



*Den Internationella föreningen för immaterialrätt
Association Internationale pour la Protection de la Propriété Intellectuelle
Internationales Vereinigung für den Schutz des Geistigen Eigentums
International Association for the Protection of Intellectual Property*

WIPO CONVERSATION ON AI AND IP POLICY

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Session1: Issue 2: Patents: Inventorship and Ownership

Intervention by Örjan Grundén

Inventorship of AI inventions

1. In analysing and considering the issue of Inventorship, AI assisted inventions and AI generated inventions – as defined in the revised WIPO Issues Paper – need to be distinguished for several reasons.

AI *assisted* inventions are already a reality since a number of years, representing a high and increasing proportion of global patents, whereas AI *generated* inventions are a future possibility of a further dramatic development of AI technology. Thus, the effect on inventorship of the invention being the result of use of AI is an issue in current patenting practice. The actual contribution to the invention by the result of such a use may vary significantly between different technical fields and commercial AI applications and other circumstances but said contribution may be crucial and only achievable by sophisticated use of AI.

The AI not being recognized as a co-inventor leaves open to what extent a human should be recognized as a co-inventor by the fact of having provided such a contribution to the invention by using the AI as a tool. This may normally not be a problem between humans cooperating in the inventive process and may in principle be judged as like contributions to an inventions provided by the use of any other tool. However, the frequency and significance of such inventive contributions by the use of AI seems to be unprecedented in the context of other technical tools.

In the area of use of AI as a tool in the inventive process, consideration of a possible need for an internationally consistent approach to this aspect of co-inventorship of AI assisted inventions is of particularly interest in view of a cross border situation being frequent in such cases as well as the preservation of the desired function of the patent system for AI assisted innovation.

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2. The effects on the issue of inventorship of AI assisted inventions are less drastic than such effects of future game changing AI generated inventions. However, AI assisted inventions bring up new aspects of the evaluation of co-inventorship in the particular situations where the use of AI has actually contributed to the invention.

In view of the technical and commercial variations of such situations, the analysis and structuring of this issue is complex and need to be based on broad practical experiences thereof. Knowledge of actual experiences of current practices in the evaluation of co-inventorship of AI assisted inventions are thus essential to have as a fact basis for developing a common international policy for inventorship of AI assisted inventions. That would though require a comprehensive international study of professional knowledge of actual problems and solutions in present handling of these situations.

We submit that such a study by WIPO would represent an appropriate contribution to the basis for deliberations on such a policy.

Session 3: Issue 11: Further Rights in Relation to Data

Intervention by Joakim Wihlsson

1. In the WIPO Issues Paper, *Data* is identified as an area of such issues, including the consideration of the creation of new rights in relation to data.

Whether new forms of intellectual property protection, such as data protection, are needed in view of the evolving AI technology was also one of the questions addressed in an USPTO public *Request for Comments* in August 2019.

Further, *Rights in Data* is an AIPPI Study Question where comprehensive Group reports are presently being prepared on the basis of Study Guidelines addressing the state of current national IP protection as well as improvements of IP protection on national and global level.

In 2019, the issue of authorship under copyright law was studied by AIPPI in the Study Question *Copyright in artificially generated works* and it was resolved that *AI generated works should only be eligible for protection by Copyright if there is human intervention in the creation of the work and provided that the other conditions for protection are met. AI generated works should not be protected by Copyright without human intervention.*

2. Big data – i.e. extremely large collections of data – is not a new phenomenon but is increasing both in importance and in volume in the digital economy, in general and in particular in combination with AI technology. The increase is exponential with the development of 5G and IoT technology.

Big data collected from various available sources has long been analysed to detect desired information contained therein. Computer implemented tools for descriptive and diagnostic analyses of big data are established processes of using software to uncover trends, patterns, correlations or other useful insights in large collections of data from a variety of sources. Advanced tools for predictive and prescriptive big data analytics using AI based algorithms have become available for many different applications and big data analytics are increasingly incorporating AI technologies.

Big data is also a significant component in AI techniques and a critical element in machine learning used in the development of AI for different applications such as natural language processing (i.a. machine translation), vision (i.a. image recognition), speech (to text and from text to speech), autonomous vehicles and robotics. There is thus a bilateral interrelation between big data and AI.

Collections of source data may need cleansing to remove corrupt, inaccurate or inconsistent data in order to be organized into structured datasets useable for specific or more general purposes. The cost of such cleansing of source data may represent the major part of the total costs for obtaining a useful database.

Numerous big data analytics tools and services are available on the market based on open source or proprietary models or combinations thereof and intensive development of new models incorporating AI continues in particular for specific applications.

Current forms of IP-protection of big data as such and IP-protection of AI models and applications relying on or related to big data are issues of wide current interest. To create extended or even new rights in data in response to needs of protection arising in the context of the development of AI technology requires a delicate balancing of interests in this field but also a comprehensive evaluation of possible consequences of any such form of IP-protection in other fields than the use of big data in combination with AI.

3. The technical and commercial background to the development of combined use of big data and AI varies widely within the many different technical and commercial areas of application of AI technology - and so do the circumstances that are the reason for an interest in IP-protection for big data in such situations. The legal means for such protection must suit the general aim of advancing the digital technology in a balanced way by providing the positive effect of rewarding technical contributions without unduly hampering further progress through such contributions by others. This balance is in particular sensitive and also difficult in the stage of development of a new technology. The use of big data, also in combination with AI, is an area of technology where the issue of IP-protection for valuable datasets already have been of interest and in practice have been dealt with in various situations. It may be noticed that training data and analytics relating to big data to a striking degree have been made available as open source in the interest of advancing technology. However, little seems to have been reported on the need of IP-protection in actual situations and the availability or lack of such protection by present forms of IP-protection.

Whether current IP protection of data in practice fails to provide sufficient coverage in the context of AI technology is an essential aspect that needs to be considered on the basis of present actual experiences taking into account the fact that big data has been used for a considerable time in situations similar to what is now foreseeable for the expanded use of big data in combination with AI.

To have a fact basis for appreciating to what extent present forms of IP-protection provide a balanced promotion of the development of technology relating to big data and AI, it seems appropriate as a first step to try to retrieve and describe actual experiences of professionals who so far have been involved in such development.

We submit that this would be an appropriate task for WIPO.