

Study Guidelines

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2021 – Study Question

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You are invited to submit a Report addressing the questions below.

Questions

I. Current law and practice

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

Introduction

For the purpose of the discussion below, we first would like to make some introductory remarks to set out how the questions and terms used in the questions are interpreted.

Artificial intelligence (AI) is an umbrella word used to describe computer programs, algorithms, that are capable of performing specific “human-like” tasks (cognitive functions) such as object recognition, natural language processing, controlling a surgical robot, monitoring people, finding a candidate molecule in a large group of molecules that can bind to a specific protein, etc.

A well-known example of an AI system is a neural network which is trained on the basis of a training set, e.g. labelled (annotated) data such as images or text samples. There are different ways of training a neural network. Moreover, in some cases it is necessary to pre-process the data, e.g. ‘enrich’ the data with synthetic data. After the training phase, the trained neural network is capable of receiving new data and process the data to generate a prediction it is trained for, e.g. detecting and classifying an object in an image. This process is referred to as the inference phase. The output of an AI system is a prediction, e.g. a value indicating the probability that an image comprises an object.

Current AI systems are only capable of performing very specific tasks they are trained for. Training and inference are separate processes. A typical deep neural network is not capable of “memorizing” information it generated during the inference process and *autonomously* use (and learn from) that information in subsequent inference processes. Deep neural networks with memory capabilities are an active field of research but still in its infancy.

While it is true that certain AI system can outperform humans in certain specific tasks, current AI systems have limited capabilities and are – in fact – itself objects of an active field of research. Most tasks can only be performed if the AI system is specially adapted to the specific task it is designed for. This type of AI is referred to as narrow AI. Narrow AI systems are not capable of reasoning, solving problems, using prior knowledge in the decision-making process, etc. If an AI system would be capable of such activities, it would qualify as general AI. Such general AI system can think, understand, and act in a way that is indistinguishable from that of a human in any given situation. To date, general AI systems do not exist. Experts suggest that (some form of) general AI may be available with a few decades, while others argue general AI will never be realized.

This means, for the purpose of the questions below, that - unless expressively stated otherwise – we assume that AI systems are not capable of *autonomously* “inventing” i.e.: identifying a problem, producing one or more solutions to this problem, and evaluating the solutions and producing an implementation without any human intervention. Rather, AI systems are software tools that can perform certain specific “human-like” tasks very accurately.

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.

NO, under Dutch law the concrete circumstances under which an invention was made (the process of inventing) are not considered when assessing inventive step. The assessment of inventive step by the Dutch Patent Office (DPO) and the Dutch Courts is an objective assessment of the result of the process of inventing.

Under Dutch law, inventive step pursuant Art. 6 of the Dutch Patent Act 1995 (DPA) and Art. 56 of the European Patent Convention (EPC) is usually assessed based on the so-called problem-and-solution approach (PSA) as developed by the case law of the EPO¹. This approach includes the steps of:

1. identification of the closest prior art,
 2. establishing the objective problem solved based on the differences between the claimed invention and the prior art; and,
 3. considering whether or not the claimed invention, starting from the closest prior art and the objective technical problem, *would* have been obvious for the skilled person.
- 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.

NO, as concrete circumstances under which an invention was made are not considered under Dutch law, the Dutch Group assumes that for the purpose of inventive step, no distinction will be made as to whether the invention has been made by a human being, by a human being assisted by an AI system or autonomously by an AI system. There is no Dutch case law that confirms this assumption.

Further, assessment of inventive step based on the PSA requires examination whether the invention *would* have been obvious for the skilled person. The question whether the invention *could* have been made without inventive skill not relevant.

- 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.

¹ Guidelines for examination in the EPO (“EPO Guidelines”), Part G, Chapter VII, 5.

In the Netherlands, the case law regarding the definition of the skilled person is generally in line with the definition as established on the basis the case law of the EPO²:

"a person skilled in the art is presumed to be a skilled practitioner in the relevant field of technology who is possessed of average knowledge and ability and is aware of what was common general knowledge in the art at the relevant date."

[...]

"the skilled person is also presumed to have had access to everything in the "state of the art", and to have been in possession of the means and capacity for routine work and experimentation which are normal for the field of technology in question."

Depending on the circumstances, the skilled person can be regarded as a team of persons. For example, if the technical problem to be solved by the claimed invention is within another field than the skilled person to which the claimed subject matter was initially addressed, the skilled person may include a person that is skilled in that particular field³. Thus, for inventions in the field of computational chemistry, the skilled person may be a team of persons, including an expert in chemistry and an expert in computer sciences.

Based on the abilities of the skilled person (performing routine experimentation, evaluating the prior art, addressing a technical problem, etc.) it is assumed, at least implicitly, that a person skilled in the art is an (imaginary) human person.

The increasing use of AI will result in AI becoming part of the prior art and the common general knowledge of the skilled person. Further, it may result in that some AI tools qualify as tools for routine work. However, the increasing use of AI does not affect the definition of the skilled person as such.

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

A skilled person is in possession of means for routine work and thus has skills to perform such routine work using such means. Depending on the circumstances, this could mean that the skills of the skilled person include skills related to the use of software, e.g. an AI tool, and a certain level of programming skills to perform routine work.

- 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

² See EPO Guidelines part G VII-3.

³ See EPO Guidelines part G VII-3: *"If the problem prompts the person skilled in the art to seek its solution in another technical field, the specialist in that field is the person qualified to solve the problem"* and Case Law of the Boards of Appeal edition 2019, I.D.8.1.1

briefly explain.

YES, the skilled person possesses common general knowledge and means and skills to perform routine work. If an AI tool can be qualified as an AI tool for performing routine work, then - depending on the facts and circumstances - such AI tool, including the processing capabilities of the AI tool, can play a role in the assessment of inventive step.

- 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, in Dutch law, the common general knowledge is the knowledge that a skilled person possesses for a particular field at the relevant date. For the assessment of inventive step of an AI invention, the common general knowledge may include knowledge about certain AI techniques.

- 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):

The assessment of inventive step is based on the PSA as described with reference to question 1 above. The outcome of such assessment largely depends on the facts and circumstances of the case, which in the hypothetical cases below are largely unknown. Below, the Dutch Group focusses on the question whether the AI system can be qualified as an AI tool for routine work that is available to the skilled person.

Note that even if such tool can be qualified as an AI tool for routine work, an inventive step can be acknowledged based on the circumstances of the case. What needs to be answered is whether the invention, e.g. selection⁴ of a molecule, would have been obvious for the skilled person, in view of the prior art, taking into account the common general knowledge of the skilled person and taking into account AI tools for routine working.

- 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).

If the publicly available AI system is an AI system that is commonly used as a standard tool for performing screening of molecules having certain property (e.g. binding to a target protein and inhibit its physiological function), then the AI system may qualify as an AI tool for routine work, which may be taken into consideration in the assessment of inventive step.

⁴ The standard case law of selection inventions may be used in that case, see e.g. EPO Guidelines Part G, Chapter VI, 8 and Part G Chapter VII, 12.

For example, it may be possible to argue that a skilled person faced with the problem of finding a molecule that is capable of inhibiting the physiological function of the target protein may be obvious based on the AI tool and the publicly available library.

- 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).

Similar to the situation in a), the AI system may qualify as an AI tool for routine work. However, because the library is not publicly available, it is no longer possible to straightforwardly argue that it is a mere selection by the skilled person from a known data set using an AI tool for routine work. In that case, the presence of an inventive step needs to be examined based on the available prior art.

- 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.

In contrast to the situations in a) and b), in this case the trained AI system cannot be qualified an AI tool for routine work. The AI system is trained based on non-publicly available data so that the trained AI system becomes⁵ a proprietary AI tool. In that case, the presence of an inventive step needs to be examined based on the available prior art.

- 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.

Similar to the situation in a), the publicly available AI system may qualify as an AI tool for routine work. Based on the facts and circumstances of the case, it may be possible to argue that a skilled person faced with the problem of finding a molecule that is capable of inhibiting the physiological function of the target protein may or may not be obvious based on the AI tool and the publicly available library.

The fact that the new molecule was found by the inventor using a not publicly available AI system is not relevant, because of a similar publicly available AI tool that could be used in the screening of the publicly available data set.

- 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

⁵ Note that in this case the AI system obtains its useful properties after training. This is a crucial step in this assessment.

publicly available data. The AI system is not commonly used in the technical field of the invention.

In this situation, the trained AI system may be qualified an AI tool for routine work. Inventive step needs to be assessed based on the PSA.

- 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.

In this situation, the trained AI system may be qualified an AI tool for routine work. Based on the circumstances of the case, the selection of the plurality of suggestions based on the AI tool and the publicly available data may be considered as a routine measure. The question whether a selection by a human from this plurality of suggestions involves an inventive step should be examined based on the PSA.

- 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, as described above, the question whether an AI tool can be qualified as a means for routine work, which is normal in the field, is a legal qualification. It depends whether such tool is publicly available, accepted by a large part of the community as a standard means for routine work (and routinely used by this community) in the field of technology at the relevant date. It is not a static definition but may evolve in time. An examiner using such AI tool during examination and arguing that such tool is a AI tool for routine work would introduce problems, both legal and practical.

Sufficiency of disclosure

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

In the Netherlands, the case law regarding sufficiency of disclosure pursuant Art. 25 DPA and Art. 83 EPC is generally in line with the standard as developed on the basis of the case law⁶ of the EPO:

“Art. 83 EPC stipulates that the application "shall" (previously "must") disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. The subject-matter of an application must be sufficiently disclosed at the date of the application, based on the application as a whole, including examples, and taking into account the common general knowledge of the skilled person. At least one way of enabling the person skilled in the art to carry out the invention must be disclosed but this is sufficient only if it allows the invention to be performed in the whole range claimed”.

⁶ Case Law of the Boards of Appeal edition 2019,II,C,1 p.348 and further.

Further, the skilled person has the same level of skill for assessing inventive step and sufficient disclosure⁷. This means that the definition of the skilled person as described above with reference to questions 2 and 3 equally apply to sufficient disclosure.

- 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, for patent applications relating to biological matter Dutch law provides special provisions regarding the standard of sufficiency of disclosure⁸. If the biological material is not available to the public and if it cannot be described in the application in such a manner as to enable the invention to be carried out by a person skilled in the art, a sample of the material needs to be disposed at a special depository institution.

- 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.

NO, there is no Dutch case law available indicating that the use of AI would change the standard of sufficiently of disclosure.

In decision T0161/18 of the Boards of the Appeal of the EPO, sufficiency of disclosure was addressed for the first time within the context of an AI invention including a trained neural network. According to the Board, the application was insufficiently disclosed because the method for training the claimed neural network was not described in sufficient detail. This decision indicates that if a neural network is part of the claimed invention, the training method of the neural network should be described in sufficient technical detail. Such requirement appears to be in line with the standard requirements of sufficiency.

The Dutch Group cannot derive any special requirements for AI inventions regarding sufficiency, e.g. a requirement that the training data set and/or the AI system need to be disclosed in full or “deposited”.

- 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, a procedure for depositing AI software or data to overcome a lack of sufficiency does not exist under Dutch law.

- 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.

The standard of sufficiency is met if the inventive part of the new or improved AI is described in sufficient technical detail so that a skilled person can work the

⁷ See EPO Guidelines for examination part G VII-3

⁸ See Art. 23(3) juncto Art. 17-22 Dutch Patent Act 1995; Art. 83 juncto Rules 33 and 34 EPC and the EPO Guidelines for examination part F III-6.

invention taken into account the common general knowledge of the skilled person.

Thus, the question whether or not the standard of sufficiency is met largely depends on the facts and circumstances of the case: if part of the invention resides in the training data or the training method of e.g. a deep neural network then the training data and the method for training should be described in sufficient detail. Similarly, if the invention resides in the architecture of a deep neural network or an application of a trained neural network then these aspects should be described in sufficient technical detail to meet the standard of sufficiency of disclosure.

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.

a) YES, if the profile of the wing is described and illustrated in the patent application in sufficient technical detail or if the specific composition of the drug and at least one way of producing such drug are described in the application in sufficient technical detail so that the skilled person is able to work the invention taking into the common general knowledge of the skilled person, than the standard of sufficiency of disclosure is met, *irrespective* of whether a trained AI system was used in the process of inventing the profile of the wing or the composition of the drug.

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.

YES, for the same reasons as above under a). The fact that the AI system is trained based on public or non-public data is not relevant for the question of sufficiency of disclosure. Sufficiency of disclosure is a disclosure requirement regarding the technical teaching of the patent application. It requires that the skilled person is able to work the invention based on the disclosure using his common general knowledge.

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.

The Dutch Group assumes that the AI platform or environment referred to the question relates to a platform supporting the development, training and inference of AI tools such as TensorFlow or Google AI. It is assumed that such platform is comparable to other platforms such as software development kits (SDKs) for creating applications for a particular software or programming environment.

The standard of sufficiency is met if the inventive part of the new or improved AI is described in sufficient technical detail so that a skilled person can work the invention. These disclosure requirements are should be met irrespective as to whether the AI platform or environment is publicly available or not. Typically, for computer-implemented inventions to meet the standard of sufficiency, it is not necessary to provide a fully description of the platform that is used when

developing the software.

- 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.

Same answer as above under c.

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.

YES, according to the Dutch Group, Dutch patent law is adequate for examining the requirements of inventive step of an AI invention.

The prior art, the skilled person, the common general knowledge and the means for routine work may change in time and follow the evolution of technology. This means that AI innovations that currently may qualify as an invention, at a later stage may become conventional art or even an AI tool for routine work. Thus, the evolution of prior art about AI technology, e.g. scientific publications describing discovery tools for a certain molecules, may eventually lead to a situation wherein selection of a certain molecule from a large set of molecules may be obvious for the skilled person in view of the prior art and the common general knowledge, irrespective of whether the AI tool that was used to predict the molecule was disclosed in the patent application.

- 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 autonomous 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.

As long as the AI inventions referred to in the question can be classified as a narrow AI, then the Dutch Group sees no reason to deviate from the current law.

In case the reference to "*inventions made autonomous by an AI*" frames a reality where an AI would be capable of inventing without any human interaction (as in general AI), then the question above appears to be aimed at a desire to anticipate this reality, whereas commonly legislation and regulations *follow* the reality. The Dutch group believes that general AI is not foreseeable in the near and medium-term future

The Dutch Group is of the opinion that for now the correct framing of inventions is and remains human ingenuity, which may be aided by tools, which may be 'intelligent' in

their own right, but are always in a responsive relation to the human making use of and controlling it. This is the essence of technology. Discussions about legislation for a reality where an AI system could pass a Turing test, have desires and ideas of its own and act to improve technology independent of any human stimulus appears to be out of scope.

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.

YES, according to the Dutch Group Dutch patent law is adequate for examining the requirement of sufficiency of disclosure of an 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.

NO, according to the Dutch group the current disclosure requirements in Dutch patent law are adequate. According to the Dutch group, AI inventions can be regarded as a subset of computer-implemented inventions (CIIs). Just like other types of CIIs, inventive aspects of AI inventions can be adequately described in a patent application that meet the standard of sufficiency, without the need to “deposit” the AI system and the associated training data at a special depository.

The Dutch Group also has reservations regarding the practical realisation⁹ of such deposit system, its public accessibility and the effects if such deposit system would be publicly available.

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.

YES, a harmonized approach of assessing inventiveness of an AI invention is desirable for achieving legal certainty in an international context.

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

⁹ AI system may be implemented based on many different AI platforms (public or not public) using many different data formats.

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

- 16) When assessing Inventive Step, should the law differentiate between an invention made by a human using AI technology and inventions made autonomous 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.

NO, see questions 2 and 12 above.

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

- b) 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.

See question 3a above: when assessing inventive step of an AI invention, the skilled person will be a human being having access to prior art in the field of AI, his common general knowledge and means in the form of AI tools for performing routine work that is normal in the field. The definition of the skilled person does not depend on the increasing use of AI in the inventive process. Only the prior art, the common general knowledge and the toolbox for routine will change (i.e. AI tools the skilled person has at his disposal for doing routine work).

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

See question 3b above: this cannot be answered generally and will depend on the technical context of the invention on the relevant date. The skills of a skilled person may include standard programming skills and skills to handle AI tools for performing routine work that is normal in the field .

- d) 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.

YES, see question 3c above: the AI system can be a AI tool for routine work that is available to the skilled person. If the capabilities of the AI tool change, the skillset of the skilled person may change. Thus, if an AI tool that can process a high amount of theoretical solutions of a given problem qualifies as an AI tool for performing routine work that is normal in the field, the skilled person could use this tool to process a high amount of theoretical solutions for a given problem.

Here, the Dutch Group would like to emphasize that - like common general knowledge - qualifying a tool as a tool for routing work is a legal qualification. So

not every tool known from the prior art however qualifies¹⁰ as a tool to perform routine work. There is no Dutch case law specifically addressing the case wherein AI is used as a tool for routine work, however EPO case law regarding the use of routine work and experimenting in the context of the assessment of inventive step could be used to address such question.

Thus, proof is required to qualify a tool as a tool for routine work, wherein circumstances such as whether a tool is publicly available, routinely used in the field of technology and generally accepted by a large part of the scientific community as a “standard” means for routine work may play a role. It may also imply that the working of such AI tool is known, e.g. the tool is based on a known neural network architecture, trained based on a standardized, publicly available training set using a generally accepted training method¹¹.

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

NO, see also question 3d above.

- 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 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).

See question 4a

- 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).

See question 4b

¹⁰ For example, a commercially available “standard” gene sequencing platform that works based on generally accepted principles in the field may be regarded as standard tool that is used in laboratories doing research in the field of genetic engineering for performing routine work. Any system beyond such standard system, e.g. a proprietary gene sequencing platform that has superior and/or extended functionalities compared to the “standard” gene sequencing platform, cannot be regarded as a normal tool for the purpose of routine experimentation.

¹¹ Based on such considerations, a proprietary AI tool (developed in house) may not qualify as an AI tool for routine work

- 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.

[See question 4c](#)

- 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.

[See question 4d](#)

- 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.

[See question 4e](#)

- 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.

[See question 4f](#)

- 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, see question 5](#)

- 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. However, the Dutch Group can imagine that AI systems may be used as a tool to assist an examiner in the assessment of inventive step.](#)

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

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.

[YES, a harmonized approach regarding the standard of sufficiency of disclosure](#)

of an AI invention is desirable for achieving legal certainty in an international context.

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.

- 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, see question 13 and 14

- 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, see question 13 and 14

- 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.

NO, see question 13 and 14

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)?

- 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 publicly available training data.

YES, see question 10a

- c) 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.

YES, see question 10b

- 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 publicly available on a website.

See question 10c

- e) 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.

See question 10d

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

General

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

No in-house counsel took part in answering the questions.