

Patent Eligibility of AI related Inventions

Nov. 20, 2019

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AI related Inventions

Inventions

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AI-related Inventions

Subject Matter Eligibility

✓ Relevant Provision

- Patent Act Article 29(1)

「An **invention** having industrial applicability ~ is **patentable**」

- Patent Act Article 2(1)

「An **invention** means the highly advanced **creation of a technical idea utilizing the laws of nature**」

Subject Matter Eligibility

✓ **Non-Patentable Subject Matter** (Examination Guidelines)

- Laws of nature per se
- Mere discoveries, not creations
- Those contrary to laws of nature
- Those in which a law of nature is not utilized
- Personal Skill per se
- Mere presentation of information
- Aesthetic creations
- Computer programming language or computer program per se
- Incomplete invention

Approach for Determining Patent Eligibility

✓ General Criteria

Creation of
technical
idea
utilizing
laws of nature



✓ Computer-Software Criteria

SW information
processing is
concretely
implemented
using **HW**

Approach for Determining Patent Eligibility

General Criteria

If the claimed invention is related to (i) **any laws other than laws of nature**, (ii) **arbitrary arrangements**, (iii) **mental activities of humans**, or (iv) **mere presentation of information**, said invention is deemed not to satisfy the criteria for patentability.

Whether a law of nature is utilized shall be determined based on the **claimed invention as a whole**

Parts of Claim	Claim As a Whole	Patent Eligibility	Example
Not use laws of nature	use laws of nature	O	Mathematical Formula
use laws of nature	Not use laws of nature	X	Business Method

Approach for Determining Patent Eligibility

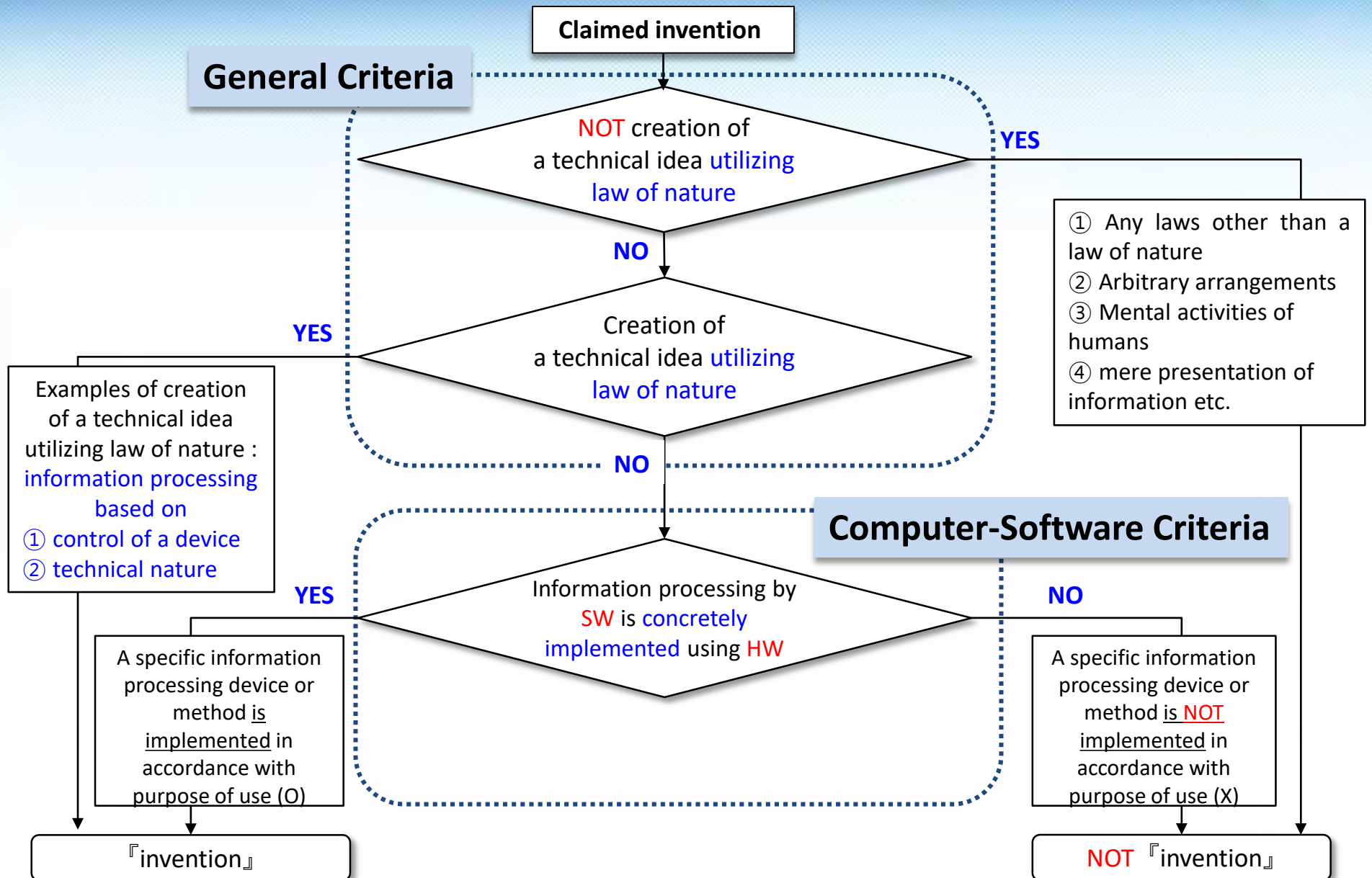
Computer-Software Criteria

If **information processing** by software **(i) using hardware** is **(ii) concretely implemented**, the claimed invention is considered to satisfy the criteria for patentability as a creation of technical ideas utilizing laws of nature.



The **Computer-Software criteria** can be determined by reviewing if the claimed invention sets out implementing **a specific information processing device** or **an operating method** in accordance with **the purported use of the invention**

Steps for Determining Eligibility



What is AI related Inventions ?

AI related Inventions

AI Model

**Training data set
Modeling
Improvement
...**

**AI
Applied**

**Health Care + BM
Robots + Big Data Analysis
Navigation
Auto Driving**

Case Example 1/3

Trained Model for Analyzing Reputations of Accommodations

[Claim 1]

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;

the model is comprised of a first neural network and a second neural network connected in a way that the said second neural network receives output from the said first neural network;

the said first neural network is comprised of ~;

weights of the said second neural network were trained ~ ; and

the model causes the computer function to perform a calculation based on the said trained weights in the said first and second neural networks in response to appearance frequency of specific words obtained from the text data on reputations of accommodations input to the input layer of the said first neural network and to output the quantified values of reputations of accommodations from the output layer of the said second neural network.

Required criteria for subject matter eligibility

Inventions

Computer-related Inventions

- SW tightly coupled with HW
- A computer-readable storage medium having a computer program stored therein
- A computer program stored computer-readable storage

AI-related Inventions

Computer-Related Invention

Category		Claim Examples
method		A computer-implemented method comprising step A, step B, and step C.
product	system or device	A computer system for implementing function A, function B, and function C.
	computer readable medium	A computer-readable medium having a program recorded thereon, wherein the program causes a computer to execute step A, step B, step C.
	computer program stored on a medium	A computer program recorded on a computer-readable storage medium for executing step A, step B, and step C on a computer
	data storing medium	A computer-readable medium having data recorded thereon, wherein the data comprises structure A, structure B, structure C.

Case Example 3/3

Trained Model for Analyzing Reputations of Accommodations

[Results of assessment]

➡ The invention of claim 1 **is 'not invention'** in Patent Act Article 2

[Modified to meet computer-related invention criteria]

- **A computer-readable storage medium having a computer program stored therein**
- **A computer program stored in a computer-readable storage medium**

The modified claim 1 **is 'invention'** in Patent Act Article 2

Thank you



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