108 To initiate enforcement proceedings, the judgment creditor should know the location of the debtor. As citizens' addresses are managed electronically in most advanced countries, the creditor can now apply for the execution court or the bailiff to find out the debtor's abode from the registration authority or other public database.<sup>265</sup> Once the debtor's abode is known, there are two ways to find the debtor's assets. One is to obligate the debtor to disclose her assets with compulsive measures. The other is to find the information from third parties other than the debtor herself, which is crucial especially when the debtor acts dishonestly on her declaration and tries to hide her assets. ICT can contribute to the latter by searching and tracking the electronically stored information on the debtor's assets. Various sorts of the debtor's assets are publicly registered (immovables, vehicles, ships, etc). The debtor's savings can be located through her bank accounts. Her other assets can be identified by the tax authority or by the Securities Depository. The debtor's employment status and her income can be disclosed through social security administrations. The above information has been mostly digitized and saved in electronic databases. What matters is making these data easily accessible electronically to the creditor or the enforcement authority while not intruding the debtor's privacy too much.
- 109 Some registers are accessible to the public with limitations. For example, In Austria, everyone is authorized to query the land register database electronically, but the list of persons is accessible only to notaries and lawyers.<sup>266</sup> In South Korea, the land registry database is digitized and accessible to anyone online who already knows the location of the real estate and seeks to find the owner's name and address. All information about the real estate except for the owner's identification number is disclosed, but the general public cannot search the entire land registry database by the owner's name.<sup>267</sup>
- 110 A more efficient method is to give the creditor or the enforcing authority a centralized power to access and search for relevant electronic databases on the debtor's assets. In most civil law countries where such a scheme was adopted, this power is not given to the creditor but bestowed to the execution court or the enforcement officer. This

<sup>264</sup> Jokubauskas and Świerczyński (n 254) 24-25.

<sup>265</sup> P Gottwald, 'Enforcement Against Movable Property in Germany' in M Deguchi (ed), *Effective Enforcement of Creditors' Rights* (Springer 2019), 23.

<sup>266</sup> *Grundbuchsumstellungsgesetz* (Land Register Computerization Act) of Austria § 6 para 1; Rechberger (n 252) 49.

<sup>267</sup> <http://www.iros.go.kr//pos1/jsp/help2/jsp/001001003001.jsp>.



indirect structure helps protect the debtor's privacy and procedural rights. In Austria, if the enforcing creditor seeks to enforce on claims the obligor has on a third party but do not know the third party or the claims, she can apply for execution without identifying the information anyway, and the court of execution shall receive the necessary information on the third-party debtor and the claims from the database of the umbrella association of the social insurance system ex officio, and seize the claims.<sup>268</sup> In Germany, the creditor may apply for the bailiff to request information from third parties (public authorities) such as the statutory pension funds, Federal Central Tax Office or the Federal Motor authority to find out the debtor's employer, bank accounts or car if certain minimum conditions are met.<sup>269</sup> South Korea has a similar system with that of Germany called 'Asset Check Process', in which the execution court can request information on the debtor's assets from various third parties including private financial institutions as well as public registries.<sup>270</sup><sup>271</sup>

- 111 Regarding the electronic search of the debtor's asset information, *Punto Neutro Judicial* (PNJ, Judicial Neutral Point) of Spain<sup>272</sup> is worth special attention. The PNJ, run by the *Consejo General del Poder Judicial* (the General Council of the Judiciary, 'CGPJ'), is a platform connected with the Tax Agency, the representative bodies of the legal professions (lawyers, *procuradores*, notaries, registrars), the police, the traffic administration, the Prosecutor's Office, the Ministry of Justice, the prison administration, the social security administration, among others, and provides diverse services including property inquiries, information exchanges, prison inquiries and access to judicial statistics. It is especially useful in locating the debtor's assets, as the PNJ enables the court clerk to directly conduct an electronic search of immovable property, cars, bank accounts, etc. from databases connected to it by entering the debtor's official identification number and to automatically send the request of information to the public and financial entities.<sup>273</sup> The automatic account seizure system called *embargo masivo de cuentas a la vista* (ECCV) offers more efficient and powerful method to seize the debtor's account. If the enforcing officer enters the data of the debtor's identification number and the amount to be seized, the program automatically carries out the seizure to the debtor's accounts in all the participating entities, using an internal algorithm to distribute the seizure among all entities, until the amount claimed is covered. It is operated based on the agreement between CGPJ and the Spanish banking associations.<sup>274</sup>

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<sup>268</sup> Rechberger (n 252) 50.

<sup>269</sup> Hess (n 252) 71.

<sup>270</sup> Ho (n 252) 387-388.

<sup>271</sup> Civil Enforcement Act (South Korea) § 74.

<sup>272</sup> For the general introduction of PNJ, See Podier Judicial Espana, 'Punto Neutro Judicial' <https://www.poderjudicial.es/cgpj/es/Temas/e-Justicia/Servicios-informaticos/Punto-Neutro-Judicial/> accessed 30 December 2023.

<sup>273</sup> F Gascón Inchausti, 'From Remote Hearings to On-Line Courts' (2024) CPLJ pt IX ch 4.

<sup>274</sup> Ibid 7-8.

- 112 In common law jurisdictions where it is largely up to the judgment creditor to find the debtor's assets, the creditor may obtain discovery from any person pursuant to the US Federal Rules of Civil Procedure,<sup>275</sup> the state law or the local rules, when the creditor needs to get information held by the debtor or relevant third parties to enforce the judgment.<sup>276</sup> The judgment creditor empowered by the execution court's document production order may gain access to various information and databases held by the debtor or third parties through e-discovery, which is basically governed by the same e-discovery principles and mechanisms developed for the litigation procedure. This party-oriented e-discovery process and the court's rather generous issuance of the document production order gives the creditor wider and freer investigative mechanisms while making the process more expensive.
- 113 Privatization of asset discovery has opened a new market for digital data tracking, forensic and analysis. Forensic assistants (FA) or private investigators aided by sophisticated digital methods now play an important role in tracing and recovering debtors' assets.<sup>277</sup> FAs hired by the creditor's attorney can conduct research on the debtor or her related parties and their assets from publicly accessible digital databases such as social media sites, court records, database on business entities, public registry on real property, etc.<sup>278</sup> They use various digital tools such as web page scraping service to gather data,<sup>279</sup> predictive analytics tools to find anomalies from transactional data,<sup>280</sup> and link analysis tools that compile data and evaluate relationships or connections between them.<sup>281</sup> However, their investigative activities are subject to legal restrictions in various countries, especially privacy and data protection laws.<sup>282</sup>

#### 4.3.4 Judicial E-auction

- 114 A public judicial auction has been a common method to realize the debtor's seized or foreclosed assets besides the turnover of the asset to the creditor, a private sale with an appraisal by an independent body, or an assignment of sale to a private auction house. Whether it's the ascending auction (English Auction) or the first-price sealed-bid auction (two-stage auction),<sup>283</sup> traditional public auctions necessitate that all interested

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<sup>275</sup> US Federal Rules of Civil Procedure § 69(b).

<sup>276</sup> Marcus (n 245) 115.

<sup>277</sup> M Korte & C Muth, 'The Involvement of Private Investigators in Asset Tracing Investigations' in International Centre for Asset Recovery, *Tracing Stolen Assets: A Practitioner's Handbook* (Basel Institute on Governance 2009) 101-110.

<sup>278</sup> N Wadlinger et al, 'Domestic Asset Tracing and Recovery of Hidden Assets and the Spoils of Financial Crime' (2018) 49 ST. MARY'S L.J. 609, 615-624.

<sup>279</sup> Eg, see Mozenda <https://www.mozenda.com/> and Outwit <https://www.outwit.com/> accessed 30 December 2023.

<sup>280</sup> Wadlinger et al (n 278) 619.

<sup>281</sup> Eg, see Sentinel Vsulizer <https://perma.cc/2AEK-B7HF> accessed 30 December 2023.

<sup>282</sup> Korte & Muth (n 277) 107-108.

<sup>283</sup> Although not definitive, there have been some research suggesting that the latter tends to be more corruptible. Gramckow (n 244) 18.

individuals physically attend a designated location, such as a court or auction house, at a specific time or during a specified period to place bids on listed properties. Due to these physical, logistical, and administrative constraints, offline auctions have proven less effective in attracting numerous bidders and maximizing asset sales at optimal prices through a transparent process. Therefore, inspired by the success of e-auction in the private market, especially that of eBay,<sup>284</sup> implementation of e-auction for the execution sale has been recommended as a means for effective enforcement.<sup>285</sup>

- 115 E-auction permits any individual logged into the online auction platform to place bids from any location. An increase in participants leads to heightened competition, reduced miscarriages, and elevated sale prices. This approach may also mitigate corruption, disruptions, or other illicit behaviours that could occur in physical auctions, enhancing the transparency and fairness of the procedure.<sup>286</sup> The successful sale of assets at the highest possible price through e-auction also safeguards the debtor's property rights.<sup>287</sup> Conversely, the e-auction platform must ensure proper registration and secure connections for electronically identified individuals, and in addition, should incorporate technical interfaces enabling sophisticated bidding methods and seamless interactions with banks or other necessary institutions for bidding and payment.<sup>288</sup> The intricate technical demands involved make establishing an e-auction platform more challenging than other judicial e-platforms. Furthermore, given the accessibility and instantaneity of e-auction, achieving neutrality for offline bidders becomes more difficult once e-auction is implemented, even if alternative in-person bidding methods are provided.
- 116 Owing to these challenges, e-auction was not as prevalent as other cyberjustice tools prior to the COVID-19 pandemic. However, numerous countries swiftly embraced e-auction to navigate the lockdown. As of 2022, 27 out of the 54 member states of the Council of Europe had implemented e-auction, marking a twofold increase from the pre-pandemic era.<sup>289</sup>
- 117 The 'Guide on Judicial E-auctions' by CEPEJ examined and identified common elements in the e-auction systems implemented by the previously mentioned 27 States, presenting recommended good practices that include the following. An effective e-auction platform should serve as a centralized hub within a single country for publishing sales notice, advertising, and placing bidding in order to attract a maximum number of bidders and achieve the highest sale price. Individuals interested in the sale must register on the platform with proper digital identification, such as eIDAS. System requirements

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<sup>284</sup> Founded in 1995 and renamed as eBay in 1997, eBay has developed multiple new e-auction methods as the frontrunner in the e-auction area. See <https://www.ebayinc.com/company/our-history/> accessed 31 December 2023.

<sup>285</sup> CEPEJ (n 234) para 44.

<sup>286</sup> Ibid para 40-41.

<sup>287</sup> Jokubauskas and Świerczyński (n 254) 26.

<sup>288</sup> CEPEJ (n 11) para 43.

<sup>289</sup> Ibid para 49-50.

and user-friendly explanation of the process should be offered. Detailed information on foreclosed assets, including descriptions, maps, appraisals, virtual tours, etc, should be uploaded and made searchable to registrants while safeguarding debtors' private information. The platform's interoperability with court systems, banks, tax authorities, and land registers is crucial for conducting all necessary steps online. Employing online bidding techniques like time extension, automatic bidding, and offering premiums for the first bidder can attract more participants and potentially elevate prices. Additionally, it is also recommended to integrate the auction platform with public real estate registers and enable the automatic transfer of ownership to the winning bidder post-auction.<sup>290</sup> Most of all, in establishing and operating the e-auction platform, the basic principles of transparency, non-discrimination, equal access, open competition, accountability, and the security of the system should be ensured.<sup>291</sup>

- 118 The convenience and automatic nature of e-auction requires special devices to prevent its misuse or abuse. As it is easier to place a bid online, bidding should be allowed only to persons who have genuine intention and ability to buy. Therefore, it is necessary for bidders to pay a proper level of security that may attract real bidders while excluding frivolous ones.<sup>292</sup> As a potential buyer is more susceptible to making a mistake (so called 'fat finger error') in bidding with digital devices, an e-auction system should implement technical safeguards such as giving a warning to a seemingly unreasonable bidding to protect bidders' right and avoid miscarriage of auction, although placing a correct bidding is basically the bidder's responsibility.<sup>293</sup> It is also crucial that the e-auction process is not completely governed by software but eventually be under human oversight.<sup>294</sup>

#### 4.4 Challenges of E-enforcement

- 119 As shown above, the use of ICT in enforcement proceedings can make it easier to locate assets, attach and seize them, make them accessible to a wider range of potential buyers, and sell them quickly for a better price. The fairness and efficiency of the judicial process can be considerably improved through e-enforcement, and it is the duty of the state to ensure effective electronic enforcement.<sup>295</sup> Nevertheless, incorporating ICT into enforcement proceedings poses a number of challenges, which may be shared with general judicial proceedings or distinctive to the enforcement context.

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<sup>290</sup> Ibid para 65-67, 107.

<sup>291</sup> Ibid para 74.

<sup>292</sup> Eg, the security for the online auction bidding is 10% of the assessment of the value of the immovable property in Lithuania and Latvia. Jokubauskas and Świerczyński (n 254) 27. It is 5% of the asset value in Spain. Inchausti (n 273) 8.

<sup>293</sup> Ibid 28.

<sup>294</sup> CEPEJ (n 11) para 46.

<sup>295</sup> Regarding the duty of member States of the Council of Europe to establish an e-enforcement system and Art 6 of the European Convention on Human Rights, see Jokubauskas and Świerczyński (n 254) 28-30.

- 120 The digitization of enforcement proceedings is much more complex than main judicial proceedings due to the presence of multiple stakeholders and their different legal statuses. If the authority of enforcement is shared between the court and the enforcement agents and they do not share the same view on e-enforcement, digital transition may be considerably delayed. Although swift sale of the debtor's assets at a higher price would eventually be beneficial to the debtor, debtors tend to delay auction as much as possible to have more opportunity to pay the debt themselves. In jurisdictions where auctions are overseen by multiple authorities or private entities, creating a central e-auction platform or establishing a standardized procedure across multiple platforms could be a challenging objective.
- 121 While digitization facilitates tracing and identifying debtor's asset information, it can also lead to an excessive invasion of the debtor's privacy and livelihood in the absence of appropriate safeguards. Previous procedural protections sufficing for traditional situations may not be enough when almost every financial activity of the debtor can be traced electronically. This concern for debtors' minimum level of privacy is also echoed in the EU's Proposal for the Digital Euro Regulation.<sup>296</sup> Mechanisms need to be put in place to ensure that assets are secured but debtors' personal information is not passed on to creditors too much, and the scope of unseizable assets needs to be adjusted to reflect the increased traceability of assets. In the meanwhile, completely untraceable digital assets such as cryptocurrencies stored in a cold wallet are and will continue to be a conundrum to the effective collection of debts no matter what measures are taken to the debtor.
- 122 It is a matter of principle to ensure that people with disabilities or the elderly have the same access to the e-enforcement system. While direct parties to enforcement proceedings should be guaranteed access to e-enforcement systems more thoroughly, potential bidders might not demand the same level of accessibility and should be satisfied with lesser measures such as technical sophistication of the platform or electronic bidding by a representative.<sup>297</sup> Proportionality and the reasonableness of costs must be taken into account when implementing those measures.

## 5 CONCLUSIONS

- 123 This chapter has examined the digitization of civil proceedings from the internal CMS of the judiciary to the enforcement procedure, mainly focusing on the normal functions of the civil justice. At any stage of the process, the benefits of digitization are clear: it enables systematic case management, provides statistical analysis of data crucial for

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<sup>296</sup> Proposal for a Regulation of the European Parliament and of the Council on the establishment of the digital euro, COM/2023/369 final, Art 34.

<sup>297</sup> For equal access to e-auction, see CEPEJ (n 11) para 74.

judicial administration, saves time and effort poured into physical communications, improves transparency, and enhances the parties' access to justice.

- 124 Face-to-face contact is getting more expensive and time-consuming as individuals get used to digital communications. People are realizing that cyberjustice is not an option anymore but a necessity to protect people's safety, health and access to justice, especially after the COVID-19 pandemic. A consensus is also being formed on key principles in adopting digital tools for civil proceedings, such as i) respect for fundamental rights, ii) non-discrimination, iii) quality and security, iv) transparency, impartiality and fairness, and v) 'under user control,' as summarized in the 'European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their environment' by CEPEJ.<sup>298</sup>
- 125 As has been analysed above, judicial structure, nature of proceedings and people's willingness to embrace change present different challenges and risks in adopting digital technology for civil proceedings, and every attempt of digital transformation has not succeeded. Still, the benefits of cyberjustice outweigh the problems, and a 'digital-by-default' approach should be taken, as the European Council emphasized in its 'Notices from European Union Institutions, Bodies, Offices and Agencies.'<sup>299</sup> In doing so, protecting people's procedural rights should be at the centre. It should also be reiterated that the tedious tasks of making a robust and stable system, protecting users' privacy, and improving digital literacy of users are more important than adopting the latest cutting-edge solutions. Moreover, greater caution will be required for the implementation of digital tools that affect the fundamental roles of the judiciary.

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<sup>298</sup> CEPEJ (n 41).

<sup>299</sup> European Council, '2019-2023 Strategy on e-Justice' (2019) OJ 2019/C 96/04, para 11.

## ABBREVIATIONS AND ACRONYMS

ADR	Alternative Dispute Resolution
AI	Artificial Intelligence
ALI	American Law Institute
Art	Article/Articles
AOUSC	Administrative Office of the US Courts
beA	besonderes elektronisches Anwaltspostfach
BGH	<i>Bundesgerichtshof</i> (Federal Court of Justice) [Germany]
BID	<i>Banco Interamericano de Desarrollo</i> (Inter-American Development Bank)
CEPEJ	<i>Conseil de l'Europe Commission européenne pour l'efficacité de la justice</i> (Council of Europe European Commission for the efficiency of justice)
cf	<i>confer</i> (compare)
ch	chapter
CGPJ	<i>Consejo General del Poder Judicial</i>
CJEU	Court of Justice of the European Union
CM/ECF	Case Management and Electronic Case Files
CMS	Case Management Systems
CRT	Civil Resolution Tribunal
DLT	Distributed Ledger Technologies
EBRD	European Bank for Reconstruction and Development
e-CODEX	e-Justice Communication via Online Data Exchange
ECtHR	European Court of Human Rights
ed	editor/editors
edn	edition/editions
EFS	Electronic Filing System
eg	<i>exempli gratia</i> (for example)
ELI	European Law Institute
EOP	European Order for Payment
ESCP	European Small Claims Procedure
etc	et cetera
EU	European Union
EUR	Euro
FA	Forensic assistants
ff	following
fn	footnote (external, ie, in other chapters or in citations)
FRCP	Federal Rules of Civil Procedure
GDPR	General Data Protection Regulation (EU)
ibid	<i>ibidem</i> (in the same place)
ICT	Information and Communication Technologies



ie	<i>id est</i> (that is)
JPY	Japanese Yen
LLM	Large Language Models
ML	Machine Learning
n	footnote (internal, ie, within the same chapter)
NCA	National Court Administration
NEF	Notice of Electronic Filing
No	number/numbers
OECD	Organisation for Economic Co-operation and Development
para	paragraph/paragraphs
PD	Practice Direction
PNJ	<i>Punto Neutro Judicial</i>
pt	part
SCC	Supreme Court Canada
Sec	Section/Sections
supp	supplement/supplements
trans/tr	translated, translation/translator
UK	United Kingdom
UKCPR	Civil Procedure Rules (UK)
UNIDROIT	<i>Institut international pour l'unification du droit privé</i> (International Institute for the Unification of Private Law)
UP	University Press
US / USA	United States of America
USD	United States Dollar
v	versus
vol	volume/volumes

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