Q276

National Group:	Hungary
Title:	**Inventiveness and sufficiency of disclosure in AI inventions**
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Questions

I. Current law and practice

Please answer the below questions with regard to your Group's current law and practice.

Inventiveness

1) When assessing Inventive Step under your law, are the concrete/actual circumstances under which an invention was made (e.g., the amount of time and resources used by the concrete inventor) considered at all, or is the assessment of the Inventive Step rather an objective examination of the invention against the prior art? Please briefly explain.

In Hungary, the concrete/actual circumstances under which an invention was made are not considered, but the assessment of the Inventive Step is an objective examination of the invention against the prior art.

2) Further to question 1), when assessing Inventive Step, does your law differentiate between an invention made by a human being using AI technology and inventions made autonomously by AI? In particular, assuming that a specific invention could have been made using AI without Inventive Step, is the invention still patentable if the applicant claims that the invention was made without using AI? Please briefly explain.

When assessing Inventive Step, the Hungarian law does not differentiate between an invention made by a human being using AI technology and inventions made autonomously by AI. Inventive Step is assessed on the basis of the objective examination of the invention against the prior art, irrespectively of any statement of the applicant concerning any involvement of AI in the creation process.

3) The following questions relate to the definition of the person skilled in the art when assessing Inventive Step of an AI Invention under your law:

a) What is the definition of the "person skilled in the art"? An AI "person"? A human person? A human person having access to AI? Does the increasing use of AI in the inventive process change the definition of the person skilled in the art? Please briefly explain.

In Hungary, the general definition of the "person skilled in the art" is the same as in the Resolution on Q213, as detailed in point 12) under the title "Previous work of AIPPI" in the Study Guidelines (for the sake of simplicity, not repeated here). The person skilled in the art is a human person (or a group of human persons) and the same general definition applies to all inventions, i.e. also for AI inventions. Because of the objective examination of the invention against the prior art with respect to Inventive Step, in which the steady reference is the human skilled person as defined above, the increasing use of AI in the inventive process does not change the definition of the person skilled in the art.

b) What kind of "skills" (e.g., access to software) does this "person" have in the specific context? Please briefly explain.

The "skills" are the same as in the Resolution on Q213, as detailed in point 12) b) under the title "Previous work of AIPPI" in the Study Guidelines. There are no differences in the "skills" in this specific context.

c) Do the capabilities of AI impact the assessment of the skillset of the person skilled in the art? In particular, do the capabilities of AI to process a high amount of theoretical solutions of a given problem impact the assessment of the skillset? Please briefly explain.

No, the capabilities of AI do not impact the assessment of the skillset of the person skilled in the art, as always a human person (or a group of human persons) is considered as outlined in the Resolution on Q213.

d) Does your law treat common general knowledge differently for AI inventions? Please answer YES or NO, and you may add a brief explanation.

No, Hungarian law does not treat common general knowledge differently for AI inventions, as always the common general knowledge of a human person (or a group of human persons) is considered as outlined in the Resolution on Q213. The Examination Guidelines of the Hungarian Intellectual Property Office declare that the person skilled in the art is aware of the entire state of the art, i.e. the most comprehensive knowledge theoretically imaginable.

4) Further to questions 2) and 3), under your law, how is the Inventive Step assessed in the following hypothetical cases (you may answer whether Inventive Step is met by answering YES or NO, but you also may add a brief explanation):

a) A publicly available AI system is trained using publicly available training data. The trained AI system is used to make a suggestion for a technical solution based on publicly available data (e.g., the invention is in the pharmaceutical field, the AI system was trained using structural information and binding data of molecules binding to a target protein and inhibiting its physiological function. The suggestion for the technical solution is a new molecule selected from a library of molecules and predicted to bind to the target protein and inhibit its physiological function).

Assuming that the invention is the suggested technical solution, Inventive Step is met if the technical solution is not obvious for a skilled person over the prior art, independently of any extent and type of AI contribution. In the particular example given, Inventive Step is met according to the Hungarian practice.

Thus, we assume that the invention to be considered for this hypothetical case is the suggestion (e.g. the molecule), and not the trained AI system or its use. However, for this latter two options we note that irrespectively from the facts that the AI system and the training data are publicly available, the trained AI system can still, in itself, meet the Inventive Step requirement, as the training process (how the known AI is trained with the known data) is a further factor that determines AI functioning, and this factor may result in an inventive trained AI system.

b) A publicly available AI system is trained using publicly available training data. The trained AI system is used to make a suggestion for a technical solution based on not publicly available data (e.g. a library of molecules available only to the applicant).

Assuming that the invention is the suggested technical solution, Inventive Step is met if the technical solution is not obvious for a skilled person over the prior art, independently of any extent and type of AI contribution. In the particular example given, Inventive Step is met according to the Hungarian practice.

Thus, we assume that the invention to be considered for this hypothetical case is the suggestion (e.g. the molecule), and not the trained AI system or its use. However, for this latter two options we note that irrespectively from the facts that the AI system and the training data are publicly available, the trained AI system can still, in itself, meet the Inventive Step requirement, as the training process (how the known AI is trained with the known data) is a further factor that determines AI functioning, and this factor may result in an inventive trained AI system.

c) A publicly available AI system is trained using not publicly available training data (e.g., unpublished experimental results obtained by the applicant). The trained AI system is used to make a suggestion for a technical solution based on publicly available data.

Assuming that the invention is the suggested technical solution, Inventive Step is met if the technical solution is not obvious for a skilled person over the prior art, independently of any extent and type of AI contribution. In the particular example given, Inventive Step is met according to the Hungarian practice.

Thus, we assume that the invention to be considered for this hypothetical case is the suggestion (e.g. the molecule), and not the trained AI system or its use. However, for this latter two options we note that irrespectively from the fact that the AI system is publicly available, the trained AI system can still, in itself, meet the Inventive Step requirement, as the training data and process (how the known AI is trained with the known data) are further factors that determine AI functioning, and these factors may result in an inventive trained AI system.

d) A not publicly available AI system is trained using publicly available training data. The trained AI system is used to make a suggestion for a technical solution based on publicly available data. The AI system relies on commonly used AI principles and leads to the same result as another publicly available AI system commonly used in the technical field of the invention.

Assuming that the invention is the suggested technical solution, Inventive Step is met if the technical solution is not obvious for a skilled person over the prior art, independently of any extent and type of AI contribution. In the particular example given, Inventive Step is met according to the Hungarian practice.

Thus, we assume that the invention to be considered for this hypothetical case is the suggestion (e.g. the molecule), and not the trained AI system or its use. However, for this latter two options we note that irrespectively from the fact that the training data are publicly available, the trained AI system can still, in itself, meet the Inventive Step requirement, as the AI system and the training process (how the known AI is trained with the known data) are further factors that determine AI functioning, and these factors may result in an inventive trained AI system.

e) A publicly available AI system is trained using publicly available training data. The trained AI system is used to make a suggestion for a technical solution based on publicly available data. The AI system is not commonly used in the technical field of the invention.

Assuming that the invention is the suggested technical solution, Inventive Step is met if the technical solution is not obvious for a skilled person over the prior art, independently of any extent and type of AI contribution. In the particular example given, Inventive Step is met according to the Hungarian practice.

Thus, we assume that the invention to be considered for this hypothetical case is the suggestion (e.g. the molecule), and not the trained AI system or its use. However, for this latter two options we note that irrespectively from the facts that the AI system and the training data are publicly available, the trained AI system can still, in itself, meet the Inventive Step requirement, as the training process (how the known AI is trained with the known data) is a further factor that determines AI functioning, and this factor may result in an inventive trained AI system.

f) A publicly available AI system is trained using publicly available training data. The trained AI system makes a plurality of suggestions for technical solutions based on publicly available data. A human selects one of the suggestions as the most promising based on his/her experience.

Inventive Step is met if the selected technical solution (suggestion) is not obvious for a human skilled person, irrespectively of any extent and type of AI contribution.

5) Assuming that an AI system becomes standard for solving technical problems in a certain technical field, does the Patent Office in your country use this AI system during examination of a patent application? Please answer YES or NO, and you may add a brief explanation.

No, the Hungarian Intellectual Property Office does not use such an AI system during examination of a patent application.

Sufficiency of disclosure

6) Please briefly describe the standard of sufficiency of disclosure under your jurisdiction.

According to Art. 60(1) and (2) of the Hungarian Patent Act (Act No. XXXIII of 1995 on the protection of inventions by patents):
(1) A patent application shall disclose the invention in a manner sufficiently clear and detailed for it
to be carried out by a person skilled in the art on the basis of the description and the drawings. The industrial applicability of a sequence or a partial sequence of a gene shall be disclosed in the patent application.
(2) If an invention involves the use of or concerns biological material which is not available to the
public and which cannot be disclosed as required by paragraph (1), the invention shall be considered disclosed in a sufficient and detailed manner prescribed by this Act, provided that
(a) the biological material has been deposited in compliance with the provisions of Article 63;
(b) the application as filed contains such relevant information as is available to the applicant on the
characteristics of the biological material deposited;
(c) the patent application states the name of the depositary institution and the accession number.

7) Further to question 6), does your law provide exceptions from the standard of sufficiency of disclosure? Please answer YES or NO, and you may add a brief explanation.

Yes, there is an exemption for inventions involving the use of or concerning biological materials which are not available to the public and which cannot be disclosed as generally required.

8) Does/did the increasing use of AI change the standard of sufficiency of disclosure? Please answer YES or NO, and you may add a brief explanation.

We do not think so. The standard is steadily applied as stipulated by the Hungarian Patent Act.

9) Under your law, is it possible to overcome a possible lack of sufficiency of disclosure by submitting a "deposit" of AI software or data? Please answer YES or NO, and you may add a brief explanation.

No, there is no such an exemption for AI inventions.

10) Is the standard of sufficiency of disclosure met in the following hypothetical cases (you may answer whether sufficiency of disclosure is met by answering YES or NO, but you also may add a brief explanation)? Hereinafter, "publicly available" refers to the priority/filing date.

a) The specific profile of a wing or the specific composition of a drug was designed using AI, and this AI system was trained using publicly available training data.

Assuming that the specific profile of the wing or the specific composition of the drug is sufficiently disclosed in the application, sufficiency of disclosure is met. Always the result, i.e. the invention itself is considered in this respect, independently of any extent and type of AI contribution.

b) The specific profile of a wing or the specific composition of a drug was designed using AI, and this AI system was trained using not publicly available training data.

Assuming that the specific profile of the wing or the specific composition of the drug is sufficiently disclosed in the application, sufficiency of disclosure is met. Always the result, i.e. the invention itself is considered in this respect, independently of any extent and type of AI contribution.

c) The invention consists of a new or improved AI, and the AI platform or environment (which may involve extensive databases) in which the invention is operating is publicly available on a website.

Sufficiency of disclosure is only met if the new or improved AI is sufficiently disclosed according to the general sufficiency provisions of the Hungarian Patent Act. It is noted the AI platform or environment in itself is not sufficient for the disclosure of the new or improved AI, but all the relevant AI structure/training/data/functioning aspects should be sufficiently disclosed.

d) The invention consists of a new or improved AI, and the AI platform or environment (which may involve extensive databases) in which the invention is operating is not publicly available.

Sufficiency of disclosure is only met if the new or improved AI is sufficiently disclosed according to the general sufficiency provisions of the Hungarian Patent Act. All the relevant AI structure/training/data/functioning aspects should be sufficiently disclosed. As in this case the AI platform or environment is not publicly available, a disclosure of a larger volume is expectedly necessary to reach the sufficiency criteria.

II. Policy considerations and proposals for improvements of your Group's current law

Inventiveness

11) According to the opinion of your Group, is your current law regarding inventiveness of AI inventions adequate and/or sufficient? Please answer YES or NO, and you may add a brief explanation.

In the opinion of the Hungarian Group, the current Hungarian law regarding inventiveness of AI inventions is adequate and sufficient. AI is considered as a tool for creating inventions, and inventiveness is assessed from the aspect of a skilled person (being a human person or a group of human persons).

12) According to the opinion of your Group, would a differentiation between an invention made by a human being using AI technology and inventions made autonomously by an AI regarding the assessment of Inventive Step conflict with the purpose of patent law to incentivize creation (you may also refer to other general patent law doctrines under your law, if applicable)? In answering this question, please specifically refer to the scenario that a specific invention could have been made using AI without Inventive Step, but the patent applicant claims that the invention was made without using AI. Please briefly explain.

In the opinion of the Hungarian Group, a differentiation between an invention made by a human being using AI technology and inventions made autonomously by an AI regarding the assessment of Inventive Step would conflict with the purpose of patent law to incentivize human creation. A recognition of the invention and its usefulness in the art is in itself an inventive human activity, and such activities are to be incentivized so as to enrich the general knowledge with useful inventions. A recognition of the invention and its usefulness in the art is to be made by a human e.g. for being able to file a corresponding patent application.

Sufficiency of disclosure

13) According to the opinion of your Group, is your current law regarding sufficiency of disclosure of AI inventions adequate and/or sufficient? Please answer YES or NO, and you may add a brief explanation.

In the opinion of the Hungarian Group, the current Hungarian law regarding sufficiency of disclosure of AI inventions is adequate and sufficient. The growing number of patents granted for AI inventions show that AI inventions can be sufficiently disclosed under the present patent framework. However, a distinction seems to be adequate in this respect between the two types of AI inventions as defined by this Study Guidelines:

In case the invention does not comprise (new or improved) AI, but was made by an AI contribution, disclosure of the invention according to the general provisions should be sufficient, without any regard to any disclosure of the AI contribution.

In case the invention comprises (new or improved) AI, disclosure of the AI as in the presently granted AI patents should be sufficient. Such disclosures usually consist of the structural, training, training data and functioning aspects, which together enable a skilled person to carry out the AI invention.

14) According to the opinion of your Group, if applicable, would the recognition of the possibility to submit a “deposit” in order to overcome a possible lack of sufficiency of disclosure help to foster innovation? Please answer YES or NO, and you may add a brief explanation.

As AI inventions can be sufficiently disclosed for being patented under the present patent system, no separate possibility to submit a “deposit” seems to be necessary. The AI of an AI invention can be realized in many ways and can have different actual realizations with respect to structural, training, training data and functioning aspects, which is an essential difference between an AI and a biological material. The Hungarian Group is of the view that generally accepting that AI can be sufficiently disclosed by its structural, training, training data and functioning aspects would really foster innovation, in contrast to accepting a deposit of a singular AI realization.

III. Proposals for harmonization

Please consult with relevant in-house / industry members of your Group in responding to Part III.

Inventiveness

15) Do you consider harmonization regarding the inventiveness of AI inventions as desirable in general? Please answer YES or NO, and you may add a brief explanation. If YES, please respond to the following questions without regard to your Group's current law or practice.

Even if NO, please address the following questions to the extent your Group considers your Group's current law or practice could be improved.

Yes, harmonization regarding the inventiveness of AI inventions is desirable in general.

16) When assessing Inventive Step, should the law differentiate between an invention made by a human using AI technology and inventions made autonomously by an AI? In particular, assuming that a specific invention could have been made using AI without Inventive Step, should the invention still be patentable if the applicant claims that the invention was made without using AI? Please briefly explain.

In the opinion of the Hungarian Group, the law should not differentiate between an invention made by a human using AI technology and inventions made autonomously by an AI. A necessarily existing recognition of the invention and its usefulness in the art is in itself an inventive human activity, and such activities are to be incentivized so as to enrich the general knowledge with useful inventions.

17) The following questions relate to the definition of the person skilled in the art when assessing Inventive Step of an AI Invention:

a) What should the definition of the “person skilled in the art” be? An AI “person”? A human person? A human person having access to AI? Should the increasing use of AI in the inventive process change the definition of the person skilled in the art?

Please briefly explain.

The definition of the “person skilled in the art” should remain as in the Resolution on Q213, as detailed in point 12) under the title “Previous work of AIPPI” in the Study Guidelines (for the sake of simplicity, not repeated here).

b) What kind of “skills” (e.g., access to software) should this “person” have in the specific context? Please briefly explain.

The “skills” should remain the same as in the Resolution on Q213, as detailed in point 12) b) under the title “Previous work of AIPPI” in the Study Guidelines. There should be no differences in the “skills” in this specific context.

c) Should the capabilities of AI impact the assessment of the skillset of the person skilled in the art? In particular, should the capabilities of AI to process a high amount of theoretical solutions of a given problem impact the assessment of the skillset? Please briefly explain.

No, the capabilities of AI should not impact the assessment of the skillset of the person skilled in the art, as always a human person (or a group of human persons) should be considered as a reference.

d) Should the law treat common general knowledge differently for AI inventions? Please answer YES or NO, and you may add a brief explanation.

No, the law should not treat common general knowledge differently for AI inventions, as always a human person (or a group of human persons) should be considered as a reference.

18) Further to questions 16) and 17), how should the Inventive Step be assessed in the following hypothetical cases (you may answer whether Inventive Step is met by answering YES or NO, but you also may add a brief explanation):

a) A publicly available AI system is trained using publicly available training data. The trained AI system is used to make a suggestion for a technical solution based on publicly available data (e.g., the invention is in the pharmaceutical field, the AI system was trained using structural information and binding data of molecules binding to a target protein and inhibiting its physiological function. The suggestion for the technical solution is a new molecule selected from a library of molecules and predicted to bind to the target protein and inhibit its physiological function).

The invention, being the suggested technical solution, should meet Inventive Step if the technical solution is not obvious for a skilled person over the prior art, independently of any extent and type of AI contribution.

b) A publicly available AI system is trained using publicly available training data. The trained AI system is used to make a suggestion for a technical solution based on not publicly available data (e.g. a library of molecules available only to the applicant).

The invention, being the suggested technical solution, should meet Inventive Step if the technical solution is not obvious for a skilled person over the prior art, independently of any extent and type of AI contribution.

c) A publicly available AI system is trained using not publicly available training data (e.g., unpublished experimental results obtained by the applicant). The trained AI system is used to make a suggestion for a technical solution based on publicly available data.

The invention, being the suggested technical solution, should meet Inventive Step if the technical solution is not obvious for a skilled person over the prior art, independently of any extent and type of AI contribution.

d) A not publicly available AI system is trained using publicly available training data. The trained AI system is used to make a suggestion for a technical solution based on publicly available data. The AI system relies on commonly used AI principles and leads to the same result as another publicly available AI system commonly used in the technical field of the invention.

The invention, being the suggested technical solution, should meet Inventive Step if the technical solution is not obvious for a skilled person over the prior art, independently of any extent and type of AI contribution.

e) A publicly available AI system is trained using publicly available training data. The trained AI system is used to make a suggestion for a technical solution based on publicly available data. The AI system is not commonly used in the technical field of the invention.

The invention, being the suggested technical solution, should meet Inventive Step if the technical solution is not obvious for a skilled person over the prior art, independently of any extent and type of AI contribution.

f) A publicly available AI system is trained using publicly available training data. The trained AI system makes a plurality of suggestions for technical solutions based on publicly available data. A human selects one of the suggestions as the most promising based on his/her experience.

Inventive Step should be met if the selected technical solution is not obvious for a human skilled person, irrespectively of any extent and type of AI contribution.

19) Assuming that an AI system becomes standard for solving technical problems in a certain technical field, should Patent Offices use this AI system during examination of a patent application? Please answer YES or NO, and you may add a brief explanation.

No, the Patent Offices should not use such an AI system during examination of a patent application, but should maintain the established human examination practice.

20) Would it be desirable that assessment of Inventive Step be automated in Patent Offices, using standard AI systems and publicly available information in order to evaluate Inventive Step? Please answer YES or NO, and you may add a brief explanation.

No, the Patent Offices should not introduce such policies, but should maintain the established human examination practice as to Inventive Step.

21) Please comment on any additional issues concerning any aspect of inventiveness of AI inventions you consider relevant to this Study Question.

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Sufficiency of disclosure

22) Do you consider harmonization regarding the sufficiency of disclosure of AI inventions as desirable in general? Please answer YES or NO, and you may add a brief explanation.

If YES, please respond to the following questions without regard to your Group's current law or practice.

Even if NO, please address the following questions to the extent your Group considers your Group's current law or practice could be improved.

Yes, harmonization regarding the sufficiency of disclosure of AI inventions is desirable in general.

23) Should the increasing use of AI change the standard of sufficiency of disclosure? Please answer YES or NO, and you may add a brief explanation.

No, the standard of sufficiency of disclosure should not be changed because of increasing use of AI.

24) Should the law provide exceptions from the standard of sufficiency of disclosure regarding AI inventions? Please answer YES or NO, and you may add a brief explanation.

No, there should be no such exemptions for AI inventions, as AI inventions can be sufficiently disclosed under the present patent framework as well.

25) Should it be possible to overcome a possible lack of sufficiency of disclosure by submitting a "deposit" of AI software or data? Please answer YES or NO, and you may add a brief explanation.

As AI inventions can be sufficiently disclosed for being patented under the present patent system, no separate possibility to submit a "deposit" seems to be necessary. The AI of an AI invention can be realized in many ways and can have different actual realizations with respect to structural, training, training data and functioning aspects, which is an essential difference between an AI and a biological material. The Hungarian Group is of the view that generally accepting that AI can be sufficiently disclosed by its structural, training, training data and functioning aspects would really foster innovation, in contrast to accepting a deposit of a singular AI realization.

26) Should the standard of sufficiency of disclosure be met in the following hypothetical cases (you may answer whether sufficiency of disclosure is met by answering YES or NO, but you also may add a brief explanation)?

a) The specific profile of a wing or the specific composition of a drug was designed using AI, and this AI system was trained using publicly available training data.

Assuming that the specific profile of the wing or the specific composition of the drug is sufficiently disclosed in the application, sufficiency of disclosure should be met, independently of any disclosure relating to AI contribution.

b) The specific profile of a wing or the specific composition of a drug was designed using AI, and this AI system was trained using not publicly available training data.

Assuming that the specific profile of the wing or the specific composition of the drug is sufficiently disclosed in the application, sufficiency of disclosure should be met, independently of any disclosure relating to AI contribution.

c) The invention consists of a new or improved AI, and the AI platform or environment (which may involve extensive databases) in which the invention is operating is publicly available on a website.

Sufficiency of disclosure should be met if the new or improved AI is sufficiently disclosed according to the general sufficiency criteria by all the relevant AI structure/training/data/functioning aspects.

d) The invention consists of a new or improved AI, and the AI platform or environment (which may involve extensive databases) in which the invention is operating is not publicly available.

Sufficiency of disclosure should be met if the new or improved AI is sufficiently disclosed according to the general sufficiency criteria by all the relevant AI structure/training/data/functioning aspects.

27) Please comment on any additional issues concerning any aspect of sufficiency of disclosure of AI inventions you consider relevant to this Study Question.

In the light of the increasing use of AI, the Hungarian Group would welcome if Examination Guidelines of patent authorities were completed with guidance on minimum disclosure requirements specifically for AI inventions, also declaring that AI can be sufficiently disclosed by its structural, training, training data and functioning aspects.

General

28) Please indicate which industry sector views provided by in-house counsels are included in your Group's answers to Part III.

Pharmaceutical industry.