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REPORT

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

Committee on Legal Affairs

Rapporteur: Stéphane Séjourné

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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 (TFEU), 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 Interinstitutional Agreement of 13 April 2016 on Better Law-Making¹ and the Commission's Better Regulations Guidelines (COM(2015)0215),
- having regard to the World Intellectual Property Organisation (WIPO) Copyright
 Treaty, the WIPO Performances and Phonograms Treaty and the WIPO revised Issues
 Paper of 29 May 2020 on Intellectual Property Policy and Artificial Intelligence,
- 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/EC²,
- having regard to Directive 96/9/EC of the European Parliament and of the Council of 11
 March 1996 on the legal protection of databases³,
- 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 programs⁴,
- 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 disclosure⁵,
- 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 information⁶,
- 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/EC⁷,

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¹ OJ L 123, 12.5.2016, p. 1.

² OJ L 130, 17.5.2019, p. 92.

³ OJ L 77, 27.3.1996, p. 20.

⁴ OJ L 111, 5.5.2009, p. 16.

⁵ OJ L 157, 15.6.2016, p. 1.

⁶ OJ L 172, 26.6.2019, p. 56.

⁷ OJ L 119, 4.5.2016, p. 1.

- 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 Union⁸,
- having regard to Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services⁹,
- having regard to the Commission White Paper of 19 February 2020 entitled '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 of November 2019,
- having regard to the digital economy working paper 2016/05 of the Commission's Joint Research Centre and its Institute for Prospective Technological Studies entitled 'An Economic Policy Perspective on Online Platforms',
- having regard to the political guidelines for the next European Commission 2019-2024 entitled 'A Union that strives for more: my agenda for Europe',
- having regard to its resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics¹⁰,
- 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 (A9-0176/2020),
- A. whereas the Union's legal framework for intellectual property aims to promote innovation, creativity and access to knowledge and information;
- B. whereas Article 118 of the TFEU 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 Union citizens;

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⁸ OJ L 303, 28.11.2018, p. 59.

⁹ OJ L 186, 11.7.2019, p. 57.

¹⁰ OJ C 252, 18.7.2018, p. 239.

- C. whereas recent developments in artificial intelligence (AI) and similar emerging technologies represent a significant technological advance that is generating opportunities and challenges for Union citizens, businesses, public administrations, creators and the defence sector:
- D. whereas AI technologies may render the traceability of IPRs and their application to AIgenerated output difficult, thus preventing human creators whose original work is used to power such technologies from being fairly remunerated;
- E. whereas the aim of making the Union the world leader in AI technologies must encompass efforts to regain and safeguard the Union's digital and industrial sovereignty, ensure its competitiveness and promote and protect innovation, and must require a structural reform of the Union's industrial policy to allow it to be at the forefront of AI technologies while respecting cultural diversity; whereas the Union's global leadership in AI calls for an effective intellectual property system which is fit for the digital age, enabling innovators to bring new products to the market; whereas strong safeguards are crucial to protect the Union's patent system against abuse, which is detrimental to innovative AI developers; whereas a human-centred approach to AI that is compliant with ethical principles and human rights is needed if the technology is to remain a tool that serves people and the common good;
- F. whereas the Union is the appropriate level at which to regulate AI technologies in order to avoid fragmentation of the single market and differing national provisions and guidelines; whereas a fully harmonised Union regulatory framework in the field of AI will have the potential to become a legislative benchmark at international level; whereas new common rules for AI systems should take the form of a regulation in order to establish equal standards across the Union and whereas legislation must be future-proofed to ensure it can keep pace with the fast development of this technology, and must be followed up on through thorough impact assessments; whereas legal certainty fosters technological development, and whereas public confidence in new technologies is essential for the development of this sector, as it strengthens the Union's competitive advantage; whereas the regulatory framework governing AI should therefore inspire confidence in the safety and reliability of AI and strike a balance between public protection and business incentives for investment in innovation;
- G. whereas AI and related technologies are based on computational models and algorithms, which are regarded as mathematical methods within the meaning of the European Patent Convention (EPC) and are therefore not patentable as such; whereas mathematical methods and computer programs may be protected by patents under Article 52(3) of the EPC when they are used as part of an AI system that contributes to producing a further technical effect; whereas the impact of such potential patent protection should be thoroughly assessed;
- H. whereas AI and related technologies are based on the creation and execution of computer programs which, as such, are subject to a specific copyright protection regime, whereby only the expression of a computer program may be protected, and not the ideas, methods and principles which underlie any element of it;
- I. whereas an increasing number of AI-related patents are being granted;

- J. whereas the development of AI and related technologies raises questions about the protection of innovation itself and the application of IPRs to materials, content or data generated by AI and related technologies, which can be of an industrial or artistic nature and which create various commercial opportunities; whereas in this regard it is important to distinguish between AI-assisted human creations and creations autonomously generated by AI;
- J. whereas AI and related technologies are heavily dependent on pre-existing content and large volumes of data; whereas increased transparent and open access to certain non-personal data and databases in the Union, especially for SMEs and start-ups, as well as interoperability of data, which limits lock-in effects, will play a crucial role in advancing the development of European AI and supporting the competitiveness of European companies at the global level; whereas the collection of personal data must respect fundamental rights and data protection rules and requires tailored governance, namely in terms of data management and the transparency of data used in developing and deploying AI technologies, and this throughout the entire lifecycle of an AI-enabled system;
- 1. Takes note of 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 unlocking the potential of human-centred AI in the EU; notes, however, that the issue of the protection of IPRs in the context of the development of AI and related technologies has not been addressed by the Commission, despite the key importance of these rights; highlights the necessity of creating a single European data space and believes that the use thereof will play an important role in innovation and creativity in the Union economy, which should be incentivised; stresses that the Union should play an essential role in laying down basic principles on the development, deployment and use of AI, without hindering its advancement or impeding competition;
- 2. Highlights the fact that the development of AI and related technologies in the transport and tourism sectors will bring innovation, research, the mobilisation of investment and considerable economic, societal, environmental, public and safety benefits, while making these sectors more attractive to new generations and creating new employment opportunities and more sustainable business models, but stresses that it should not cause harm or damage to people or society;
- 3. Stresses the importance of creating an operational and fully harmonised regulatory framework in the field of AI technologies; suggests that such a framework should take the form of a regulation rather than a directive in order to avoid fragmentation of the European digital single market and promote innovation;
- 4 Calls on the Commission to take into account the seven key requirements identified in the Guidelines of the High-Level Expert Group, as welcomed by it in its communication of 8 April 2019¹¹, and properly implement them in all legislation dealing with AI;
- 5. Stresses that the development, deployment and use of AI technologies and the growth of the global data economy make it necessary to address significant technical, social,

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¹¹ 'Building trust in human-centric artificial intelligence' (COM(2019)0168).

- economic, ethical and legal issues in a variety of policy areas, including IPRs and their impact on these policy areas; highlights that in order to unlock the potential of AI technologies, it is necessary to remove unnecessary legal barriers, so as not to hamper the growth of or innovation in the Union's developing data economy; calls for an impact assessment to be conducted with regards to the protection of IPRs in the context of the development of AI technologies;
- 6. Stresses the key importance of balanced IPR protection in relation to AI technologies, and of the multidimensional nature of such protection, and, at the same time, stresses the importance of ensuring a high level of protection of IPRs, of creating legal certainty and of building the trust needed to encourage investment in these technologies and ensure their long-term viability and use by consumers; considers that the Union has the potential to become the frontrunner in the creation of AI technologies by adopting an operational regulatory framework that is regularly assessed in the light of technological developments and by implementing proactive public policies, particularly as regards training programmes and financial support for research and public-private sector cooperation; reiterates the need to ensure sufficient leeway for the development of new technologies, products and services; emphasises that creating an environment conducive to creativity and innovation by encouraging the use of AI technologies by creators must not come at the expense of the interests of human creators, nor the Union's ethical principles;
- 7. Considers also that the Union must address the various aspects of AI by means of definitions that are technologically neutral and sufficiently flexible to encompass future technological developments as well as subsequent uses; considers it necessary to continue to reflect on interactions between AI and IPRs, from the perspective of both intellectual property offices and users; believes that the challenge of assessing AI applications creates a need for some transparency requirements and the development of new methods as, for instance, adaptive learning systems may recalibrate following each input, making certain ex ante disclosures ineffective;
- 8. Stresses the importance of streaming services being transparent and responsible in their use of algorithms, so that access to cultural and creative content in various forms and different languages as well as impartial access to European works can be better guaranteed;
- 9. Considers the increasing need for AI and related technologies in remote or biometric recognition technologies, such as tracing apps in the transport and tourism sector, as a new way of dealing with COVID-19 and possible future sanitary and public health crises, while keeping sight of the need to protect fundamental rights, privacy and personal data;
- 10. 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, for example, the degree of human intervention, the autonomy of AI, the importance of the role and the origin of the data and copyright-protected material used and the possible involvement of other relevant factors; recalls that any approach must strike the right balance between the need to protect investments of both resources and effort and the need to incentivise creation and sharing; takes the view that more

thorough research is necessary for the purposes of evaluating human input regarding AI algorithmic data; believes that disruptive technologies such as AI offer both small and large companies the opportunity to develop market-leading products; considers that all companies should benefit from equally efficient and effective IPR protection; therefore calls on the Commission and the Member States to offer support to start-ups and SMEs via the Single Market Programme and Digital Innovation Hubs in protecting their products;

- Suggests that this assessment focus on the impact and implications of AI and related 11. technologies under the current system of patent law, trademark 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; acknowledges the potential of AI technologies to improve the enforcement of IPRs, notwithstanding the need for human verification and review, especially where legal consequences are concerned; emphasises, further, the need to assess whether contract law ought to be updated in order to best protect consumers and whether competition rules need to be adapted in order to address market failures and abuses in the digital economy, the need to create a more comprehensive legal framework for the economic sectors in which AI plays a part, thus enabling European companies and relevant stakeholders to scale up, and the need to create legal certainty; stresses that the protection of intellectual property must always be reconciled with other fundamental rights and freedoms;
- 12. Points out that mathematical methods as such are excluded from patentability unless they are used for a technical purpose in the context of technical inventions, which are themselves patentable only if the applicable criteria relating to inventions are met; points out, further, that if an invention relates either to a method involving technical means or to a technical device, its purpose, considered as a whole, is in fact technical in nature and is therefore not excluded from patentability; underlines, in this regard, the role of the patent protection framework in incentivising AI inventions and promoting their dissemination, as well as the need to create opportunities for European companies and start-ups to foster the development and uptake of AI in Europe; points out that standard essential patents play a key role in the development and dissemination of new AI and related technologies and in ensuring interoperability; calls on the Commission to support the establishment of industry standards and encourage formal standardisation;
- 13. 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 the legal challenges of reverse engineering, which is an exception to the copyright protection of computer programs and the protection of trade secrets, which are in turn of crucial importance for innovation and research and which should be duly taken into account in the context of the development of AI technologies; calls on the Commission to assess possibilities for products to be adequately tested, for example in a modular way, without creating risks for IPR holders or trade secrets due to extensive disclosure of easily replicated products; stresses that AI technologies should be openly available for educational and research purposes, such as more effective learning methods;

- 14. Notes that the autonomisation of the creative process of generating content of an artistic nature can raise issues relating to the ownership of IPRs covering that content; considers, in this connection, that it would not be appropriate to seek to impart legal personality to AI technologies and points out the negative impact of such a possibility on incentives for human creators;
- 15. Points out the difference between AI-assisted human creations and AI-generated creations, with the latter creating new regulatory challenges for IPR protection, such as questions of ownership, inventorship and appropriate remuneration, as well as issues related to potential market concentration; further considers that IPRs for the development of AI technologies should be distinguished from IPRs potentially granted for creations generated by AI; stresses that where AI is used only as a tool to assist an author in the process of creation, the current IP framework remains applicable;
- Takes the view that technical creations generated by AI technology must be protected under the IPR legal framework in order to encourage investment in this form of creation and improve legal certainty for citizens, businesses and, since they are among the main users of AI technologies for the time being, inventors; considers that works autonomously produced by artificial agents and robots might not be eligible for copyright protection, in order to observe the principle of originality, which is linked to a natural person, and since the concept of 'intellectual creation' addresses the author's personality; calls on the Commission to support a horizontal, evidence-based and technologically neutral approach to common, uniform copyright provisions applicable to AI-generated works in the Union, if it is considered that such works could be eligible for copyright protection; recommends that ownership of rights, if any, should only be assigned to natural or legal persons that created the work lawfully and only if authorisation has been granted by the copyright holder if copyright-protected material is being used, unless copyright exceptions or limitations apply; stresses the importance of facilitating access to data and data sharing, open standards and open source technology, while encouraging investment and boosting innovation;
- 17. 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 AI or related technologies used for the registration procedure to grant IPRs and for the determination of liability for infringements of IPRs cannot be a substitute for human review carried out on a case-by-case basis, in order to ensure the quality and fairness of decisions; notes that AI is progressively gaining the ability to perform tasks typically carried out by humans and stresses, therefore, the need to establish adequate safeguards, including design systems with human-in-the-loop control and review processes, transparency, accountability and verification of AI decision-making;
- 18. Notes, with regard to the use of non-personal data by AI technologies, that the lawful use of copyrighted works and other subject matter and associated data, including pre-existing content, high-quality datasets and metadata, needs to be assessed in the light of the existing rules on limitations and exceptions to copyright protection, such as the text and data mining exception, as provided for by the Directive on copyright and related rights in the Digital Single Market; calls for further clarification as regards the protection of data under copyright law and potential trademark and industrial design protection for works generated autonomously through AI applications; considers that

voluntary non-personal data sharing between businesses and sectors should be promoted and based on fair contractual agreements, including licencing agreements; highlights the IPR issues arising from the creation of deep fakes on the basis of misleading, manipulated or simply low-quality data, irrespective of such deep fakes containing data which may be subject to copyright; is worried about the possibility of mass manipulation of citizens being used to destabilise democracies and calls for increased awareness-raising and media literacy as well as for urgently needed AI technologies to be made available to verify facts and information; considers that non-personal auditable records of data used throughout the life cycles of AI-enabled technologies in compliance with data protection rules could facilitate the tracing of the use of copyrightprotected works and thereby better protect right-holders and contribute to the protection of privacy, if the requirement to keep auditable records were extended to cover data containing or deriving from images and/or videos containing biometric data; stresses that AI technologies could be useful in the context of IPR enforcement, but would require human review and a guarantee that any AI-driven decision-making systems are fully transparent; stresses that any future AI regime may not circumvent possible requirements for open source technology in public tenders or prevent the interconnectivity of digital services; notes that AI systems are software-based and rely on statistical models, which may include errors; stresses that AI-generated output must not be discriminatory and that one of the most efficient ways of reducing bias in AI systems is to ensure – to the extent possible under Union law – that the maximum amount of non-personal data is available for training purposes and machine learning; calls on the Commission to reflect on the use of public domain data for such purposes;

- 19. Stresses the importance of full implementation of the Digital Single Market Strategy in order to improve the accessibility and interoperability of non-personal data in the EU; stresses that the European Data Strategy must ensure a balance between promoting the flow of, wider access to and the use and sharing of data on the one hand, and the protection of IPRs and trade secrets on the other, while respecting data protection and privacy rules; highlights the need to assess in that connection whether Union rules on intellectual property are an adequate tool to protect data, including sectoral data needed for the development of AI, recalling that structured data, such as databases, when enjoying IP protection, may not usually be considered to be data; 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; welcomes the Commission's intention to create a single European data space;
- 20. 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 non-personal data and welcomes 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;
- 21. Stresses the need for the Commission to aim to provide balanced and innovation-driven protection of intellectual property, for the benefit of European AI developers, to strengthen the international competitiveness of European companies, including against possible abusive litigation tactics, and to ensure maximum legal certainty for users, notably in international negotiations, in particular as regards the ongoing discussions on

AI and data revolution under the auspices of WIPO; welcomes the Commission's recent submissions of the Union's views to the WIPO public consultation on the WIPO draft Issues Paper on Intellectual Property Policy and Artificial Intelligence; recalls in this regard the Union's ethical duty to support development around the world by facilitating cross-border cooperation on AI, including through limitations and exceptions for cross-border research and text and data mining, as provided for by the Directive on copyright and related rights in the Digital Single Market;

- 22. Is fully aware that progress in AI will have to be paired with public investment in infrastructure, training in digital skills and major improvements in connectivity and interoperability in order to come to full fruition; highlights, therefore, the importance of secure and sustainable 5G networks for the full deployment of AI technologies but, more importantly, of necessary work on the level of infrastructure and security thereof throughout the Union; takes note of the intensive patenting activity taking place in the transport sector when it comes to AI; expresses its concern that this may result in massive litigation that will be detrimental to the industry as a whole and may also affect traffic safety if we do not legislate on the development of AI-related technologies at Union level without further delay;
- 23. Endorses the Commission's willingness to invite the key players from the manufacturing sector transport manufacturers, AI and connectivity innovators, service providers from the tourism sector and other players in the automotive value chain to agree on the conditions under which they would be ready to share their data;
- 24. 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

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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 <u>https://www.nextrembrandt.com/</u>

OPINION OF THE COMMITTEE ON THE INTERNAL MARKET AND CONSUMER PROTECTION

for the Committee on Legal Affairs

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

Rapporteur for opinion: Adam Bielan

SUGGESTIONS

The Committee on the Internal Market and Consumer Protection calls on the Committee on Legal Affairs, as the committee responsible, to incorporate the following suggestions into its motion for a resolution:

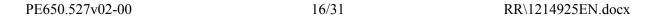
- 1. Recalls the potential that artificial intelligence (AI) has when it comes to delivering innovative services to businesses, consumers and the public sector; stresses the key role that AI technologies can play in the digitisation of the economy in many sectors, such as industry, healthcare, construction and transport, which can lead to the establishment of new business models; highlights that the Union must actively embrace developments in this area to advance the digital single market; underlines that the development and use of AI in the internal market will benefit from a reliable, balanced and effective system of intellectual property rights (IPRs); notes the importance of differentiating between AI applications or algorithms, AI-generated technology and products, data bases and individual data, which require different forms of rights;
- 2. Believes that disruptive technologies such as AI offer both small and large companies the opportunity to develop market-leading products; considers that all companies or other owners of such products should benefit from equally efficient and effective IPR protection; considers that this may foster the emergence of European small and medium-sized enterprises (SMEs) and result in a significant competitive advantage in the Union; calls for an analysis of the impact of abusive practices by 'patent trolls' and strategic IPR litigation, which can act as an artificial barrier to entry and protect market incumbents; underlines the importance of AI technologies when it comes to enabling a more transparent, efficient and reliable management of IP-related aspects of transactions;
- 3. Stresses the importance of measures and information channels that help SMEs and startups to effectively use IPR protection in AI technologies; calls on the Commission and

the Member States to offer support to start-ups and SMEs via the Single Market Programme and Digital Innovation Hubs to develop and protect their products and thus enable them to fully develop their potential for growth and jobs in Europe; stresses the importance of the Commission and the Member States seeking coordination with other important global players in IPR for the development of AI, so as to create a globally compatible approach that would be beneficial for both SMEs and start-ups;

- 4. Stresses the importance of protecting IPRs, including trade secrets, in any regulatory framework for AI, in particular as regards any detailed requirements for the narrow set of applications deemed 'high-risk', while recognising the need to reconcile these with the application of other public policy objectives, including respect for fundamental rights or freedoms; believes that in order to ensure the development of human-centric, trusted AI, effective implementation of the legislation concerning whistle-blowers is needed;
- 5. Stresses that in addition to protecting IPRs, it is in the interest of consumers to have legal certainty about allowed uses of protected works, especially when it comes to complicated algorithmic products; calls for the Commission to propose measures for data traceability, while taking into account both the legality of data acquisition and the protection of consumer and fundamental rights;
- 6. Believes that the challenge of assessing AI applications requires the development of new methods and proper administrative capacity for the market surveillance authorities; notes that adaptive learning systems may recalibrate following each input, making certain ex ante disclosures alone ineffective;
- 7. Considers that where AI applications are certified, they should demonstrate transparency, explainability as much as feasibly possible and compliance with ethical standards; notes that this goal cannot be solely achieved through the simple disclosure of the algorithm or code, if at all; recalls that data sets are also important in this process;
- 8. Calls on the Commission to consider how to assess ways that allow for products to be tested, for instance in a modular way or with the use of verification tools that would allow products to be adequately tested while observing confidentiality in order to protect the commercial secrets held by IPR holders.

INFORMATION ON ADOPTION IN COMMITTEE ASKED FOR OPINION

Date adopted	7.7.2020
Result of final vote	+: 43 -: 0 0: 1
Members present for the final vote	Alex Agius Saliba, Andrus Ansip, Brando Benifei, Adam Bielan, Hynek Blaško, Biljana Borzan, Vlad-Marius Botoş, Markus Buchheit, Dita Charanzová, Deirdre Clune, David Cormand, Petra De Sutter, Carlo Fidanza, Evelyne Gebhardt, Alexandra Geese, Sandro Gozi, Maria Grapini, Svenja Hahn, Virginie Joron, Eugen Jurzyca, Arba Kokalari, Marcel Kolaja, Kateřina Konečná, Andrey Kovatchev, Jean-Lin Lacapelle, Maria-Manuel Leitão-Marques, Adriana Maldonado López, Antonius Manders, Beata Mazurek, Leszek Miller, Kris Peeters, Anne-Sophie Pelletier, Christel Schaldemose, Andreas Schwab, Tomislav Sokol, Ivan Štefanec, Kim Van Sparrentak, Marion Walsmann, Marco Zullo
Substitutes present for the final vote	Pascal Arimont, Marco Campomenosi, Maria da Graça Carvalho, Edina Tóth, Stéphanie Yon-Courtin



FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

43	+
ECR	Adam Bielan, Carlo Fidanza, Eugen Jurzyca, Beata Mazurek
ЕРР	Pascal Arimont, Maria da Graça Carvalho, Deirdre Clune, Arba Kokalari, Andrey Kovatchev, Antonius Manders, Kris Peeters, Andreas Schwab, Tomislav Sokol, Ivan Štefanec, Edina Tóth, Marion Walsmann
EUL/NGL	Kateřina Konečná, Anne-Sophie Pelletier
GREENS/EFA	David Cormand, Petra De Sutter, Alexandra Geese, Marcel Kolaja, Kim Van Sparrentak,
ID	Markus Buchheit, Marco Campomenosi, Virginie Joron, Jean-Lin Lacapelle
NI	Marco Zullo
RENEW	Andrus Ansip, Vlad-Marius Botoş, Dita Charanzová, Sandro Gozi, Svenja Hahn, Stéphanie Yon-Courtin
S&D	Alex Agius Saliba, Brando Benifei, Biljana Borzan, Evelyne Gebhardt, Maria Grapini, Maria-Manuel Leitão-Marques, Adriana Maldonado López, Leszek Miller, Christel Schaldemose

0	-

1	0
ID	Hynek Blaško

Key to symbols: + : in favour - : against 0 : abstention

OPINION OF THE COMMITTEE ON TRANSPORT AND TOURISM

for the Committee on Legal Affairs

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

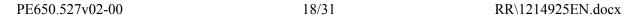
Rapporteur for opinion: Andor Deli

SUGGESTIONS

The Committee on Transport and Tourism calls on the Committee on Legal Affairs, as the committee responsible, to incorporate the following suggestions into its motion for a resolution:

Introduction

- 1. Welcomes the ambitions affirmed by the Commission in its communications of 19 February 2020, as well as in its White Paper on 'Artificial Intelligence A European approach to excellence and trust' and in the European Data Strategy, in the area of artificial intelligence (AI) and data; notes, however, that the issue of the protection of intellectual property rights (IPRs) in the context of the development of AI and related technologies has to be taken more seriously;
- 2. Stresses that the development and deployment of AI and related technologies make it necessary to address technical, social, economic, ethical and legal issues and cross-sectoral implications in a variety of policy areas, including IPRs, and to provide answers and formulate policies at the European level;
- 3. Highlights the fact that the development of AI and related technologies in the transport and tourism sectors will bring innovation, research, the mobilisation of investment and considerable economic, societal, environmental, public and safety benefits, while making the sector more attractive to new generations and creating new employment opportunities and more sustainable business models, but should not cause harm or damage to people or society;
- 4. Takes note of the global competition between companies and economic regions in the development of AI solutions for the transport sector; highlights the need to strengthen the international competitiveness of European companies operating in the transport sector by establishing the EU as an environment favourable for the development and application of AI solutions; underlines furthermore that AI should also be deployed in all modes of transport, in both urban and rural areas, and that a holistic, technologically



- neutral and flexible approach is therefore needed to tackle adequately all the challenges in the transport and mobility sector;
- 5. Affirms that defining the appropriate legal framework at EU level for IPRs for AI and connectivity innovations, as well as for access to and security of data will be key in the development and smooth, safe and wide dissemination of AI and related technologies in transport and tourism ecosystems;
- 6. Considers that intellectual property (IP) protection strategies will constantly evolve over time as AI evolves, and that it will be necessary to take account of issues such as adapting to this changing environment with flexible copyright, patent, trademark and design protection or even trade secret rules, and to consider what route will provide innovators with the broadest and most robust means of IP protection that combine legal certainty and encourage new investment in private enterprises, universities, SMEs and clusters using public-private collaboration to support research and development;
- 7. Calls on the Commission to take into account the seven key requirements identified in the Guidelines of the High-Level Expert Group, as welcomed by it in its communication of 8 April 2019¹, and properly implement them in all legislation dealing with AI;
- 8. Considers the increasing need for AI and related technologies in remote or biometric recognition technologies, such as tracing apps in the transport and tourism sector, as a new way of dealing with COVID-19 and possible future sanitary and public health crises, while keeping sight of the need to protect fundamental rights, privacy and personal data;

IP rights and AI innovations

- 9. Notes that the current fragmented legal framework of IP rights and legal uncertainty affect the development of AI and related technologies in transport; calls on the Commission, therefore, to evaluate the fitness of its intellectual property regime for the development of AI technologies and, after a thorough analysis and review of the current legislation, to put forward the legislative proposals it finds necessary in order to ensure confidence, legal certainty and transparency and avoid further fragmentation, thus encouraging investment in these technologies;
- 10. Notes that although AI makes it possible to process a large quantity of data relating to IPRs, it cannot be a substitute for human verification in relation to the granting of IPRs and the determination of liability for infringements of IPRs;
- 11. 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, and in the light of all uses covered by limitations and exceptions to IPR protection;
- 12. Calls on the Commission to evaluate the possibility and relevance for companies, including SMEs, of obtaining patents for software or algorithms with a view to ensuring both the protection of innovation and the need for transparency required for trustworthy

¹ 'Building trust in human-centric artificial intelligence' (COM(2019)0168).

- AI, as well as the availability of algorithms used for public purposes; stresses the need to maintain a level playing field between these companies, as well as the importance of remaining consistent with competition law;
- 13. Is fully aware that progress in AI will have to be paired with public investment in infrastructure, training in digital skills and major improvements in connectivity and interoperability in order to come to full fruition; highlights, therefore, the importance of secure and sustainable 5G networks for the full deployment of AI technologies but, more importantly, necessary work on the level of infrastructure and security thereof throughout the Union; takes note of the intensive patenting activity taking place in the transport sector when it comes to AI; expresses its concern that this may result in massive litigation that will be detrimental to the industry as a whole and may also affect traffic safety if we do not legislate the development of AI-related technologies at European level without further delay;
- 14. Points out that standard essential patents (SEPs) play a key role in the development and dissemination of new AI and related technologies and ensuring interoperability; calls on the Commission to encourage the emergence of cross-industry standards and formal standardisation; recalls in this regard the Commission's communication of 29 November 2017 on SEP licensing and the key principles it set out for transparency in SEPs, namely fair, reasonable and non-discriminatory (FRAND) licensing and enforcement; draws particular attention to SEPs that can improve accessibility, road safety and security for transport users;

Intellectual property rights and data

- 15. Welcomes the Commission's willingness to ensure that data will be collected and used in full compliance with the EU's General Data Protection Regulation and other strict data protection rules; stresses the need to continue to safeguard the data of European citizens, but considers a right balance between data protection and IP rules is needed in order to grant necessary flexibility to AI innovators;
- 16. Welcomes the Commission's aim of creating a single European data space with investment in standards, tools and infrastructure; supports in particular the establishment of a common European mobility data space, taking into consideration the existing European legislative framework on data protection;
- 17. Calls on the Commission to address adequately and urgently the question of, and legislative proposals relating to, data and intellectual property protection with fair and appropriate flexibility and in compliance with the principle of technological neutrality, also by developing initiatives for the exchange of best practices and investing in research in this field;
- 18. Welcomes the future establishment of an enabling and flexible legislative framework for the governance of common European data spaces, as well as the Commission's willingness to foster business-to-government and business-to-business data sharing and to limit mandatory access to data under FRAND conditions to the cases where specific circumstances so dictate; highlights the importance of access to vehicle generated data for all mobility stakeholders in order to promote the development of innovative data-driven services;

- 19. Calls on the Commission to pay special attention to access for SMEs and clusters to data that could boost their activity, as well as to technology centres and universities to promote their research programmes;
- 20. Endorses the Commission's willingness to invite the key players from the manufacturing sector transport manufacturers, AI and connectivity innovators, service providers from the tourism sector and other players in the automotive value chain to agree on the conditions under which they would be ready to share their data.

INFORMATION ON ADOPTION IN COMMITTEE ASKED FOR OPINION

Date adopted	14.7.2020
Result of final vote	+: 41 -: 2 0: 6
Members present for the final vote	Magdalena Adamowicz, Andris Ameriks, José Ramón Bauzá Díaz, Izaskun Bilbao Barandica, Marco Campomenosi, Ciarán Cuffe, Jakop G. Dalunde, Johan Danielsson, Andor Deli, Karima Delli, Anna Deparnay-Grunenberg, Ismail Ertug, Gheorghe Falcă, Giuseppe Ferrandino, Mario Furore, Søren Gade, Isabel García Muñoz, Jens Gieseke, Elsi Katainen, Kateřina Konečná, Elena Kountoura, Julie Lechanteux, Bogusław Liberadzki, Benoît Lutgen, Elżbieta Katarzyna Łukacijewska, Marian-Jean Marinescu, Tilly Metz, Giuseppe Milazzo, Cláudia Monteiro de Aguiar, Caroline Nagtegaal, Jan-Christoph Oetjen, Philippe Olivier, Rovana Plumb, Dominique Riquet, Dorien Rookmaker, Massimiliano Salini, Barbara Thaler, István Ujhelyi, Elissavet Vozemberg-Vrionidi, Lucia Vuolo, Roberts Zīle, Kosma Złotowski
Substitutes present for the final vote	Leila Chaibi, Angel Dzhambazki, Markus Ferber, Carlo Fidanza, Maria Grapini, Roman Haider, Alessandra Moretti

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FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

41	+
ECR	Angel Dzhambazki, Carlo Fidanza, Roberts Zīle, Kosma Złotowski
NI	Mario Furore, Dorien Rookmaker
PPE	Magdalena Adamowicz, Andor Deli, Gheorghe Falcă, Markus Ferber, Jens Gieseke, Elżbieta Katarzyna Łukacijewska, Benoît Lutgen, Marian-Jean Marinescu, Giuseppe Milazzo, Cláudia Monteiro de Aguiar, Massimiliano Salini, Barbara Thaler, Elissavet Vozemberg-Vrionidi
RENEW	José Ramón Bauzá Díaz, Izaskun Bilbao Barandica, Søren Gade, Elsi Katainen, Caroline Nagtegaal, Jan-Christoph Oetjen, Dominique Riquet
S&D	Andris Ameriks, Johan Danielsson, Ismail Ertug, Giuseppe Ferrandino, Isabel García Muñoz, Maria Grapini, Bogusław Liberadzki, Alessandra Moretti, Rovana Plumb, István Ujhelyi
VERTS/ALE	Ciarán Cuffe, Jakop G. Dalunde, Karima Delli, Anna Deparnay-Grunenberg, Tilly Metz

2	-
GUE/NGL	Leila Chaibi, Kateřina Konečná

6	0
GUE/NGL	Elena Kountoura
ID	Marco Campomenosi, Roman Haider, Julie Lechanteux, Philippe Olivier, Lucia Vuolo

Key to symbols: + : in favour - : against 0 : abstention

OPINION OF THE COMMITTEE ON CULTURE AND EDUCATION

for the Committee on Legal Affairs

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

Rapporteur: Sabine Verheyen

SUGGESTIONS

The Committee on Culture and Education calls on the Committee on Legal Affairs, as the committee responsible, to incorporate the following suggestions into its motion for a resolution:

- 1. Recalls that artificial intelligence (AI) and related technologies, more broadly, should be at the service of humanity and that their benefits should be widely shared, without any discrimination; stresses that, as AI is an ever-changing collection of technologies that are being developed at great speed, and as it is progressively gaining the ability to perform more tasks typically carried out by humans, it may even surpass human intellectual capacity in some areas in the long term; stresses the need, therefore, to establish adequate safeguards including, when reasonable, design systems with human-in-the-loop control and review processes, transparency and verification of AI decision-making; recognises that in the cultural and creative sectors, creators already make extensive use of new AI technologies to produce their artistic works;
- 2. Stresses that the Union should play an essential role in laying down basic principles on the development, deployment, programming and use of AI, without hindering its advancement or impeding competition, notably in Union regulations and codes of conduct; recalls that Directive (EU) 2019/790 provides a legal framework for the use of copyright protected works in text and data mining (TDM) processes, which are key in any AI-related process; emphasises, therefore, the requirement that any work used must be accessed lawfully, as well as the guaranteed right of rights holders to pre-emptively opt out their works from being used in an AI-related process without their authorisation; also stresses the need for an ethical framework and strategy for digital data, accompanied, if necessary, by legislation in which fundamental rights and Union values are enshrined;
- 3. Underlines the importance of using AI in schools and universities, enabling them to



- adopt new and more efficient learning methods that will increase pupils' and students' success rates; stresses the importance of promoting AI curricula designed to help pupils and students to acquire the know-how needed for future jobs; stresses that AI technologies should be openly available for educational and research purposes;
- 4. Stresses that open and equal access to AI across the Union and within the Member States is of upmost importance; stresses that Union support for AI innovation and research should be widely available across the Union; highlights that special support should be given to AI developers and beneficiaries from disadvantaged groups and those with disabilities;
- 5. Considers that guidance and counselling for AI developers and users on protecting IPR should be widely available;
- 6. Recalls that AI cannot only perform activities which used to be exclusively human, but can also acquire and develop autonomous and cognitive features through experience learning or reinforcement learning; stresses the notion of responsibility with regard to AI systems capable of learning through reinforcement; stresses that trained AI systems can quasi-autonomously create and generate cultural and creative works, with only minimum human input; notes, moreover, that AI systems can evolve in an unpredictable way, by creating original works unknown even to their initial programmers, a fact that should also be taken into account when establishing a framework for the protection of the exploitation rights derived from such works; reiterates, nevertheless, that AI should assist and not replace the creative human mind;
- 7. Takes note that AI systems are software-based and display intelligent behaviour based on an analysis of their environment; highlights that this analysis is based on statistical models of which errors form an inevitable part, sometimes with feedback loops that replicate, reinforce and prolong pre-existing biases, errors and assumptions; notes the need to ensure that systems and methods are in place to allow algorithms to be verified and explained and any problems to be resolved;
- 8. Considers that IPR for the development of AI technologies should be distinguished from IPR for content generated by AI; stresses the need to remove unnecessary legal barriers to AI development in order to unlock the potential of such technologies in culture and education;
- 9. Emphasises the need to address copyright issues relating to AI-generated cultural and creative works; underlines that creation by human beings as authors and producers of works must form the basis of the IPR system; notes, furthermore, that the question of the extent to which a work created by AI can be traced back to a human creator is of key importance; draws attention to the need to assess whether there is such a thing as an 'original creation' that does not require any human intervention; considers that thorough research is needed to understand whether automatically assigning the copyright of AI-generated works to the copyright holder of the AI software, algorithm or programme is the best way forward, as there is a need for a human to be credited as the author of a new creative work; welcomes the Commission's call for a study on copyright and new technologies;
- 10. Expresses concern about the potential vacuum between IPR and the development of AI, which could make the cultural and creative sectors and education vulnerable to AI-

generated copyright-protected works; is concerned about possible infringements of intellectual property and stresses the need to monitor any market failures or damage that occur; calls on the Commission to support a horizontal, evidence-based and technologically neutral approach to common, uniform copyright provisions applicable to AI-generated works in the Union, which would increase their growth and also attract private sector investment in the technological and economic development of the AI and robotics sector;

- 11. Notes the development of AI capacities in the dissemination of misinformation and the creation of disinformation; is concerned that this could lead to many breaches of intellectual property legislation, and is, furthermore, extremely worried about the possibility of mass manipulation of citizens being used to destabilise democracies; calls in this regard for action to increase information and media literacy, taking account of the fact that digital transformation is an indispensable aspect thereof; calls for the development of software to verify facts and information to be made a priority;
- 12. Recalls that data is the central element of the development and training of any AI system; stresses that this includes structured data, such as databases, copyright-protected works and other creations enjoying IP protection which may not usually be considered to be data; stresses therefore that it is also important to address the notion of IP-relevant uses relating to the functioning of AI technologies;
- 13. Points out that the most efficient way of reducing bias in AI systems is to ensure that the maximum amount of data is available to train them, for which it is necessary to limit any unnecessary barriers to TDM and to facilitate cross-border uses;
- 14. Stresses that where AI is used only as a tool to assist an author in the process of creation, the current copyright framework remains applicable to the work created and the intervention of AI is not taken into consideration;
- 15. Recommends that special security features and rules be introduced in order to protect privacy rights related to AI technologies; stresses that privacy auditing of AI technologies should be compulsory;
- 16. Further recalls that the Union copyright reform introduced a TDM exception according to which scientific research may benefit from free data uses, and that TDM carried out for other purposes will also be allowed under the new exception if further requirements are met;
- 17. Emphasises that AI can also be an effective tool for detecting and reporting the presence of copyright-protected content online; also emphasises the need to address the issue of liability for copyright and other intellectual property infringements by AI systems, as well as the issue of data ownership; stresses, however, that a clear distinction has to be made between autonomous infringements and the copying of third party works that were facilitated or not prevented by the operator of the AI software; states that traceability should be an indispensable condition in allocating responsibility, as it acts both as a basis for legal action and enables the diagnosis and correction of malfunctions;
- 18. Stresses the importance of streaming services being transparent and responsible in their use of algorithms, so that access to cultural and creative content in various forms and different languages as well as impartial access to European works can be better

guaranteed;

- 19. Recalls the Union's ethical duty to support development around the world by facilitating cross-border cooperation on AI, including through limitations and exceptions for cross-border research and TDM, and therefore urges the speeding up of international action at the World Intellectual Property Organization to achieve this;
- 20. Recognises that due to the technological advancement of certain states, the Union has a fundamental obligation to promote the sharing of the benefits of AI, utilising a number of tools, including investment in research in all Member States.

INFORMATION ON ADOPTION IN COMMITTEE ASKED FOR OPINION

Date adopted	1.9.2020
Result of final vote	+: 28 -: 1 0: 1
Members present for the final vote	Isabella Adinolfi, Christine Anderson, Ilana Cicurel, Gilbert Collard, Gianantonio Da Re, Laurence Farreng, Tomasz Frankowski, Romeo Franz, Hannes Heide, Irena Joveva, Petra Kammerevert, Niyazi Kizilyürek, Predrag Fred Matić, Dace Melbārde, Victor Negrescu, Peter Pollák, Marcos Ros Sempere, Andrey Slabakov, Massimiliano Smeriglio, Michaela Šojdrová, Sabine Verheyen, Salima Yenbou, Milan Zver
Substitutes present for the final vote	Isabel Benjumea Benjumea, Christian Ehler, Ibán García Del Blanco, Bernard Guetta, Marcel Kolaja, Elżbieta Kruk, Martina Michels

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FINAL VOTE BY ROLL CALL IN COMMITTEE ASKED FOR OPINION

28	+
PPE	Isabel Benjumea Benjumea, Christian Ehler, Tomasz Frankowski, Peter Pollák, Michaela Šojdrová, Sabine Verheyen, Milan Zver
S&D	Ibán García del Blanco, Hannes Heide, Petra Kammerevert, Predrag Fred Matić, Victor Negrescu, Marcos Ros Sempere, Massimiliano Smeriglio
RENEW	Ilana Cicurel, Laurence Farreng, Bernard Guetta, Irena Joveva
ID	Gilbert Collard
VERTS/ALE	Romeo Franz, Marcel Kolaja, Salima Yenbou
ECR	Elżbieta Kruk, Dace Melbārde, Andrey Slabakov
GUE/NGL	Niyazi Kizilyürek, Martina Michels
NI	Isabella Adinolfi

1	-
ID	Christine Anderson

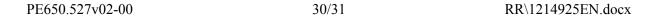
1	0
ID	Gianantonio Da Re

Key to symbols:

+ : in favour
- : against
0 : abstention

INFORMATION ON ADOPTION IN COMMITTEE RESPONSIBLE

Date adopted	1.10.2020
Result of final vote	+: 19 -: 3 0: 2
Members present for the final vote	Manon Aubry, Gunnar Beck, Geoffroy Didier, Angel Dzhambazki, Ibán García Del Blanco, Jean-Paul Garraud, Esteban González Pons, Mislav Kolakušić, Gilles Lebreton, Karen Melchior, Jiří Pospíšil, Franco Roberti, Marcos Ros Sempere, Liesje Schreinemacher, Stéphane Séjourné, Raffaele Stancanelli, József Szájer, Marie Toussaint, Adrián Vázquez Lázara, Axel Voss, Tiemo Wölken, Javier Zarzalejos
Substitutes present for the final vote	Patrick Breyer, Evelyne Gebhardt



FINAL VOTE BY ROLL CALL IN COMMITTEE RESPONSIBLE

19	+
EPP	Geoffroy Didier, Esteban González Pons, Jiří Pospíšil, József Szájer, Axel Voss, Javier Zarzalejos
S&D	Ibán García Del Blanco, Evelyne Gebhardt, Franco Roberti, Marcos Ros Sempere, Tiemo Wölken
RENEW	Liesje Schreinemacher, Stéphane Séjourné, Adrián Vázquez Lázara
ID	Jean-Paul Garraud, Gilles Lebreton
ECR	Angel Dzhambazki, Raffaele Stancanelli
NI	Mislav Kolakušić

3	-
VERTS/ALE	Patrick Breyer, Marie Toussaint
GUE/NGL	Manon Aubry

2	0
RENEW	Karen Melchior
ID	Gunnar Beck

Key to symbols: + : in favour - : against 0 : abstention