



**国家知识产权局**

China National Intellectual Property Administration

# **Examination of AI Relating Inventions**

**November, 2019**

# Content

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AI Relating Inventions

02

Case1

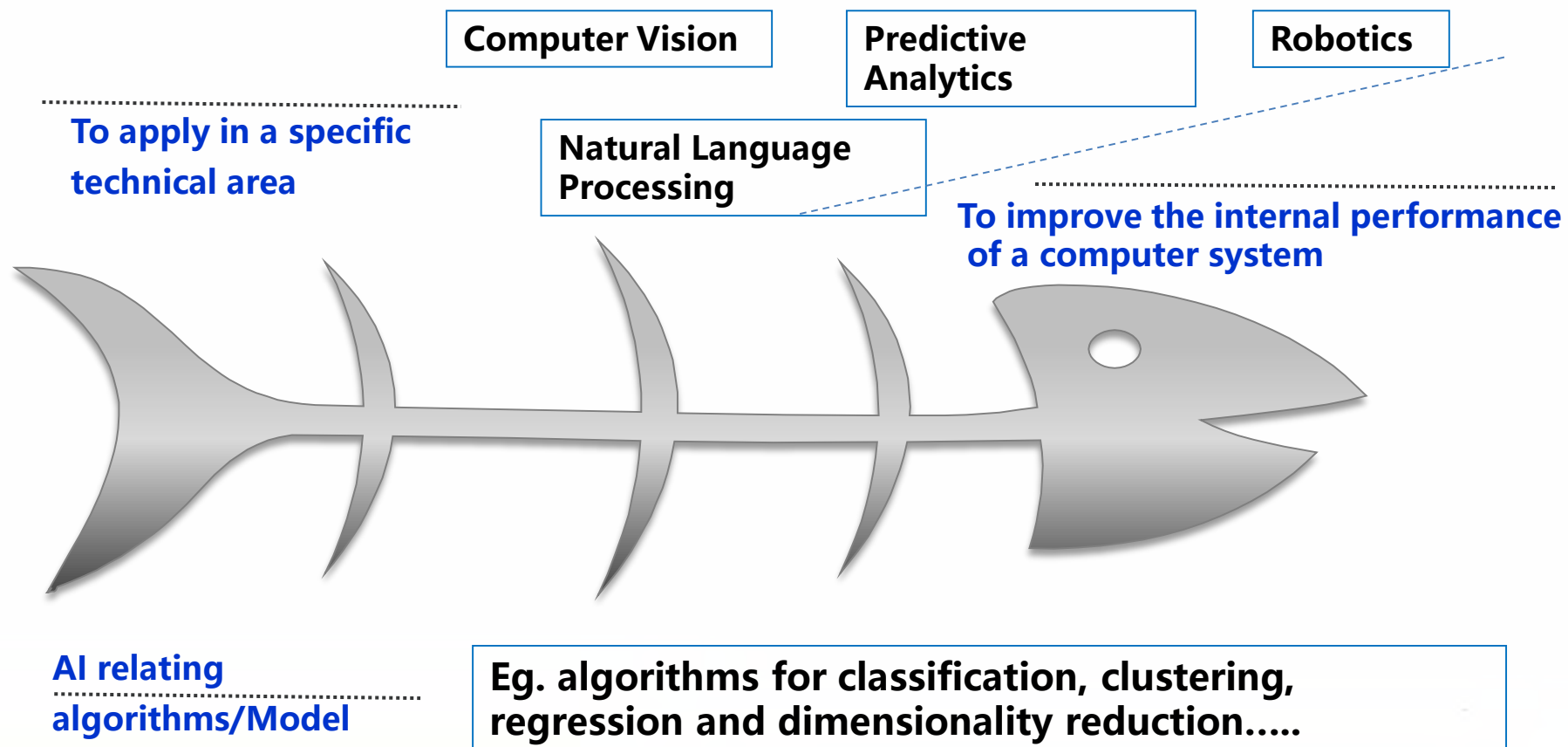
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Case 2

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Summary

## AI: To simulate, extend or expand human intelligence



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**Summary**

## **[Case 1 for Patent subject matter eligibility]**

**Title of the invention:**

**Trained Model for Analyzing Reputations of Accommodations**

**What is claimed is:**

**A trained model for causing a computer to function to output quantified values of reputations of accommodations based on text data on reputations of accommodations, wherein;**

**.....**



## Art. 25.1 : Exclusions

- (1) Scientific discoveries;
- (2) Rules and methods for mental activities;**
- (3) Methods for the diagnosis or treatment of diseases;
- (4) Animal or plant varieties;
- (5) Substances obtained by means of nuclear transformation;  
and
- (6) Designs that are mainly used for marking the pattern,  
colour or the combination of the two of prints.

## Examples

- methods and systems of managing organization, production, commercial activities, or economy, etc.;
- mathematical theories and methods of conversion;
- methods of statistics, accounting, or bookkeeping.

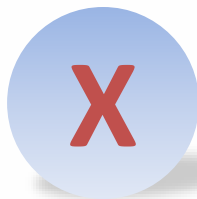
If a claim merely relates to an algorithm, or mathematical computing, it falls into the scope of the rules and methods for mental activities.

## Art. 25.1(2): Rules and methods for mental activities



(1) A claim concerns only rules and methods for mental activities (**RMMA**)

(2) A claim is defined by RMMA except for its title



A claim in its whole contents contains not only matter of **RMMA** but also technical features, then the claim, viewed as a whole, shall not be excluded under Article 25



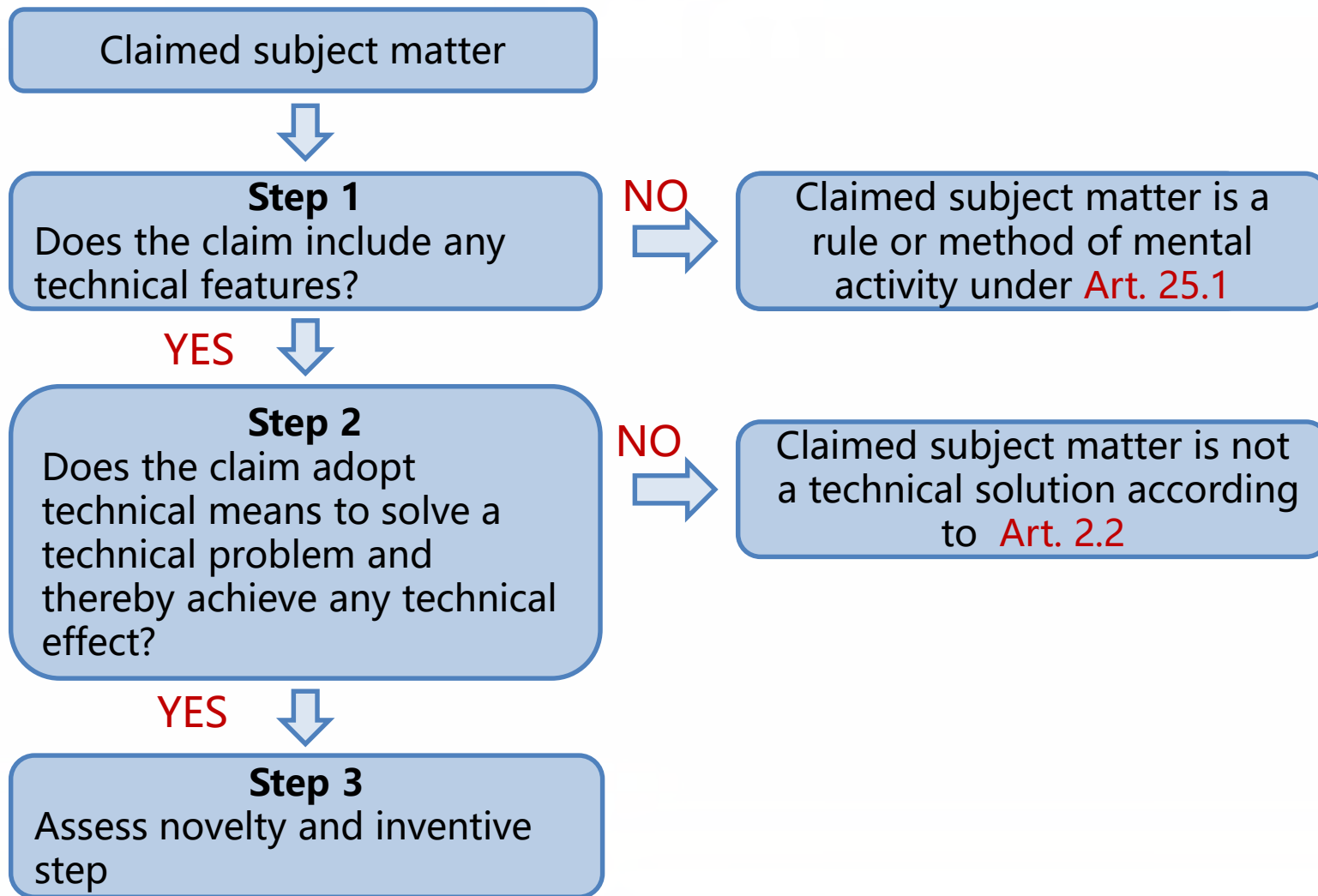


## Art. 2.2 What is an invention:

"Invention" means any new **technical solution** relating to a product, a process or improvement thereof

- A technical solution **is an aggregation of technical means** applying the laws of nature to solve a technical problem
- A solution that does not adopt **technical means** to solve a **technical problem** and thereby does not achieve any **technical effect** in compliance with the laws of nature does not constitute a subject matter as defined in Art.2.2

## ➤ Claims containing rules and methods for mental activities



## *Analysis*

As for Claim1, it doesn't show how the model processes the text data, that is, how to apply the above input data to train and calculate the final result. Moreover, determination of stars from the evaluation does not reflect the natural law. Therefore, we think that claim1 does not conform to A2.2.

For the same reason, claim 2 and claim 3 are not in conformity with the provisions of Article 2.2.

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### Title of Invention

Estimation system of hydroelectric generating capacity

[Claim 1]

An estimation system of a hydroelectric power generating capacity of a dam comprising:

a neural network that is built by means of an information processor, the neural network having an input layer and an output layer.....

[Claim 2]

The estimation system of a hydroelectric power generating capacity as in Claim 1, wherein the input data to the input layer further contains a temperature of the upper stream of the river during the predetermined period between the reference time and the predetermined time before the reference time.

## Problem-Solution Approach provided in Guidelines Part II, Chap.4

**STEP 1**

**Determine the closest prior art**



**STEP 2**

**Determine the distinguishing features of the invention and the technical problem actually solved by the invention**



**STEP 3**

**Determine whether or not the claimed invention is obvious to a person skilled in the art**

### **Analysis**

➤ D1:

An estimation system of a hydroelectric power generating capacity that carries out a multiple regression analysis by an information processor

➤ Difference

The invention of Claim 1 realizes an estimation of a hydroelectric power generating capacity by means of a neural network having an input layer and output layer ,not by means of a regression equation model.

## Analysis-Claim1

For those skilled in the art, if it is well known that an estimation process of future output is performed based on the input of past time series data by using trained neural networks, an inventive step may not be recognized over D1.

Otherwise, the invention of Claim 1 involves an inventive step.



## Analysis-Claim2

### Considerations:

- Whether those skilled in the art think that the accuracy of the estimation is significantly improved
- Whether there is technical enlightenment of selecting the temperature parameter in the prior art

## Drafting of Description

The specification of an invention patent application containing algorithm features shall clearly and completely describe the solution adopted by the invention to solve its technical problems.

When including algorithm features, we should combine abstract algorithm features with technical fields.

## Drafting of Claims

The claims of an invention application relating to computer programs may be drafted as process claim or product claim ,i.e., the apparatus for executing the process.

No matter what kind of claim it is drafted as, the claim shall be supported by the description, represent the technical solution of the invention in its entirety and outline the essential technical features for resolving the technical problems, and do not describe resumptively the functions of the computer program and the effects those functions can produce only.

## Drafting of Claims

If a technical solution is on the basis computer program procedure completely, the claim may be drafted as follow:

A medium in which a computer program is stored, characterized in that the computer program can carry out following steps when implemented by the processor.....

## Drafting of Claims

If a apparatus claim includes a computer program and hardware, the claim can be drafted as follow:

A computer apparatus, including a memorizer in which a computer program is stored, and a processor, characterized in that the computer program can carry out following steps when implemented by the processor.....

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- As for a claim relating to AI, if it contains not only matters of rule or method for mental activities, but also technical features, it shall not be excluded from patentability under Article 25.
- When determining whether the solution is technical (A2.2) the technical means, technical problem and technical effect are the three important factors to be considered and should be considered in combination.
- Algorithms and intellectual rules are taken into consideration as long as they are functionally supportive and interactive with technical features--together to solve a technical problem (subject matter and inventive step).



**THANK YOU !**

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