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on intellectual property rights for the development of artificial intelligence
technologies
(2020/2015(INI))

Committee on Legal Affairs

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MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

on intellectual property rights for the development of artificial intelligence technologies (2020/2015(INI))

The European Parliament,

- having regard to the Treaty on the Functioning of the European Union, in particular Articles 4, 16, 26, 114 and 118 thereof,
- having regard to the Berne Convention for the Protection of Literary and Artistic Works,
- having regard to the World Intellectual Property Organisation (WIPO) Copyright Treaty and the draft Issues Paper on intellectual property policy and artificial intelligence Policies (WIPO/IP/AI/2/GE/20/1) of 13 December 2019,
- having regard to Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC¹,
- having regard to Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases²,
- having regard to Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs³,
- having regard to Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure⁴,
- having regard to Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information⁵,
- having regard to 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/EC⁶,
- having regard to Regulation (EU) 2018/1807 of the European Parliament and of the Council of 14 November 2018 on a framework for the free flow of non-personal data in the European Union⁷,
- having regard to Regulation (EU) 2019/1150 of the European Parliament and of the

¹ OJ L 130, 17.5.2019, p. 92.

² OJ L 77, 27.3.1996, p. 20.

³ OJ L 111, 5.5.2009, p. 16.

⁴ OJ L 157, 15.6.2016, p. 1.

⁵ OJ L 172, 26.6.2019, p. 56.

⁶ OJ L 119, 4.5.2016, p. 1.

⁷ OJ L 303, 28.11.2018, p. 59.

Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services⁸,

- having regard to the Commission White Paper of 19 February 2020 on Artificial Intelligence - A European approach to excellence and trust (COM(2020)0065),
 - having regard to the work of the High Level Expert Group on Artificial Intelligence set up by the Commission,
 - having regard to the Commission communications entitled ‘A European Data Strategy’ (COM(2020)0066) and ‘A new industrial strategy for Europe’ (COM(2020)0102),
 - having regard to the Guidelines for Examination in the European Patent Office (EPO) of November 2019,
 - having regard to the Digital Economy Work Programme 2016/05 ‘An Economic Policy Perspective on Online Platforms’ of the Joint Research Centre and its Institute for Prospective Technological Studies (IPTS),
 - having regard to the political guidelines for the next European Commission 2019-2024: A Union that strives for more,
 - having regard to Rule 54 of its Rules of Procedure,
 - having regard to the opinions of the Committee on the Internal Market and Consumer Protection, the Committee on Transport and Tourism and the Committee on Culture and Education,
 - having regard to the report of the Committee on Legal Affairs (A9-0000/2020),
- A. whereas the European legal framework for intellectual property aims to promote innovation, creativity and access to knowledge and information;
- B. whereas Article 118 of the Treaty on the Functioning of the European Union stipulates that the Union legislator must establish measures for the creation of European intellectual property rights (IPRs) to provide uniform protection of those rights throughout the Union; whereas the single market is conducive to the stronger economic growth needed to ensure the prosperity of European citizens;
- C. whereas recent developments in artificial intelligence (AI) represent a significant technological advance that is generating opportunities and challenges for European citizens, businesses and creators;
- D. whereas the aim of making the European Union the world leader in AI technologies must include efforts to safeguard the Union’s digital and industrial sovereignty;
- E. whereas a human-centred approach to AI is needed if the technology is to remain a tool that serves people and the common good;
- F. whereas legal certainty fosters technological development, and whereas public

⁸ OJ L 186, 11.7.2019, p. 57.

confidence in new technologies is essential for the development of this sector;

- G. whereas the EU is the appropriate level at which to regulate AI technologies in order to avoid fragmentation of the single market; whereas the EU regulatory framework in the field of AI will have the potential to become a legislative benchmark at international level;
 - H. whereas AI technologies are regarded as mathematical methods within the meaning of the European Patent Convention;
 - I. whereas AI technologies are based on the creation and execution of computer programs which, as such, are protected by copyright;
 - J. whereas AI technologies, as computer programs, cannot be patented, except under Article 52(3) of the European Patent Convention;
 - K. whereas the development of AI is raising questions about the protection of innovation itself and the application of IPRs to data generated by AI technologies, which can be industrial or artistic creations; whereas it is sometimes difficult to distinguish between assisted creation and AI-generated creation;
 - L. whereas AI technologies are heavily dependent on data, a blanket term for information falling into a range of categories that requires protection and tailored governance; whereas increased access to certain data and databases in the European Union will play a crucial role in advancing the development of European AI;
1. Welcomes the Commission White Paper on ‘Artificial Intelligence - A European approach to excellence and trust’ and the European Data Strategy; stresses that the approaches outlined therein are likely to contribute to the deployment of the potential of human-centered AI in the EU; notes, however, that the issue of the protection of IPRs in the context of the development of AI technologies does not seem to have been addressed by the Commission, despite the importance of these rights and the role played by innovation and creativity in the EU economy;
 2. Stresses that the development and deployment of AI technologies and the growth of the global data economy make it necessary to address significant technical, social, economic, ethical and legal issues in a variety of policy areas, including IPRs;
 3. Stresses the importance of protecting IPRs in relation to AI technologies, in order to create the legal certainty and build the trust needed to encourage investment in these technologies; considers that the EU can be a frontrunner in the creation of AI technologies if it adopts an operational regulatory framework that is regularly assessed in the light of technological developments and implements proactive public policies, particularly as regards training programmes and financial support for research;
 4. Considers also that the Union must address the various aspects of AI by means of a definition that is technologically neutral and sufficiently flexible to encompass future technological developments;
 5. Recommends that priority be given to assessment by sector and type of IPR implications of AI technologies; considers that such an approach should take into

account the degree of human intervention, the importance of the role of the data used and the possible involvement of other factors, such as sectoral economic equilibria;

6. Suggests that assessment focus on the impact and implications of AI technology under the current system of patent law, trade mark and design protection, copyright and related rights, including the applicability of the legal protection of databases and computer programs, and the protection of undisclosed know-how and business information ('trade secrets') against their unlawful acquisition, use and disclosure; emphasises, further, the need to assess whether contract law and competition rules ought to be strengthened in order to create a more comprehensive legal framework for the economic sectors in which AI plays a part;
7. Points out that mathematical methods are excluded from patentability unless they constitute inventions of a technical nature, which are then patentable if the applicable criteria relating to inventions are met; points out, further, that if a claim relates either to a method involving technical means or to a device, its purpose, considered as a whole, is technical in nature and it is therefore not excluded from patentability; consequently, notes that innovations in AI are patentable if the criteria relating to inventions are met;
8. Notes that patent protection can be granted provided that the invention is new and not self-evident and involves an inventive step; notes, further, that patent law requires a comprehensive description of the underlying technology, which may pose challenges for certain AI technologies in view of the complexity of the reasoning; stresses also that reverse engineering is an exception to the trade secrets rule that may pose IPR-related problems in the context of the development of AI technologies;
9. Notes that the autonomisation of the creative process raises issues relating to the ownership of IPRs; considers, in this connection, that it would not be appropriate to seek to impart legal personality to AI technologies;
10. Takes the view that consideration must be given to protecting technical and artistic creations generated by AI, in order to encourage this form of creation; considers that certain works generated by AI can be regarded as equivalent to intellectual works and could therefore be protected by copyright; recommends that ownership of rights be assigned to the person who prepares and publishes a work lawfully, provided that the technology designer has not expressly reserved the right to use the work in that way;
11. Looks forward to a review of the current policy on trade marks and designs, as these can be generated autonomously by AI applications;
12. Notes that AI makes it possible to process a large quantity of data relating to the state of the art or the existence of IPRs; notes, at the same time, that the use of AI technology cannot be a substitute for human verification in relation to the granting of IPRs and the determination of liability for infringements of IPRs;
13. Notes, with regard to the use of data by AI, that the use of copyrighted data needs to be assessed in the light of the text and data mining exceptions provided for by the Directive on copyright and related rights in the Digital Single Market; highlights the IPR issues arising from the creation of deep fakes on the basis of data which may be subject to copyright;

14. Stresses the importance of full implementation of the Digital Single Market Strategy in order to improve data accessibility in the EU; stresses the need to assess in that connection whether EU rules on intellectual property are capable of protecting the data needed for the development of AI; considers that comprehensive information should be provided on the use of data protected by IPRs, in particular in the context of platform-to-business relationships;
15. Notes that the Commission is considering the desirability of legislation on issues that have an impact on relationships between economic operators whose purpose is to make use of data, one element in which is the evaluation of the IPR framework, including a possible revision of the Database Directive and a possible clarification of the application of the directive on the protection of trade secrets as a generic framework; looks forward to the results of the public consultation procedure launched by the Commission on the European Data Strategy;
16. Stresses the need for the Commission to continue to aim at the highest level of protection of intellectual property for European AI developers and the maximum legal certainty for users in international negotiations, in particular as regards the ongoing discussions on AI and the data revolution under the auspices of the World Intellectual Property Organisation (WIPO);
17. Instructs its President to forward this resolution to the Council and the Commission as well as to the parliaments and the governments of the Member States.

EXPLANATORY STATEMENT

Artificial intelligence (AI) is a field of scientific research whose origins date back to the mid-20th century. The objective is an ambitious one: to understand how the human cognitive system works in order to reproduce it and so create comparable decision-making processes. Some years ago, a new era began in AI, thanks to a combination of vast computing power, much larger numbers of data sets and powerful algorithms.

The resulting new impetus is fuelling the development and deployment of AI in many sectors. It is making it possible, for example, to automate the analysis of clinical samples, or to adjust traffic lights in response to road traffic flows without human intervention. The potential of this technology, in terms of innovation, is therefore enormous, and **it is important that the European Union adopt an operational legal framework for the development of European AI and public policies that are commensurate with the issues at stake**, particularly with reference to the training of people in Europe and financial support for applied and fundamental research. This framework must necessarily include thinking about intellectual property rights (IPRs) in order to encourage and protect innovation and creativity in this area.

The definition of AI is still a matter for debate, but legal certainty is likely to stimulate the necessary investment in this area in the EU. A form of legislative flexibility should therefore be promoted in order to take account of the multifaceted reality of AI and create a framework that is future-proof (catering for further technological progress).

Upstream, **consideration must first be given to assessing patent law in the light of the development of AI**. Patents protect technical inventions, i.e. products that provide a new technical solution to a given technical problem. Thus, although algorithms, mathematical methods and computer programs are not patentable as such, they may form part of a technical invention that can be patented. It is crucial for the deployment of European AI that economic operators, in particular European start-ups, are aware of this opportunity.

Patent applications registered by the European Patent Office for inventions directly related to the operation of AI (core AI technologies) have more than tripled in a decade: from 396 in 2010 to 1 264 in 2017. However, it should be noted that more applications are being submitted in some third countries and that international competition in this strategic area is strong.

AI is also used by patent offices to facilitate research into the state of the art. In that connection, it seems important to point out that the technology provides useful assistance, but should not replace analysis by a human examiner as a basis for granting rights. In the field of patents, it must also be pointed out that the complexity of the reasoning used by certain AI technologies may increase the difficulty of checking that these inventions comply with existing rules.

Downstream, the growing autonomisation of certain decision-making processes can give rise to technical or artistic creations. **Assessing all IPRs in the light of these developments must be a priority for this area of EU law**, in order to foster an environment conducive to creativity and innovation by rewarding creators. The role of human intervention remains fundamental to the programming of AI devices, the selection of input data and the application

of the results obtained. The prospect of a ‘strong’ AI, that is to say one that is conscious of itself, seems after all still to be very futuristic.

As regards copyright, the condition of originality, which imprints on the work the personality of its author, could constitute an obstacle to the protection of AI-generated creations. However, the general trend with regard to that condition is towards an objective concept of relative novelty, making it possible to distinguish a protected work from works already created. AI-generated creation and ‘traditional’ creation still have in common the aim of expanding cultural heritage, even if the creation takes place by means of a different act. At a time when artistic creation by AI is becoming more common (one example being the ‘Next Rembrandt’ painting¹ generated after 346 works by the painter were digitised so that they could be processed using AI), we seem to be moving towards an acknowledgement that an AI-generated creation could be deemed to constitute a work of art on the basis of the creative result rather than the creative process. It should also be noted that a failure to protect AI-generated creations could leave the interpreters of such creations without rights, as the protection afforded by the system of related rights implies the existence of copyright on the work being interpreted.

Therefore, it is proposed that an assessment should be undertaken of the advisability of granting copyright to such a ‘creative work’ to the natural person who prepares and publishes it lawfully, provided that the designer(s) of the underlying technology has/have not opposed such use. This reasoning would be in line with the European system of protection of ‘works data’; such data may be exploited as part of the data used to train AI technologies which can then generate secondary creations, including for commercial purposes, provided that the right to such use has not been expressly reserved by their rightholders.

Lastly, given the essential role of data and its selection in the development of AI technologies, a number of questions arise concerning the accessibility of such data, in particular dependence on data, lock-in effects, the dominant position of certain undertakings and, in general, insufficient data flow. **It will therefore be important to encourage the sharing of data generated in the European Union in order to stimulate innovations in artificial intelligence.** In the short term, this may in particular be based on the transposition of the Open Data Directive and promotion of the conclusion of licensing agreements to encourage the sharing of industrial data. In the medium term, the Commission’s forthcoming proposal on the generic legislative framework for the governance of common European data areas will be decisive, in particular for access to sensitive databases such as those in the field of health.

¹ <https://www.nextrembrandt.com/>