

Patentability of inventions using artificial intelligence (AI) and by AI

*Working Group to Address the Topics of AI-Related
Inventions*

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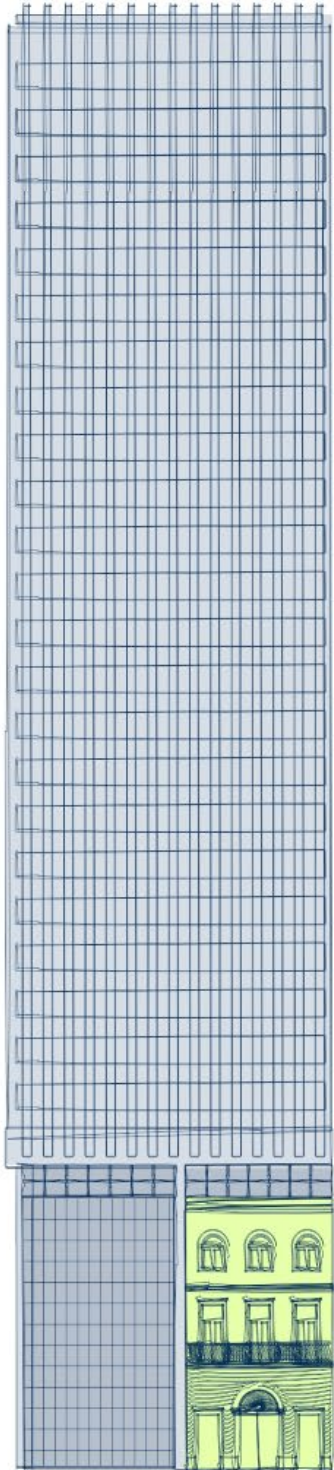
Rio de Janeiro, September 26th, 2022

Summary

- **1. Initiatives Related with AI**
 - Technical reports
 - Guidelines updates
 - Partnerships

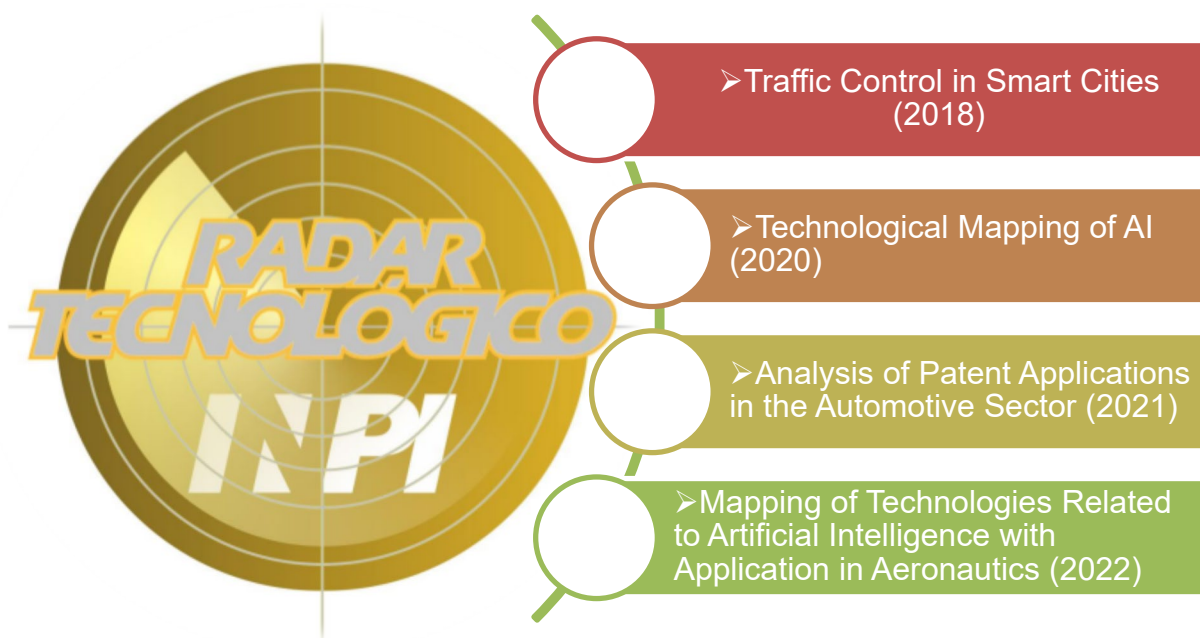
- **2. The use of AI in the granting process**

- **3. AI-Related Inventions**
 - Inventor of a patent application
 - Eligibility
 - Inventive Step
 - Sufficiency of Disclosure



1. Initiatives Related with AI

- **Technical reports**



Technological Radar
<https://www.gov.br/inpi/pt-br/assuntos/informacao/radares-tecnologicos>

PI

dados & fatos



#1

Inteligência artificial em máquinas e equipamentos

IP

data & facts:

Artificial Intelligence in machines and equipments

[https://api.abdi.com.br//file-manager/upload/files/Estudo do nipi 4 - mesclado.pdf](https://api.abdi.com.br//file-manager/upload/files/Estudo_do_nipi_4_mesclado.pdf)

1. Initiatives Related with AI

- **Guideline Update**

**Guidelines for Examining Patent Applications
Involving Computer-Implemented Inventions (CII)**
ORDINANCE/INPI/PR No. 411, DECEMBER 23th, 2020

[013] Artificial intelligence (AI) techniques, including machine learning and deep learning tools, among others, when applied to solving technical problems can be considered invention.

1. Initiatives Related with AI

- **Partnerships**

National Stakeholders

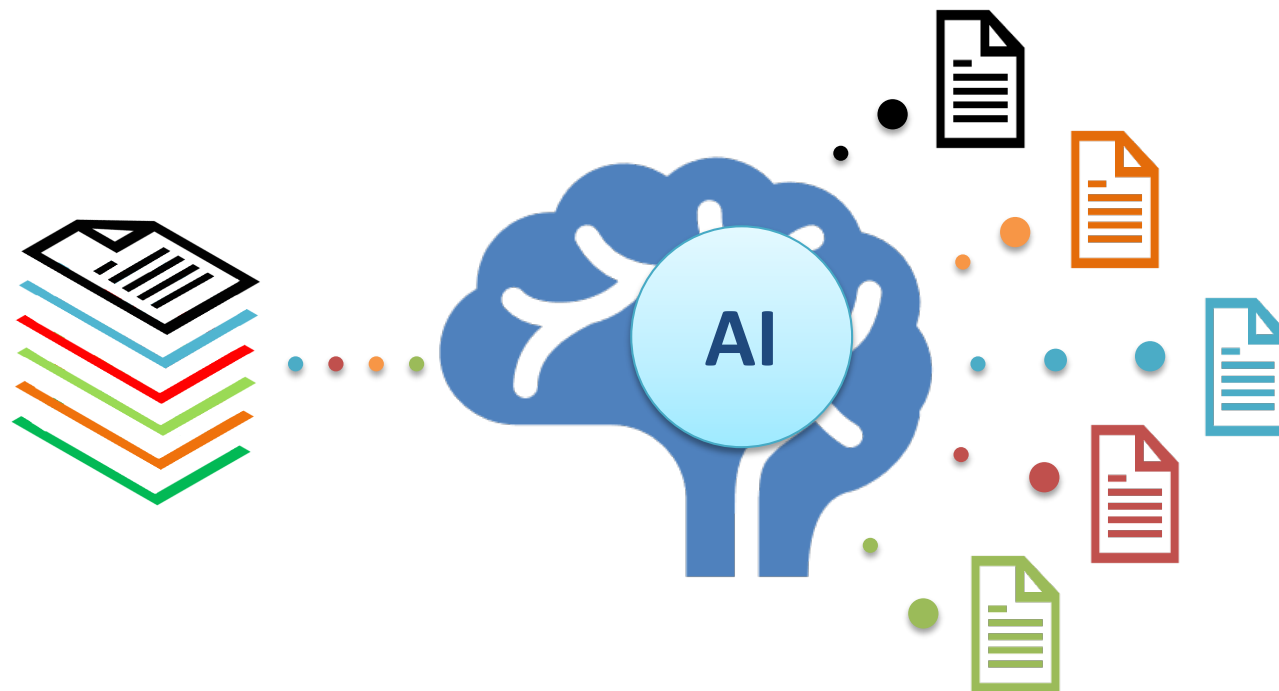
- ABDI - Brazilian Industrial Development Agency
- Ministry of Economy

IP Offices and Organizations

- DKPTO – Danish Patent and Trademark Office
- EPO - European Patent Office
- BRICS IP Offices
 - BRICS - Brazil, Russia, India, China and South Africa.
- WIPO

2. *The use of AI in the granting process*

- Determine the technical division for classifying a patent application
- The use of AI to carry out a prior search for a patent application in the chemistry area



3. AI-Related Inventions

•AI-Generated invention

- The AI is used to obtain a technical solution during the invention development process, but not need to be part of the claimed object

•AI-Applied Invention

- The AI is part of the claimed subject matter

3. AI-Related Inventions

- **AI-Generated invention**

- Patent Application BR112021008931-4 (Inventor “DABUS”)

- N° 00024/2022/CGPI/PFE-INPI/PGF/AGU:

“...in view of the consultation formulated, the Attorney General's Office, in strict legality judgment, manifests itself in the sense of the impossibility of indicating or appointing artificial intelligence as inventor in a patent application presented in Brazil...”

Source: <https://www.gov.br/inpi/pt-br/central-de-conteudo/noticias/inteligencia-artificial-nao-pode-ser-indicada-como-inventora-em-pedido-de-patente>

3. AI-Related Inventions

- **AI-Generated invention**

- Currently, we have not identified points that need updating in your exam guidelines.
 - Resolution No. 124: Guidelines for the Examination of Patent Applications - Patent Application Content.
 - Resolution No. 169: Guidelines for the Examination of Patent Applications - Block II - Patentability.
 - Ordinance/INPI/PR No. 411: Guidelines for examining patent applications involving Computer Implemented Inventions (IIC).

Our set of guidelines is accessible through the website:
<https://www.gov.br/inpi/pt-br/servicos/patentes/legislacao>

3. *AI-Related Inventions*

- **AI-Applied Inventions**
 - Eligibility
 - Inventive Step
 - Sufficiency of Disclosure

3. AI-Related Inventions

- **AI-Applied Invention: Eligibility**
 - A Mathematical Method or A Computer Program Itself
 - Assessment
 - It is within a technical field
 - It produces an effect
 - It s applied to solving technical problems
 - Mixed Claims

3. AI-Related Inventions

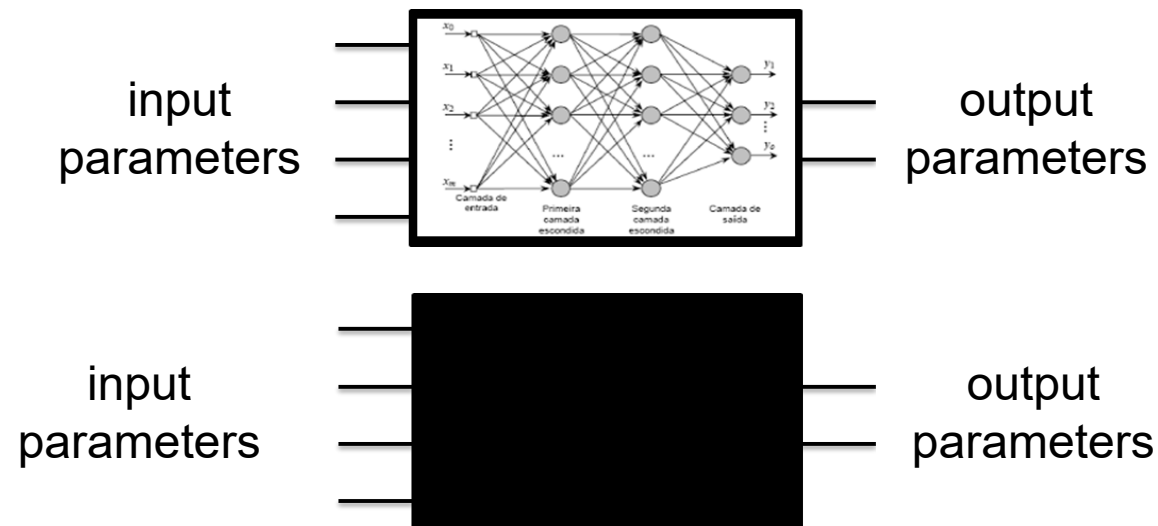
- **AI-Applied Invention: Inventive Step**

- Mere replacement of a previously known process
- Mere replacement of a IA technique
- Modifying training data to improve AI performance is obvious to a skilled person
- The presence of an unexpected technical effect
- The use o pre-processing step

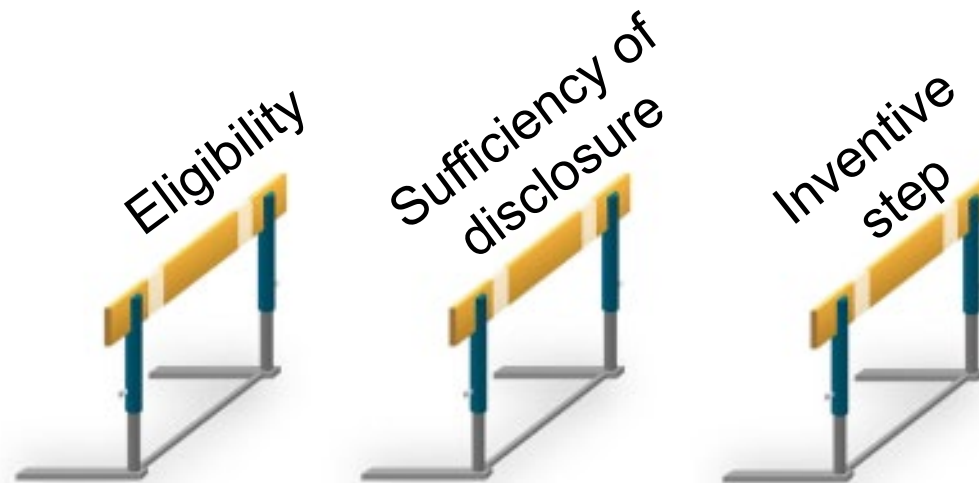


3. AI-Related Inventions

- **AI-Applied Invention: Sufficiency of Disclosure**
 - Concept of input X output correlation
 - Black box
 - Database structures
 - Parameters and Hyperparameters



Final considerations



Final considerations

- **SCP/31/8 Rev.**
 - Brazil and Spain propose that the study cover inorganic and organic chemistry, including pharmaceuticals, as well as microorganisms, AI and any other technological sector in which the fulfillment of the sufficiency of disclosure deserves special attention

Thank You !



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