EU Judicial Procedures and Case Law Databases: What's Going on and What May Lay Ahead?

Elena Alina ONTANU [a,b] and Marco VELICOGNA [b]

[a] *Erasmus University, Rotterdam (The Netherlands)*
[b] *Istituto di Ricerca sui Sistemi Giudiziari – IRSIG - CNR (Italy)*

Abstract. The raise of computational power, the boost of electronic data storage capabilities, and the growing ubiquitousness of the Internet facilitate the collection of legal information and increases its availability for stakeholders. In this context, EU institutions and key stakeholders are seeking to support initiatives that provide access to legislation and case law. This is considered paramount for economic activities, facilitating access to justice, and upholding the rule of law. This Chapter investigates existing electronic databases created to disseminate case law information on the application of EU judicial procedures and explores these databases ability to improve the application of European procedural instruments, forwarding their use and the creation of a common legal understanding. The analysis addresses also the possibilities opened by e-CODEX to integrated cross-national legal database supported by technology developments. The e-CODEX handled cross-border judicial procedures can lead to digital by default judgments in European uniform procedures. These procedures are based on electronic forms supporting structured data exchange. A database relying on these data may be designed to include not only the judgment data, but also many other data generated during the procedure, which could be used to support 'smarter' research for practitioners and interested parties. This can significantly reduce subsequent expert interventions in classifying or anonymizing case law data. Additional data generated by the procedures, but not included in the decisions could also enrich the database. Furthermore, as e-CODEX supports semantic interoperability, much of the structured data is expected to be multilingual by default.

Keywords. case law, e-Codex, electronic procedures, European order for payment, European small claims procedure, legal databases

1. Introduction

Cross-border access to legal information is often a victim of scarce transparency of norms and case law [1]. The raise of computational power, the boost of electronic data storage capabilities and the growing ubiquitousness of the Internet, have facilitated the collection of legal information, increased its availability, and facilitated stakeholders' access to data and documents [2]. Aggregation and dissemination of electronic sentences, court

decisions and legal data play a key role in forwarding and sharing knowledge at national as well as at international level. Within the European Union, access to European and national legislation and case law is seen as being of paramount importance for economic activities and for upholding the rule of law. Accordingly, EU institutions and key stakeholders are seeking to support initiatives that go in this direction[1]. Databases and dedicated portals have been created to facilitate access to EU legislation and case law (e.g. EUR-Lex, Curia). Their goal is to support the concrete use of different European legal instruments introduced to facilitate access to justice in cross-border situations. For example, rules relating to European uniform cross-border procedures rely to a significant extent on national frameworks [3]. Accordingly, their implementation and accommodation within these national systems and their functioning in practice are of considerable importance. National case law can play an important role in the way European procedures are applied and interpreted across Member States. Parties and practitioners need to know the specificities of national implementation of EU cross-border judicial procedures and have access to information related to the manner in which uniform rules are applied (in different ways) by national courts. Empirical research has shown that the letter of the EU and national laws is not sufficient [4]; [5].

Although over the last twenty years, access to national court decisions has improved in the European Union and "many courts publish all or at least a substantial selection of their decisions on the internet" [6], accessibility from a cross-border user perspective remains to a certain extent problematic. This is due to several factors, including the lack of common identifiers and metadata, no topical classification, poor formatting of documents, or the provision of scanned documents that are not computer searchable [6].

This is not an issue just from an access to justice perspective. National case law can be inspiring for judges in different Member States who have to deal with the same matter or having similar difficulties in applying a certain provision relating to a European procedure. Additionally, according to the Court of Justice of the European Union (CJEU) CILFIT judgment[2], the national judges have an obligation to consult decisions of other Member States' courts or of the CJEU, if certain question of European law emerge. This can easily be the case in cross-border litigation involving the application of European uniform procedures or other procedural instruments. The availability of national case law on European procedures can support the creation of a shared understanding of the way uniform rules and procedures should be applied. This can contribute to enhancing mutual trust and sharing of legal knowledge, as judges and practitioners will be able to find out more easily about each other's work and views ([2], p. 139).

The Chapter begins to consider an important novelty that can represent a new opportunity in developing more integrated cross-national legal databases by making use of the increased availability of electronic procedures at national, and, lately, also at EU level. It investigates existing electronic databases that have been created to disseminate national case law information related to the application of EU judicial procedures. By carrying out this analysis the Chapter looks to determine whether databases are a solution that can lead to the improvement of the application of European procedural instruments, forwarding their use and creation of a common understanding as to their interpretation and application. Furthermore, the Chapter begins to explore the potential implications of using

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[1]See for example, European Parliament Resolution of 9 July 2008 on the role of the national judge in the European judicial system, (2007/2027(INI)), O.J. C 294 E/3.12.2009, para 10-11.

[2]CJEU, *CILFIT v Ministero della Sanità*, C-283/81, ECLI:EU:C:1982:335, para. 16. See also ([6], p. 1).

electronic decision resulting from digital procedures. To do this it analyses key features of the European e-Justice Digital Service Infrastructure (e-CODEX), which has been developed to interlink existing national and European ICT systems in the e-Justice domain, and to allow electronic communication and exchange of case related data in cross-border legal procedures.

2. Methodology

The analysis is based on a multidisciplinary approach that combines theoretical and empirical perspectives into national and cross-border databases developments that shape access to legal information and case law, as well as potential developments that can be supported by the present e-justice pilots. The empirical perspective relies on observations, discussions, and informal interviews with persons involved in the development of national and European databases and their maintenance[3]. The authors have been testing the use of several national and European databases as well as contributing to the creating of such databases through European funded research. In addition, the e-CODEX DSI has been studied though an action research approach[4]. In particular, one of the authors has been actively involved in the development, implementation, maintenance, and long-term sustainability effort of the e-CODEX. This has allowed the researchers to gain access to events discussing these developments, activities related to the design and establishment of such tools, and privileged communications that would not be otherwise accessible for scientific research [9]. This approach provided the researchers with the possibility to "perceive reality from the viewpoint of someone 'inside' the case study rather than external to it" ([9], p. 117) and have a deeper understanding of the on-going developments. By choosing this active research interaction the researchers had the possibility to discuss chosen database design and development solutions, choice and generation of metadata, and other technical decisions. Additionally, this has allowed the researchers to test data interpretations and possible improvements through semi-structured and informal discussions with other researchers and/or companies involved in projects developing legal databases at national and/or European level.

3. Legal Databases: National, Cross-Jurisdiction and European Approaches

Databases are infrastructures that can be designed and built to hold certain type of data and enable specific type of analysis and queries [10]. They 'unmoor data analysis' and, once in place, they enable users to conduct extensive surveys and analysis of data without needing to compile and organise the data themselves [10]. Thus, enabling the spreading of knowledge they contain. In the legal domain, the aggregation and dissemination of legal data is a key point in sharing knowledge, support access to justice, enhance mutual trust, and can contribute to the creation of a common understanding and practice in the

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[3]*Setting Up a Case Law Database*, Workshop IC2BE Project (Max Planck Institute Luxembourg for Procedural Law, 26 February 2018).

[4]"Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework". [7]. See further on action research [8].

application of European instruments. This concerns not just the EU level, as national law plays a significant role in the way the European procedures are applied and function across Member States.

In order to uphold the rule of law and support mutual trust and mutual recognition principles, the European Commission has supported the development of European portal-based access to case law, especially for facilitating access to national cases concerning the application of different European procedural instruments. At national level, different initiatives exist, including private or general national databases that are publicly managed and financed.

The process of setting databases providing access to national and European case law in the area of cross-border litigation and civil cooperation has so far involved different initiatives undertaken by the European institutions or supported by them. The first steps in this direction have included the creation of databases in the area of cross-border litigation accessible through the EUR-Lex and the EU e-Justice Portals (Figure 1). A few initiatives can be singled out: namely, the JURE collection containing national judgments related to jurisdiction, recognition, and enforcement in civil and commercial matters[5], the National case law web page dedicated to EU case law[6], and the e-Justice ECLI search engine[7].
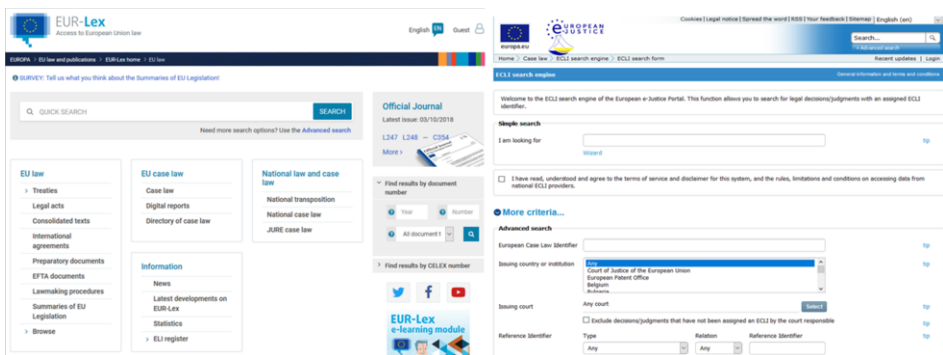

Figure 1. European database initiatives

In all these databases, the decisions are generally available in their original language, and sometimes – when provided by the Member State of origin – a summary in English, French, or German (JURE), key words on the topic of the case in English and French (National case law), or, occasionally, an abstract or key words in English or France (e-Justice ECLI search engine). In addition to these European direct endeavours, various initiatives have emerged as the result of work carried out by academics and professional organisations (in some cases supported by EU grants) to develop databases that facilitate

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[5]The database was created by the European Commission, and includes case law on relevant international conventions (i.e. 1968 Brussels Convention, 1988 Lugano Convention), http://eur-lex.europa.eu/collection/n-law/jure.html.

[6]http://eur-lex.europa.eu/collection/n-law/n-case-law.html.

[7]The ECLI search engine includes case law from 13 Member States (Belgium, Czech Republic, Germany, Estonia, Greece, Spain, France, Croatia, Italy, Latvia, Netherlands, Slovenia, and Finland). More information on the European Case Law Identifier (ECLI) can be found at https://e-justice.europa.eu/content_european_case_law_identifier_ecli-175-en.do?clang=en.

access to national and European case law. These initiatives focus primarily on providing access to case law in relation to the application of European regulations in the area of private international law. In doing so, they strive to maximise dissemination of information by elaborating as much as possible English summaries available to stakeholders in free access. Some examples in this sense are JuriFast and Dec.Nat[8], Lynxlex[9], EUFam[10], and EUPILLAR[11] databases (Figure 2).

Figure 2. Academic and professional organisations developed databases

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[8]JuriFast is a database for case law containing 'preliminary files' (i.e. preliminary questions submitted to CJEU, the CJEU decision, and the national decision(s) following the CJEU judgment) as well as national decisions on the interpretation of European Union law, www.aca-europe.eu/index.php/en/jurifast-en). Dec.Nat. is a database containing some 29,620 references to national decisions concerning Community law from 1959 up to 9 October 2017, www.aca-europe.eu/index.php/en/dec-nat-en.

[9]www.lynxlex.com.

[10]www.eufams.unimi.it/.

[11]www.abdn.ac.uk/law/research/eupillar-database-559.php.

All these databases concern specific aspects of EU and national law. The data collection concerns national case law related to the application of EU legislation (e.g. Lynxlex) or cover more than one jurisdiction (e.g. EUFam, EUPILLAR, Bruusels I-bis[12], forthcoming IC2BE[13]). Previous research carried out in the framework of the project 'Building on the European Case Law Identifier (ECLI)' on online publication of court decision in all Member States of the EU revealed that legal provisions and policy frameworks on the publication of case law differ across EU Member States. In practice, not all national courts publish their decisions, provide open access, or including the same level of detail, accessibility, metadata[14], and translations in other languages [2]. Furthermore, the ontologies used differ across databases [11].

The national, cross-jurisdiction, and European projects dedicated to the creation of databases are often the result of labour intensive analysis carried out by experts who select and classify relevant court decisions to produce structured data that is then made publicly available. They all aim to provide structured information that is easy to search through for courts, practitioners, researchers, policymakers, or parties. This can raise awareness on availability of European instruments and support informed choices in cross-border enforcement. Such endeavours can facilitate legal searches and information gathering by users who might otherwise not have been able to access and read these judgments. However, the process is made more difficult by the lack of interoperability and connection between existing databases. As van Opijnen remarks these collections remain quite small while 'the costs for development and technical maintenance are relatively high' ([6] p. 21). Project specific collection of case law are often small and do not manage to attract the attention of the communities of practitioners they are meant to serve as 'many online resources are competing for the lawyer's attention' [6]. Very specific and limited collection of cases are necessary for a small number of cases [6]. Thus, while the ECLI search engine and the European portals integrated databases can be more easy to find for the user, other projects or national initiatives remain to a certain extent less visible for users not familiar with the projects or national initiatives in other Member States as there is no single electronic environment in place providing access to the various existing databases. *De lege ferenda*, a single electronic environment would be a useful European initiative. What can appear at first as small national data has the potential to becoming 'Big Data' by aggregation [12], which in turn can lead to an exponential increase of information offered and made available for further use across the EU.

In general, these database initiatives are characterized by a patchy approach to the selection of the areas they are covering, the timeframe surveyed, their dissemination, the language(s) used, and the manner in which the data are structured. Furthermore, the way data is presented is not usually uniform, for example when access to full case law text

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[12]www.asser.nl/brusselsibis/. This database is part of a research project (JUST/2014/JCOO/AG) assessing the application of Regulation (EU) 1215/2012. The database looks to integrate court decisions from the EU Member States that are publicly accessible and apply this regulation (links to the original texts and references to court decisions are not available in free access).

[13]A new research project IC2BE (*Informed Choices in Cross-Border Enforcement*, JUST-JCOO-CIVI-AG-2016) intends to set up an English-language database for national and CJEU cases in relation to the European Enforcement Order (EEO), the European Order for Payment (EOP), the European Small Claims Procedure (ESCP), and the European Account Preservation Order (EAPO), www.ic2be.eu.

[14]This should be understood as a set of specific information selected in relation to the analysed case law included in the created databases.

is provide this is not always computer manageable (i.e. paper document scans). Some of the initiatives create English summaries together with the text of the decision in the original language. The need of translation is added to that of classification and generation of structured data. A complete translation of national cases is too costly and time consuming. Therefore, the process in general focuses in making specific kind of metadata available in English (e.g. type of procedure used, legislative provisions referred to, correlations with other relevant case law and literature, key words) and sometimes summaries. This process is laborious and requires a long process of case selection, data structuring and information choice that has to be carried out in accordance with a previously agreed taxonomy. Furthermore, compliance with data privacy requirements has to be observed[15]. In most situations, the process is purely manual and relies on a legal expert to carry it out. This makes the process highly resource demanding and costly. This has in turn effects for the maintenance, sustainability, and continuity of database initiatives, especially for grant-funded project endeavours.

Approaches that are more inclusive and less resource dependent need to be considered. As legal procedures are increasingly carried out online and judicial decisions are produced electronically, new possibilities are becoming available. Hence, technological solutions may have the potential to support more inclusive and automated data collection process and should be further considered.

4. Technology Input: Main Perspectives on Legal Database Development

Technology input into legal databases development is twofold: namely, through technology that renders access to collection of case law and case law datasets (e.g. Curia, EU-Fam, EUPILLAR), and through direct electronic support and communication via information and communication technology (ICT) with professional bodies and courts. Most of present endeavours rely on technology to provide access to legal databases that have been manually compiled following a laborious and costly process of data selection and metadata creation. The ECLI search engine (ECLI-SE) can be seen as an intermediary step between technology that facilitates access to collections of case law and the full technology based solution. This is because the Member States that implement ECLI and connect their repositories to the ECLI-SE will have their decisions and data automatically made available and displayed via this technical interface ([6], p. 10-11).

Technology based solutions follow a different approach. Technology is increasingly used to set up integrated electronic filing and handling of claims which subsequently leads to a more or less automatic feeding of the electronic decisions, thus, produced in dedicated national and/or European databases. In achieving this, the adoption of a standardised description of the documents is necessary and guarantees interoperability between the national information systems, involved authorities, and used sites. For example, the adoption of XML techniques as standard for representing the documents uni-

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[15]Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ L 119/1, 4.5.2016; Directive (EU) 2016/680 on the protection of natural persons with regard to the processing of personal data by competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data, and repealing Council Framework Decision 2008/977/JHA, OJ L 119/89, 4.5.2016.

fies the cross-border referencing system and secures interoperability. Implementing specific XML standards means that 'the users are guided to produce legal documents with a well-defined structure' [13]. This facilitates an automatic detection of specific type of information and/or text regardless of the language in which this is drafted[16].

The availability of structured documents and metadata can lead to a tailored access to information and for specific categories of users. Technology is able to provide and support personalised access to information via established databases. In practice, this would mean that no *ex ante* decision on the content of the text would need to be taken as personalised access to information would deliver specific level of detailed access based on the identity of the user (e.g. judge, enforcement officer, lawyer, party, policymaker). All information and data could be uploaded onto the national and/or European databases and, depending on the type of user consulting the database certain type of information, would become available upon research queries. This process has to comply with legislative requirements (e.g. GDPR and Data Protection Directive) related to processing of personal data, pseudonymisation, consent of data using, privacy issues, and ways in which data can be used and accessed.

Technology based solution that can lead to an integrated electronic registration and handling of cases and their direct upload on dedicated databases offer the opportunity to document the use and application of specific procedures such as the European procedures, to monitor their handling, and measure various aspects of their functioning. This is of significant importance for practitioners in terms of knowledge sharing and for policymakers.

This can be particularly true for European cross-border judicial procedures such as the European Order for Payment (EOP) and the European Small Claims Procedure (ESCP). These European procedures rely on the use of standard forms. This can support the collection of data structured *ab initio* and uniformly across the EU, as well as speeding up its collection and aggregations of decisions and case information that can be subsequently used. This process is eased when the procedures are handled electronically. Section 5 will explore the features of the electronic version of these procedures, which the e-CODEX DSI enables.

5. e-CODEX to Legal Database: New Possibilities for Data Structure and Data Access

An important novelty that can represent a new opportunity in developing more integrated cross-national legal databases results from the possibility of making use of the increased availability of electronic procedures at national, and, lately, also at EU level. This technology and law development may open up and facilitate the collection and availability of national court decisions. These developments result in digital by default judgments, which are the result of electronic procedures. At EU level for example, within the e-CODEX DSI supported judicial procedures, the EOP and the ESCP court decisions can be generated as XML and .pdf documents from electronic filed standard forms and structured data exchanged during the procedure.

e-CODEX DSI has been developed to connect and allow legally valid communication between existing national and European e-Justice back-end systems through a

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[16]On the handling of multilingual complexity, see, e.g., [14]; [15].

decentralised network of e-CODEX access points. These access points consist of two components, a Gateway that establishes and ensures secure communication with other e-CODEX access points and a Connector that carries out the adaptations of the messages and their content between national back-end systems standards and the e-CODEX ones (and vice-versa). The generic flow of a message through the e-CODEX e-Delivery solution is sketched in Figure 3.
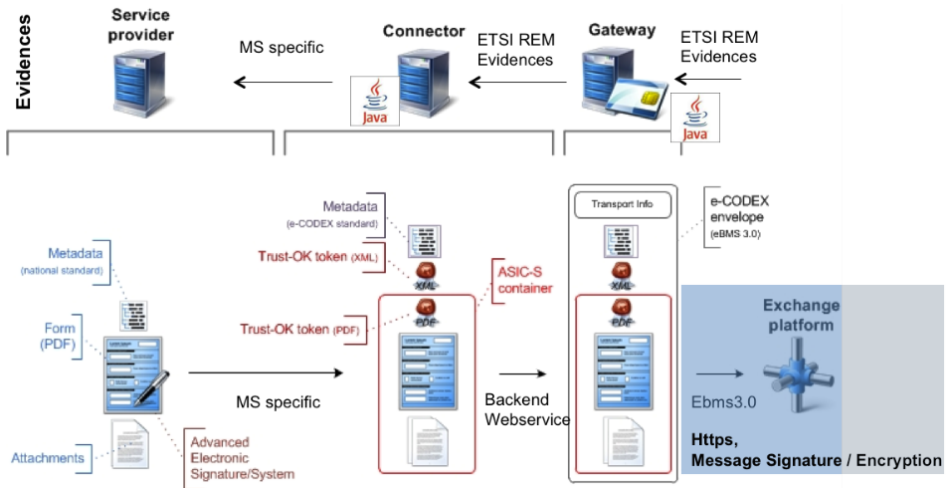

Figure 3. Generic e-CODEX national implementation and outgoing communication flow [16]

The e-CODEX DSI therefore ensure technical and legal, but also semantic interoperability. The semantic interoperability ensures that the correct meaning of the data exchanged is preserved and understood by all systems involved. National back-end e-Justice solutions 'are typically based on domestic semantic structures. To support the exchange of semantic information, e-CODEX uses common document standards and semantics. Specific coding schemas used by national systems need to be transformed in order to be interpreted by other systems using different schemas. This transformation is better known as mapping' [17]. 'Following a use-case centric modelling approach, for each use-case, with the support of national experts, e-CODEX has developed specifications which ensure mutually equal interpretation of data exchanged between national electronic systems in cross border legal procedures' [17].

At present the European procedures decisions are just sent to the parties and kept by the court. The e-CODEX system is not saving the data that is generated by the proceedings, but changes can be considered in order to use existing data and make use of the system to collect documents and their metadata (that is already unified at EU level) and feed it into a database.

Although the e-CODEX has been developed as a transportation system and it was not envisaged for the creation of an European case law database for the European uniform procedures, the forms based procedures and the metadata generated by the national systems and by the EU e-Justice portal in the transmission and receiving of procedures is a data richness that can be stored in the future and further used (Figure 4 provides an example of XML generated by the e-Justice portal when an EOP form A is filled online). Such data collection (metadata) can allow a more sophisticated and extensive analysis

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▼<dynforms>
  ▼<page_dynform_epo_a_2>
     <validation-status>valid</validation-status>
   ▼<class-name>
        eu.europa.ejusticeportal.dynforms.form.epo.EPOA2ActionForm
     </class-name>
   ▼<result-value-map xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:java="http://java.sun.c
     xsi:type="java:org.exolab.castor.mapping.MapItem">
        <key xsi:type="java:java.lang.String">parties</key>
        <value xsi:type="validator-results"/>
     </result-value-map>
     <validator-results/>
     <dynform-dynamic-next-step>0</dynform-dynamic-next-step>
   ▼<parties>
        <role xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:java="http://java.sun.com" xsi:ty
        <sur-name>John</sur-name>
        <last-name>White</last-name>
        <company/>
        <id-code/>
        <address>Clever street</address>
        <postal-code>111111</postal-code>
        <city>Rocca Secca</city>
        <country>IT</country>
        <phone/>
        <fax/>
        <email/>
        <occupation/>
        <other-details/>
     </parties>
   ▼<parties>
        <role xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:java="http://java.sun.com" xsi:ty
        <sur-name/>
```

Figure 4. Example of an EOP Form A XML structured data as generated by the e-Justice Portal

of the decisions issued on the basis of the European procedures and of their handling by courts. Such data will be generated by the procedure itself and will not require human intervention.

A database alimented by these electronic decisions could include not just text but also the structured XML data of the decision. This comprises many of the elements of the case that could be used to support 'smarter' research for practitioners and interested parties. This may significantly reduce the need of subsequent work related to the classification of data by experts or the task of anonymizing specific fields. Additional data generated during the procedure, but not available in the decision could also be used to enrich the database. Furthermore, as the support of the procedure is multilingual and e-CODEX DSI supports semantic interoperability, all the structured data would be multilingual by default.

In addition, the e-CODEX infrastructure and the richness of the available structured data could be used to profile the access of specific categories of users or to provide for different levels of authorization enabling and managing access to different sets of data, processing requests and authorizations to access data. This could allow the creation of various levels of database research details, the establishment of pre-defined and advanced research criteria and terminology, and provide support for users in need of intuitive assistance. Partial or full anonymisation can be carried out depending on the objective of the search and of the authorisation level of the user (e.g. public prosecutor carrying out an investigation on malpractice in cross-border procedures or a legal professional studying case law).

While a centralised database solutions could be developed, the decentralised nature of e-CODEX DSI could also allow the connection of national databases alimented by e-CODEX procedures. In this perspective, the e-Justice Portal could provide a single entry point through which the queries could be conveyed.

6. Concluding Remarks

This Chapter has provided an overview on the existing landscape of EU legal information databases and investigated a number of possibilities that may be available to improve it. An integrated European database containing extensive information and decisions issued by national and CJEU judges in relation to the application of European procedures and instruments can contribute to the creation of a common understanding and practice in the application of the European legislation. Furthermore, it can facilitate the correlations between various interpretations, characteristics of the cases, and outcome of the procedures. This approach can support judges' and legal practitioners' work, as well as that of parties, and to a certain extent the general public based on the level of access that is retained to comply with personal privacy legislation and GDPR provisions.

In terms of architecture of the system, the e-CODEX DSI connector structure could be used to support an interrelation of central and national databases structures through e-CODEX access points. As the database is envisaged as a direct collection process of electronically handled cases and files, attention has to be paid to the treatment of personal data and legal solutions granting various level of access for different categories of users (e.g. courts, practitioners, parties). Further research should address these legal implications.

In addition to the possibility of supporting access to central and national databases, e-CODEX services generate structured data and documents which could be used to create a decisions database. An e-CODEX database incorporated in the e-Justice Portal and building on the European 'produces' structured data (XML and XSDs) can certainly support practitioners in their interpretation and application of the regulations.

A further integration could be envisaged linking an e-CODEX generated database to the e-Justice ECLI search engine. This further development appears desirable in supporting a 'one stop shop' approach to legal information and case law across the EU. This would enhance cooperation and enable practitioners to become acquainted with the justice system and legislation of other Member States, which will in turn help boost confidence in each other's legal systems, encourage legal professionals to share best practices, and foster mutual trust.

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