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Registry of the Enlarged Board of Appeal
Attn. Mr. Wiek Crasborn
Richard-Reitzner-Allee 8
85540 Haar
Germany

St. Gallen, 1 September 2019

Third party statement re G 1/19

Dear Mr Crasborn

Further to the communication from the Enlarged Board of Appeal that has been published in OJ 2019 (A50) concerning the referral G 1/19, please find attached hereto a statement in accordance with Article 10 of the Rules of Procedure of the Enlarged Board of Appeal.

Kind regards,



Dr. Martin Wilming

Statement acc. to Art. 10 RoP EBoA regarding G 1/19

Third party statement
according to Art. 10 RoP EBoA
regarding G 1/19

1 The present referral to the EBoA is the first one relating to ‘programs for computers’ since the EBoA’s opinion in G 3/08 of 12 May 2010, which is about a decade ago. This is a very long time in a fast developing field of technology such as software and computer-implemented inventions. Further, it is reasonable to assume that, after G 1/19, it will again take quite a while until the EBoA has another chance to provide further guidance specifically on these technologies.

2 This being said, I am strongly in support of an answer to Q1 in the affirmative, as has been thoroughly addressed in epi’s *amicus curiae* brief of 27 August 2019.

3 With the present statement, I would like to add a further bit to the discussion, which is only a side-aspect for the case at hand but which is of utmost importance for the so-called Fourth Industrial Revolution (hereinafter: *4IR*), i.e. Artificial Intelligence. It would be much appreciated if the EBoA could also provide some guidance in this respect in the reasons of the decision.

4 The argument is the following:

A piece of Artificial Intelligence that is demonstrably useful in a field of technology is not a ‘program for computers’ per se. Rather, it carries the potential of a ‘further technical effect’ inherently with it, and is thus not excluded from patentability under Art. 52 EPC.

5 In the following, I will develop my line of thinking in support of the above.

The gist of the ‘per se’ exclusion

6 The gist of the exclusion of ‘programs for computers’ (hereinafter: *software*) only ‘per se’ has been thoroughly assessed by *Nack*, with the conclusion that the exclusion of software ‘per se’ is factually the same as the requirement of an invention to ‘being technical’.¹ I fully concur with this.

Artificial Intelligence is an ‘enabling technology’

7 There is not just one kind of software. Software can be as simple as a script that multiplies an input value with a pre-determined factor and displays the result. On the other hand, software can solve very complex problems of a technical nature. This is what artificial intelligence (hereinafter: *AI*) typically does nowadays.

¹ Ralph Nack in *Europäisches Patentübereinkommen. Münchner Gemeinschaftskommentar*, 28th ed. (2005), Art. 52, ¶ 308 et seq. (in particular ¶ 317)

- 8 According to a study that has been published by the EPO, inventions in the context of the 4IR are divided into three main sectors, i.e. 'core technologies', 'enabling technologies' and 'application domains'; it is important to note that AI is considered a prime example of an 'enabling technology'.² Rightly so. In my opinion, there can be no doubt that a piece of AI is nowadays commonly being considered technical 'per se', and even more so when it is demonstrably useful for a specific technical purpose.

The current Guidelines on Artificial Intelligence do not adequately address AI

- 9 The Guidelines for Examination in the European Patent Office specifically discuss AI and machine learning (hereinafter: *ML*) only since the November 2018 edition.³ In a nutshell, the Guidelines hold that AI and ML is based on computational models and algorithms which

"[...] are per se of an abstract mathematical nature, irrespective of whether they can be 'trained' based on training data. Hence, the guidance provided in G-II, 3.3⁴ generally applies also to such computational models and algorithms."

- 10 The Guidelines thus consider AI and ML 'devoid of technical character' and essentially require applicants to include the actual application of the AI or ML in a field of technology into the claim:

"For example, the use of a neural network in a heart-monitoring apparatus for the purpose of identifying irregular heartbeats makes a technical contribution."

- 11 But what if the specific design of the neural network allows for the identification of irregularities in virtually any set of data, i.e. not only heartbeats?

- 12 Under the current Guidelines, the applicant will not get claims granted that merely refer to 'irregularities in data sets', and referring to 'irregularities in technical data sets' will not carry the day, either. Any such wording will be objected as (too) abstract and thus devoid of any technical character. The cross-reference to G-II, 3.3 (mathematical methods) in the citation above makes this perfectly clear; the Guidelines in G-II, 3.3. hold (emphasis in original):

*"A **generic** purpose such as 'controlling a technical system' is not sufficient to confer a technical character to the mathematical method. The technical purpose must be a **specific** one."*

² *Patents and the Fourth Industrial Revolution. The inventions behind digital transformation*; EPO (December 2017); <<https://tinyurl.com/ydf5m3ru>>, visited 1 September 2019

³ Guidelines for Examination in the European Patent Office, November 2018, Part G, Chapter II, 3.3.1, <https://www.epo.org/law-practice/legal-texts/html/guidelines2018/e/g_ii_3_3_1.htm>

⁴ Guidelines for Examination in the European Patent Office, November 2018, Part G, Chapter II, 3.3, <https://www.epo.org/law-practice/legal-texts/html/guidelines2018/e/g_ii_3_3.htm>

- 13 An inventor who evidently made a huge contribution to any field of technology where data is monitored and analyzed will be deprived of the wages he deserves.
- 14 One might easily say: It's sad, but it's the law. But the Guidelines are not the law. The requirement of a specific purpose in such claims has long been criticized, e.g. by *Nack* (emphasis added):⁵

“Insgesamt ist daher festzuhalten, dass das Erfordernis einer Zweckbindung im Patentanspruch nicht nur sachlich sehr fragwürdig ist, sondern zudem der patentrechtlichen Dogmatik widerspricht und somit systemwidrig ist.”

This should finally be abolished with.

- 15 In view of the cross-reference in the Guidelines from the AI chapter to the chapter relating to mathematical methods, the undue requirement of limiting the claim to a specific purpose is now also imposed on AI.
- 16 Clearly, an AI module or ML module that has not yet been 'trained' is still 'abstract' in a certain sense. But this applies to any technical subject-matter: As long as it is not being used according to its purpose, even a machine like a roller-mill for grain milling is abstract. Only when being fed with grain, the roller-mill comes to life. But still, the roller-mill as such can be claimed, with a scope that is not in any way limited to its use in grain milling. Likewise, a claim directed to a chemical compound does not have to include any purpose when the compound is demonstrably useful in a field of technology.
- 17 Being 'abstract' in a certain sense does not preclude patentability. Accordingly, in my opinion, a piece of AI 'as such' that is demonstrably useful in a field of technology is not 'abstract' in a sense that prevents patentability. On the contrary, a piece of AI that is demonstrably useful in a field of technology carries the 'further technical effect' (as discussed in G 3/08)) inherently with it.

I hope the above is helpful in decision-making on the referral G 1/19.



Dr. Martin Wilming
European Patent Attorney

⁵ Ralph Nack, see fn. 1, ¶ 223 et seq., in particular ¶ 229