Horizon Results Platform & European IP Helpdesk

18/04/2024 IP and Artificial Intelligence

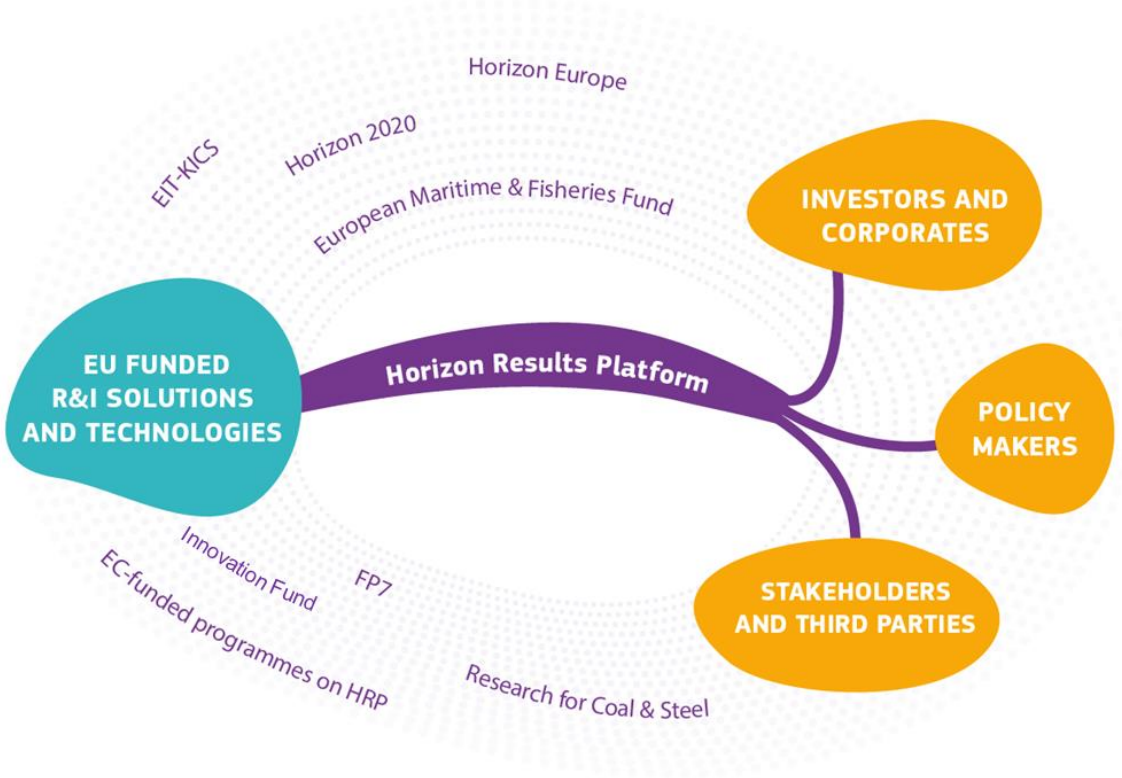
Upcoming sessions:

- *16/05/2024 IP and Software*
- *08/10/2024 Technology Transfer*
- *November/December 2024 Thinking International – International Business Opportunities*

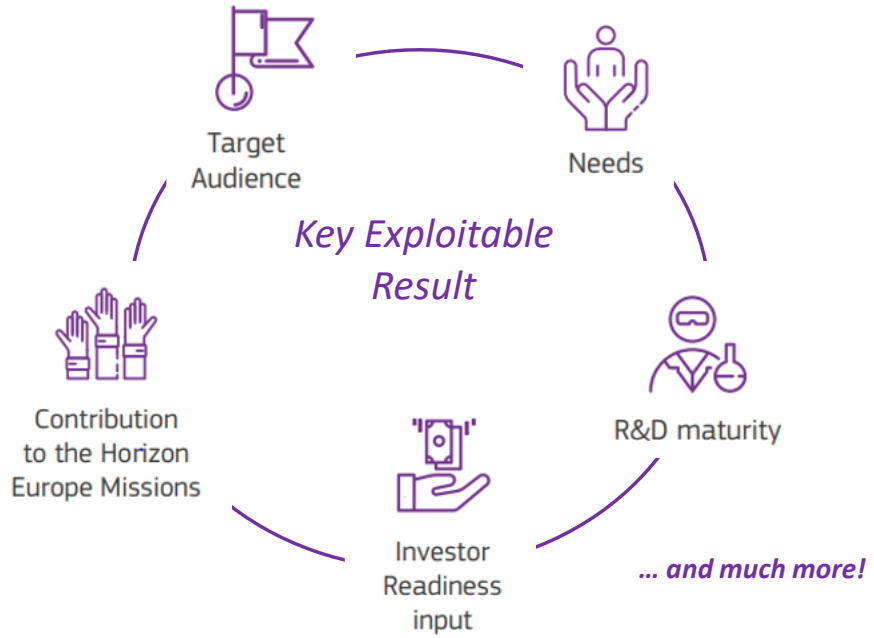
European Commission

HRP)

s (KERs), hosted on the F&I Portal



*Par **Key Exploitable Result (KER)** on HRP:*
*essential information, driving **matchmaking***



*N.B.: In **Horizon Europe**, use of the **Horizon Results Platform** becomes mandatory, if, one year after the end of the action, a Key Exploitable Result has not yet been exploited (not all results).*

HRP: Promoting EC-Funded Solutions

A unique ecosystem of partners to advance the uptake of your KERs

Benefits to you via HRP:

- **Matchmaking opportunities**
  - 16+ pitching events
  - 75+ startups pitched
- **Demand-driven training**
  - Hundreds of beneficiaries have received tailored training and support from mentors and coaches
- **Access** investors and grow networks

HRP TV Inspirational Intervie

Decarbonization for rail fleets

DIGAS

Unlocking the full potential of cancer immunotherapies

VALOTX

PEPTICHIP

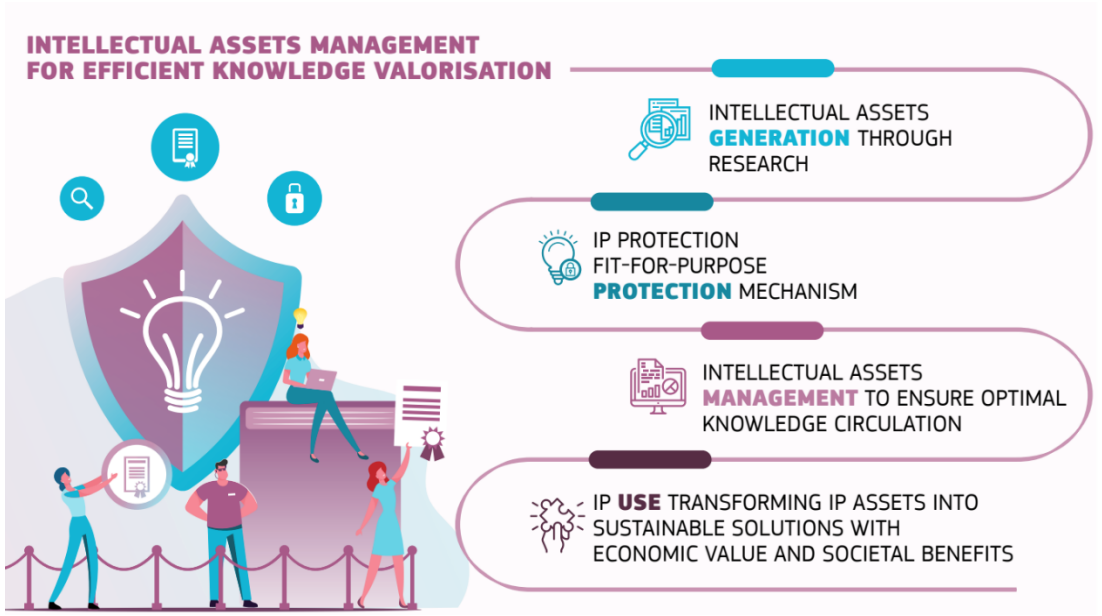
The European IP Helpdesk developped a dedicated case study on the vital role of IP in the lab-to-market journey of PeptiCHIP, an innovative result on HRP.

Training: IP Commercialisation/Valorisation

The training series addresses IP-related aspects in four areas, introducing the main aspects of IP management with a view to commercialising/valorising intellectual assets:

I. **IP and Artificial Intelligence**
II. IP and Software – 16/05/2024
III. Technology Transfer – 08/10/2024
IV. Thinking international - International business Opportunities

➢ ***NB: You will need to register for each session individually!***



Please be sure to sign up for the next sessions as well!

Horizon Results Platform Team
Email: EC-HORIZON-RESULTS-PLATFORM@ec.europa.eu

Thank you,
we look forward to hearing from you!

European IP Helpdesk

- Service initiative of the European Commission
- Addressing **current and potential beneficiaries of EU-funded projects, researchers and EU SMEs**
- Free-of-charge first-line support on intellectual property (IP)
- Hands-on IP and innovation management support
- International pool of IP experts from various thematic fields
- Unique cooperation scheme with the Enterprise Europe Network: 44 ambassadors from 27 EU countries

Training
free online and on-site sessions

Website
frequent updates from the world of IP and innovation

Helpline
confidential treatment of individual IP questions

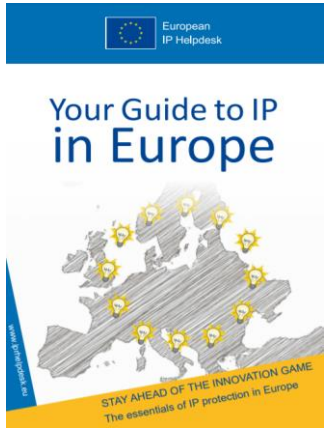
Publications
practical IP knowledge through high-level publications

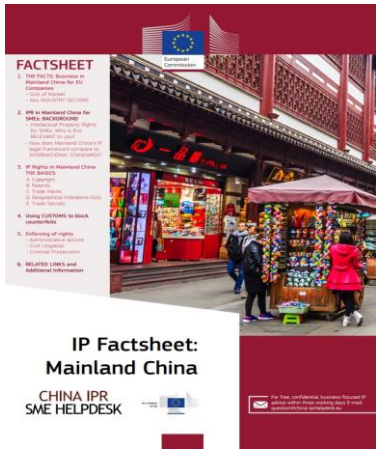
Ambassadors
local IP support throughout Europe

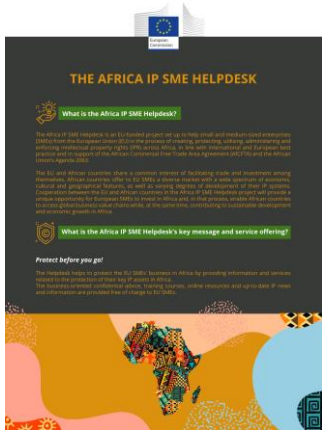
Events
info point at key networking events and conferences

The EC IP Helpdesks

EC IP (SME) Helpdesk Hub – Gateway to Information







- E-learning modules & more
- Guides / Topic, country, sector-specific factsheets / Infographics
- Case studies

European
IP Helpdesk

ec.europa.eu/ip-helpdesk

European IP Helpdesk Training Calendar

Europa - Upcoming events

09 APR 2024
Training and workshops
EU - Webinar: IP in Horizon Projects (H2020/HEurope)
Live streaming available

10 APR 2024
Training and workshops
EU - Webinar EPO Coop: Patent protection for EU funding beneficiaries - Quantum Technology
Live streaming available

11 APR 2024
Training and workshops
EU - Webinar: IP & Open Science
Live streaming available

16 APR 2024
Training and workshops
EU - Webinar: IP for Future and Emerging Technologies
Live streaming available

17 APR 2024
Training and workshops
EU - Webinar: Consortium Agreements
Live streaming available

18 APR 2024
Training and workshops
EU - Webinar & Horizon Results Platform: Artificial Intelligence
Live streaming available

23 APR 2024
Training and workshops
EU - Webinar: IP and Artificial Intelligence - Advanced
Live streaming available

24 APR 2024
Training and workshops
EU - Webinar: IP in EU funded projects with a special focus on MSCA
Live streaming available

30 APR 2024
Training and workshops
EU - Webinar: IP in Business collaborations for SMEs and Start-ups
Live streaming available

07 MAY 2024
Training and workshops
EU - Webinar: Addressing IP impact and innovation in EU projects
Live streaming available

2024

Registration: www.ec.europa.eu/ip-helpdesk

Ambassador Scheme

- **Cooperation scheme** with the Enterprise Europe Network (EEN): 44 ambassadors – 27 countries
- **Building IP capacities** among European SMEs
- **Overcoming language barriers**
- Making the topic **more accessible**
- Exchange and feedback from ambassadors on **needs of SMEs**
- Local **awareness** and **training events**

Thank you!

- www.ec.europa.eu/ip-helpdesk

- helpline@iprhelpdesk.eu
- training@iprhelpdesk.eu

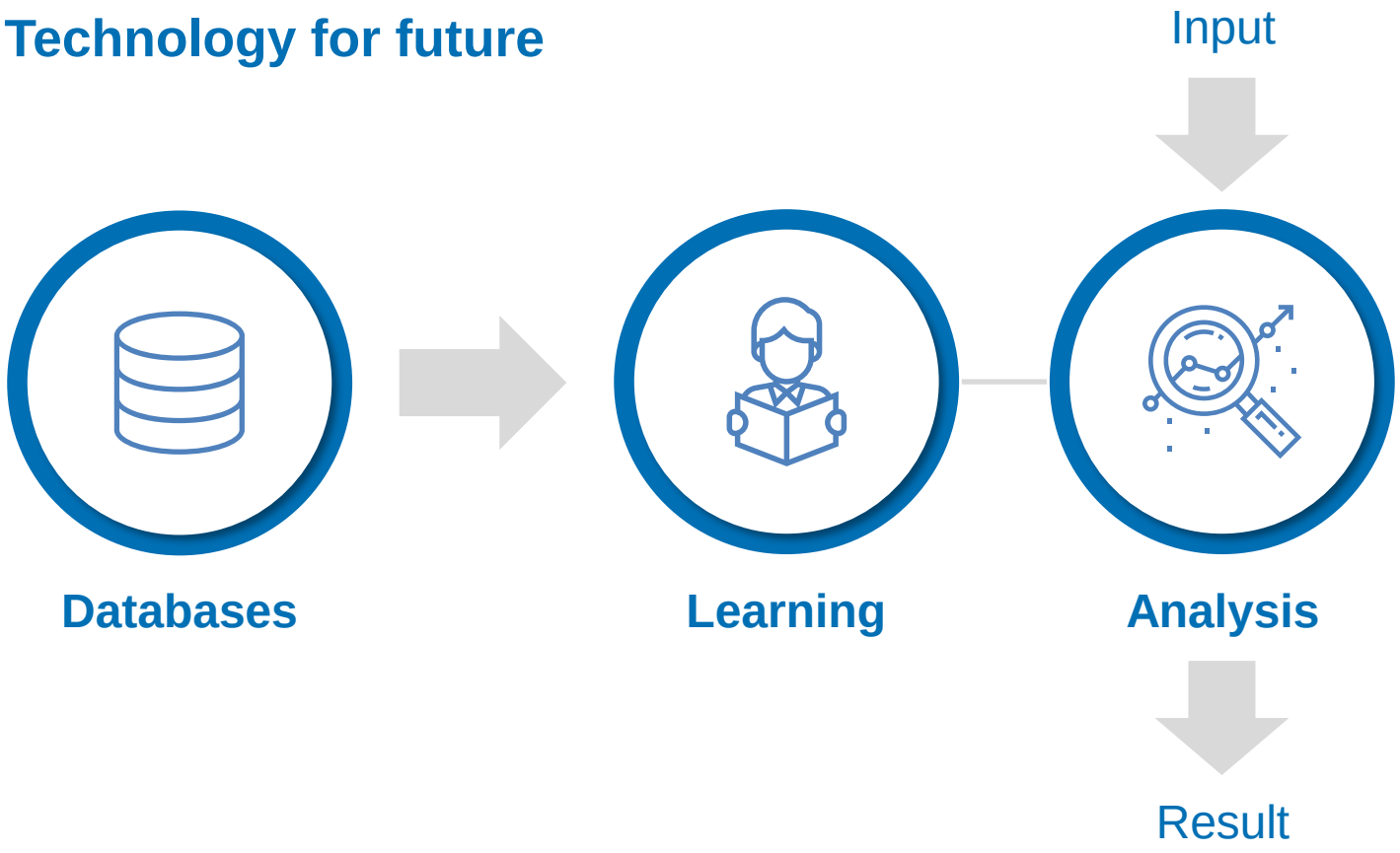
- Twitter @iprhelpdesk

- LinkedIn /european-ipr-helpdesk

Artificial Intelligence

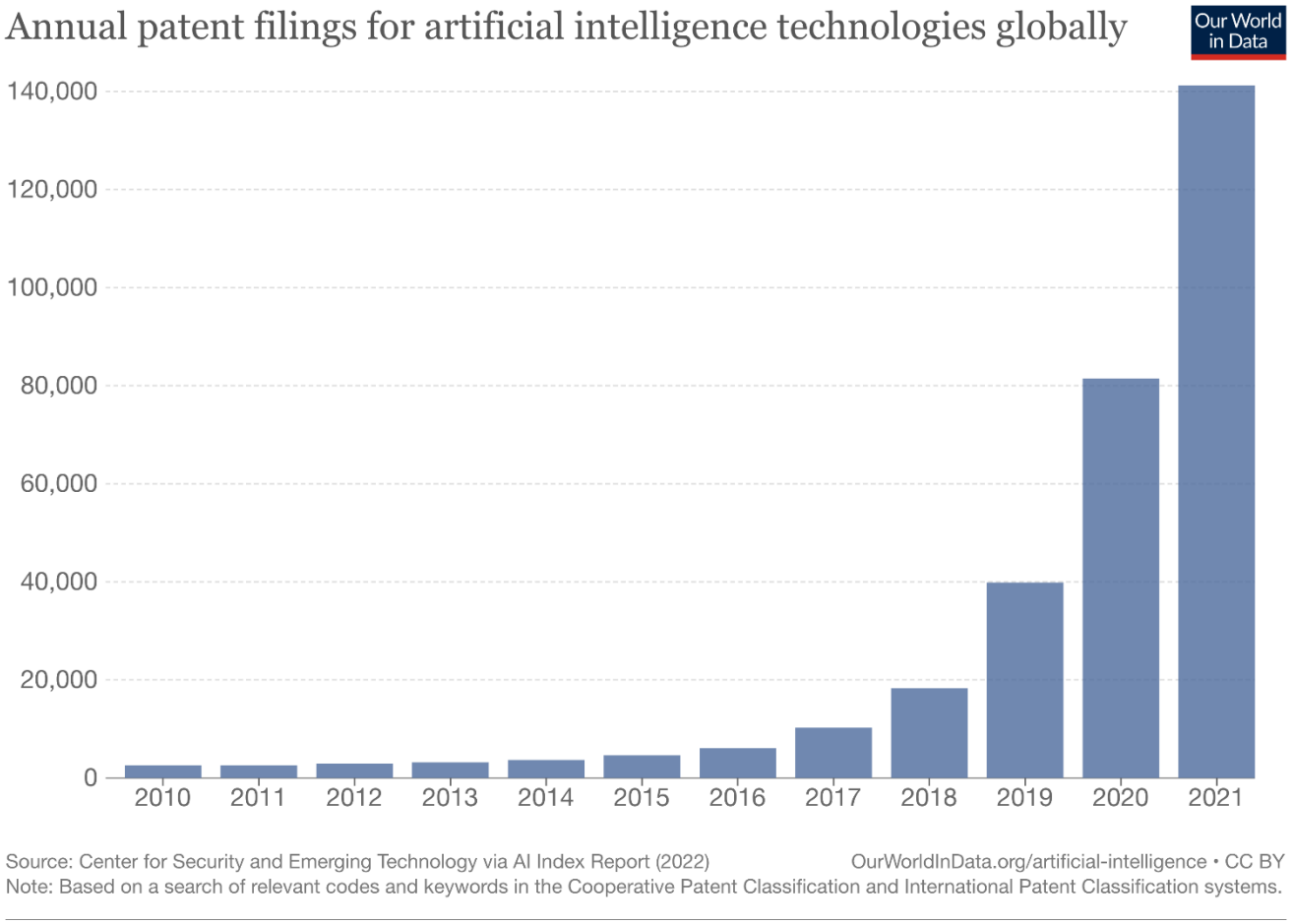
What do we mean?

Technology for future



Picture source: Istock.com

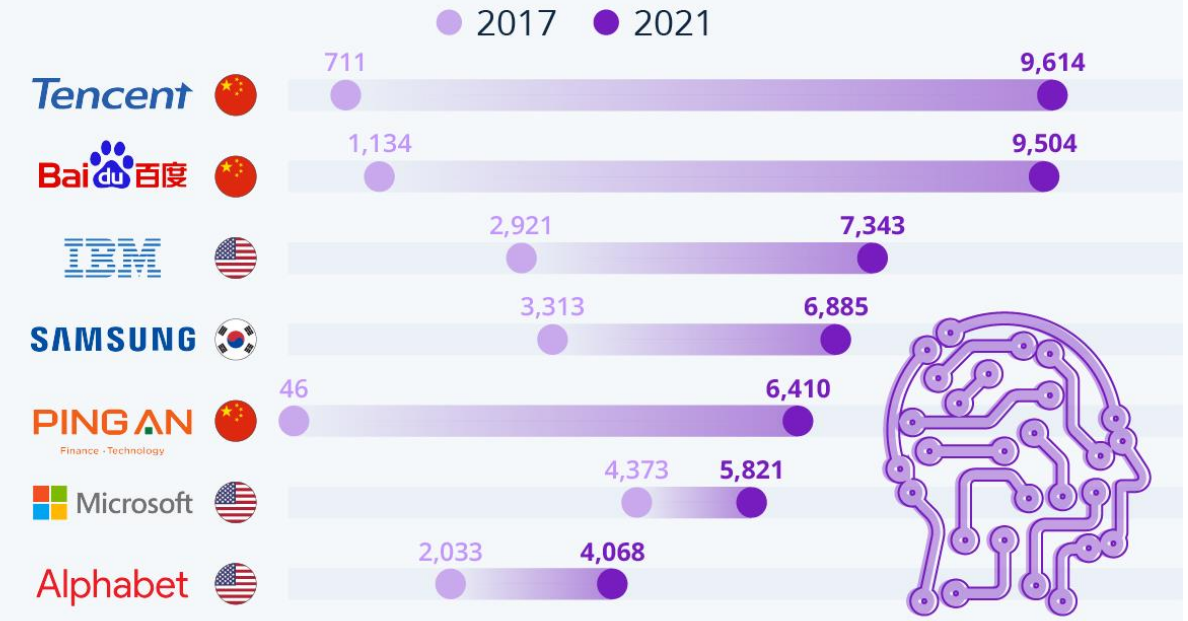
Increase in Patent Applications



Picture source: Freepik.com

The Companies Holding the Most AI Patents

Number of active AI and machine learning patent families held by company*



* Largest owners in 2021

Source: LexisNexis PatentSight

statista

European AI Act

- Common regulatory and legal framework
- Agreed by Parliament and Council
- Parliament amendment on IP
- Entering into Force

Picture source: Freepik.com

IP and Artificial Intelligence

Data ownership

Database Rights

Contractual Rights

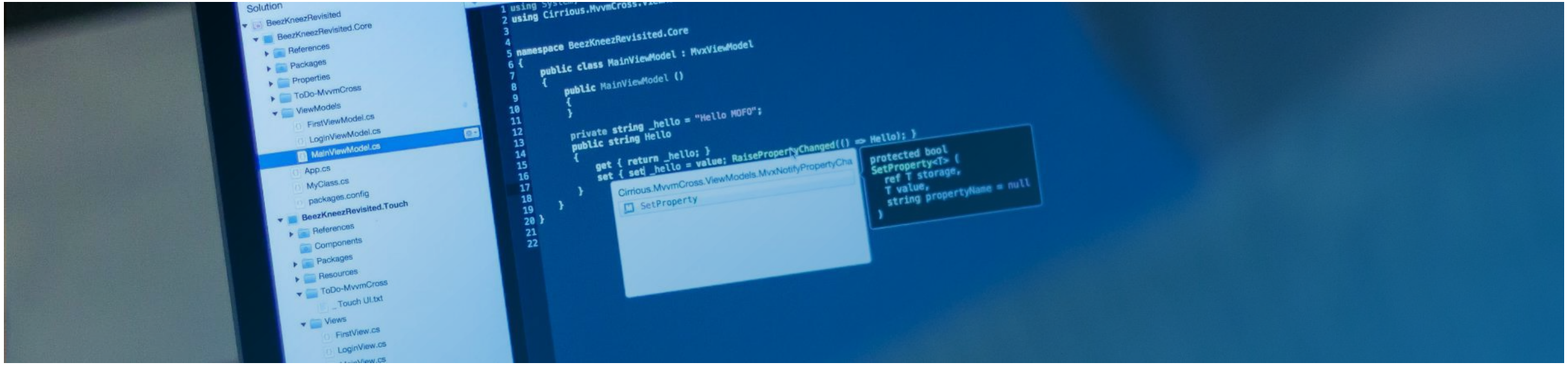
Patents

Picture source: Pixabay.com

Data Rights and Ownership

Picture source: Freepik.com

Who owns data?



Can we really talk about “ownership”?

Different countries have different legal concepts

European Commission has proposals for several data related acts, including a Data Governance Act

Picture source: Freepik.com

Copyright

Picture source: Freepik.com

Copyright Ownership

Level of Creativity Required for Copyright Protection

Data per se will not have this level

Software is protected – under Berne Convention

Picture source: Freepik.com

Database Rights (Europe)

Picture source: Freepik.com

Protects collection of data

€

Excludes machine generated data

Not individual data items

Picture source: Freepik.com

Contracts

Picture source: Freepik.com

Contractual Arrangements

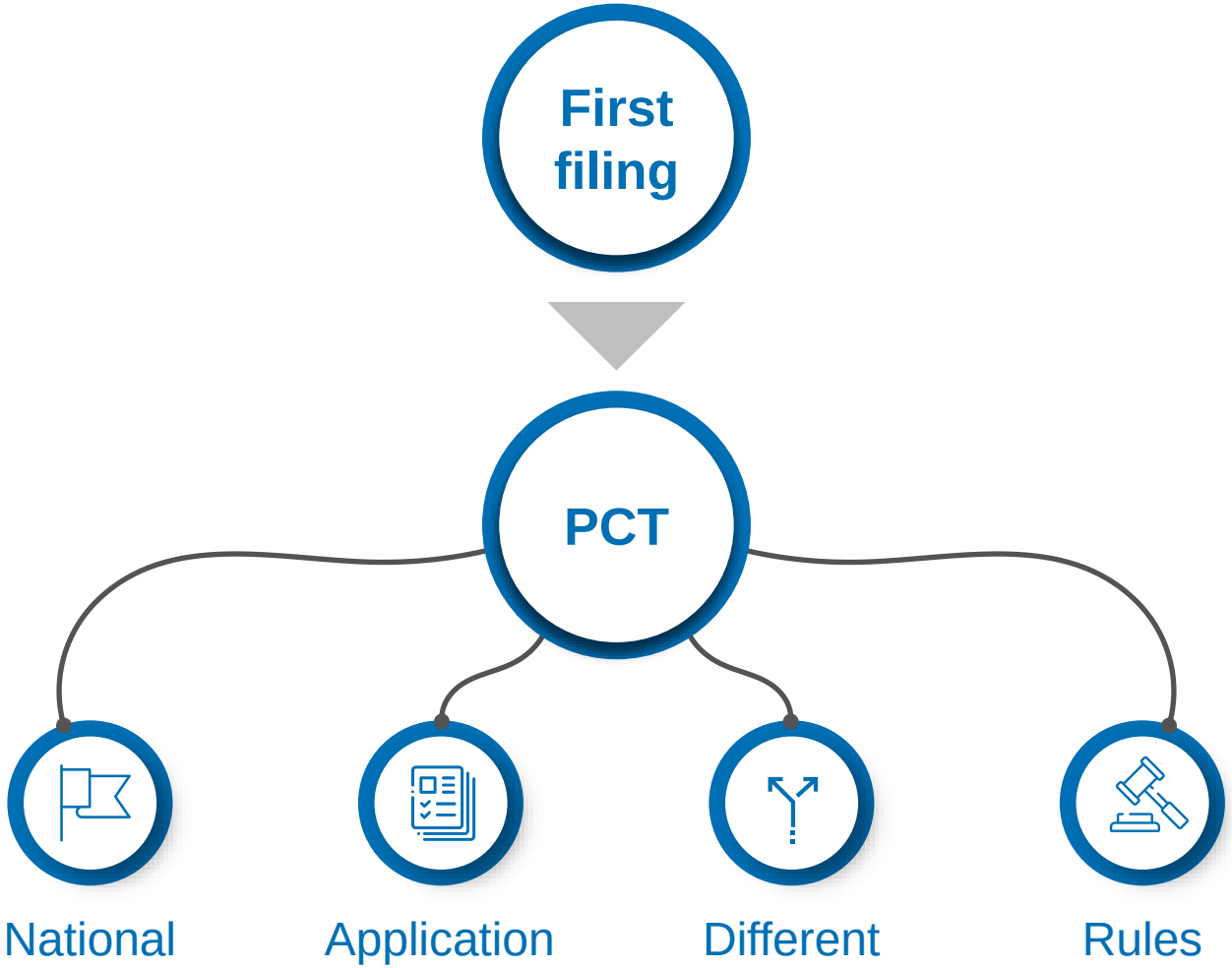
- Use of input data
- Curation of data
- Exploitation of data
- Exploitation of results

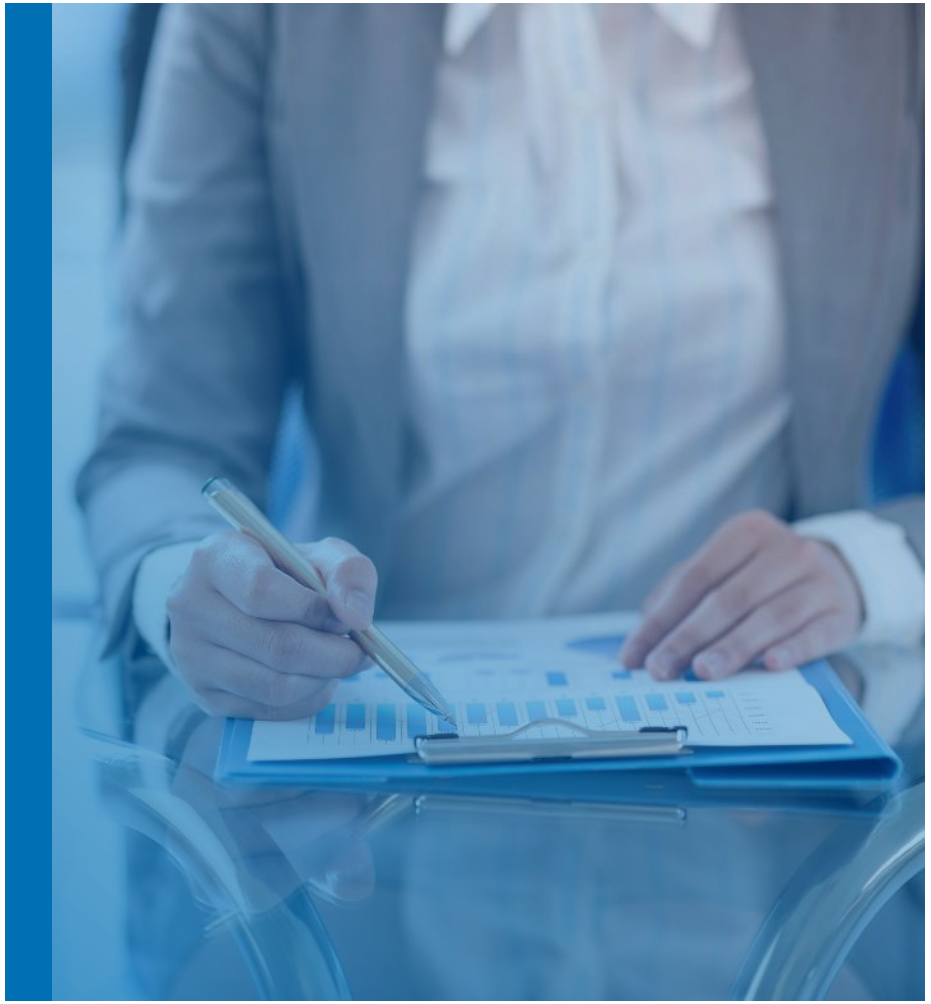
Picture source: Freepik.com

Patent Rights

Picture source: Freepik.com

Filing a Patent Application





Picture source: Freepik.com

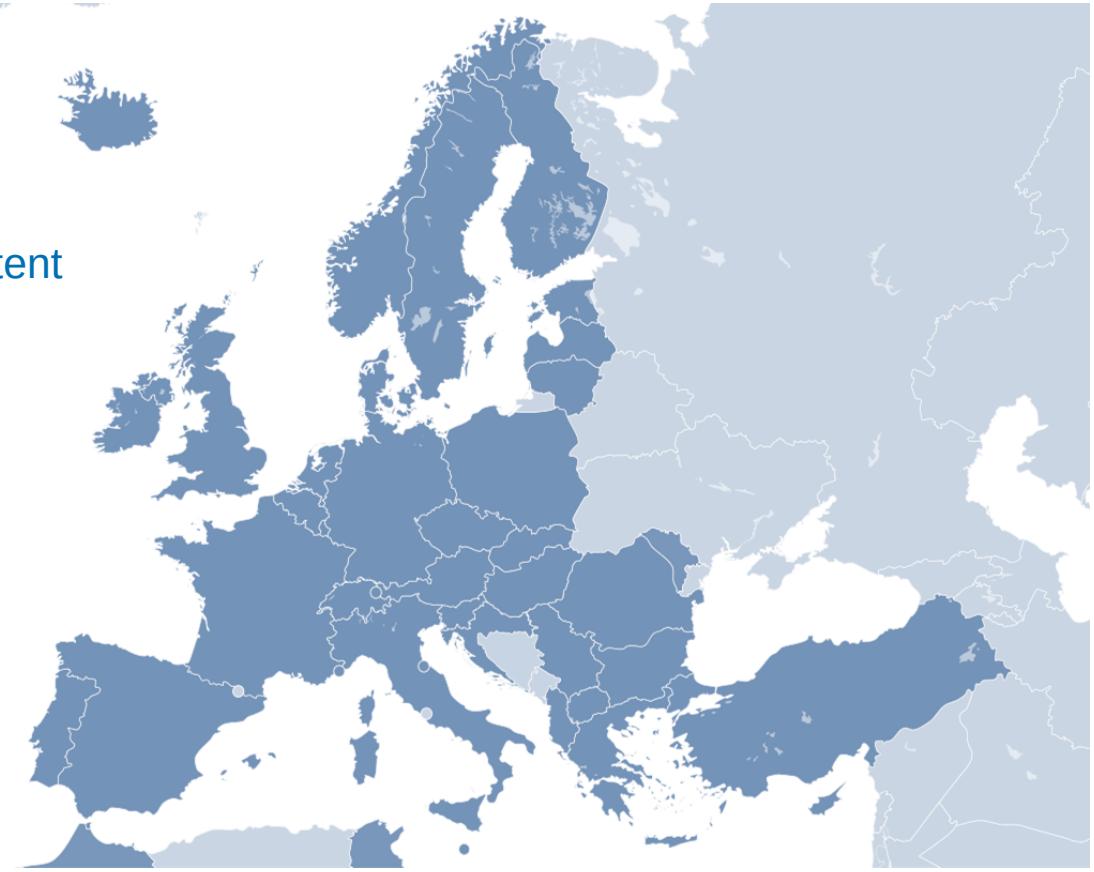
National Rights

- Different countries treat AI differently
- AI is often seen as software-based
- US – rejects “abstract idea” §101 rejections
- EU – “software excluded form patents per se”

Picture source: Freepik.com

Focus on Europe

European Patent Countries

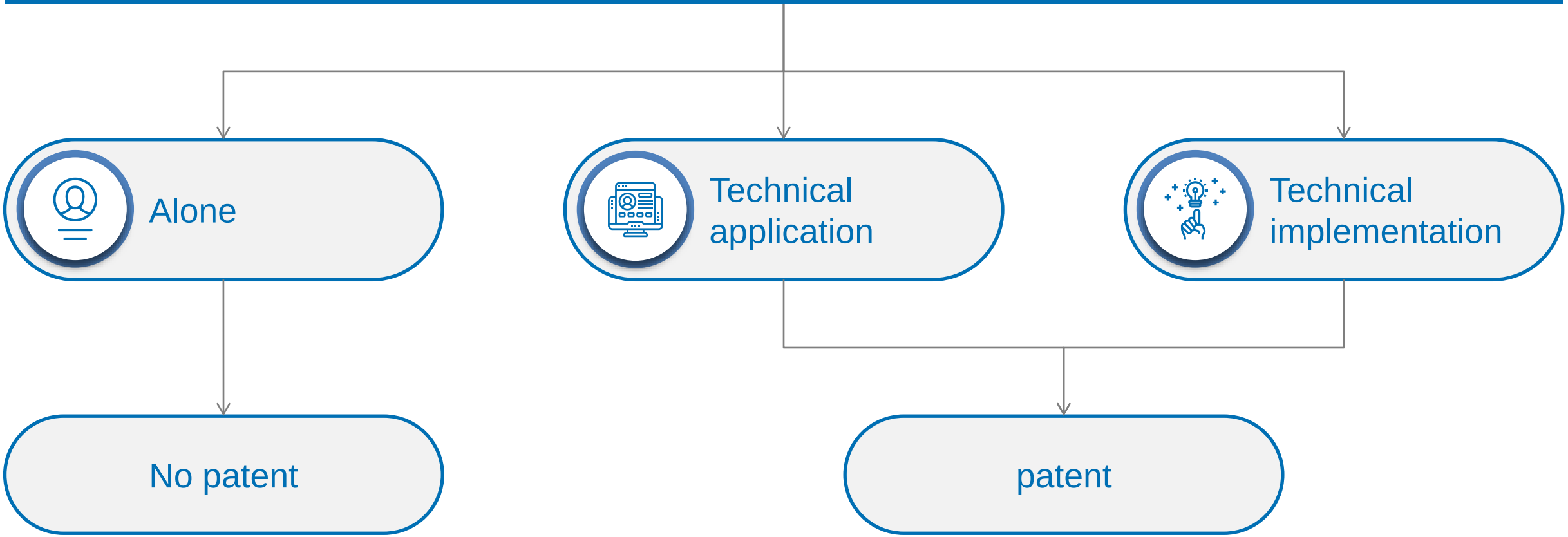


Picture source: European Patent Office

Picture source: google.com/maps

II. Guidelines for Examination of AI in the EPO (Nov 2019 & March 2021)

Examined as inventions involving **mathematical methods**



Technical Application

First Case – Technical Application of a mathematical model

Use in monitoring equipment, such as a heart monitoring device for identifying irregular heartbeats;

Controlling a specific technical system or process, e.g. an X-ray apparatus or a steel cooling process;

Digital audio, image or video enhancement or analysis, e.g. classifying, de-noising, detecting persons in a digital image, estimating the quality of a transmitted digital audio signal;

Separation of sources in speech signals; speech recognition, e.g. mapping a speech input to a text output; or

Providing a medical diagnosis by an automated system processing physiological measurement.

This technical purpose must be specific

Technical Implementation

Second Case - Technical Implementation of a mathematical model

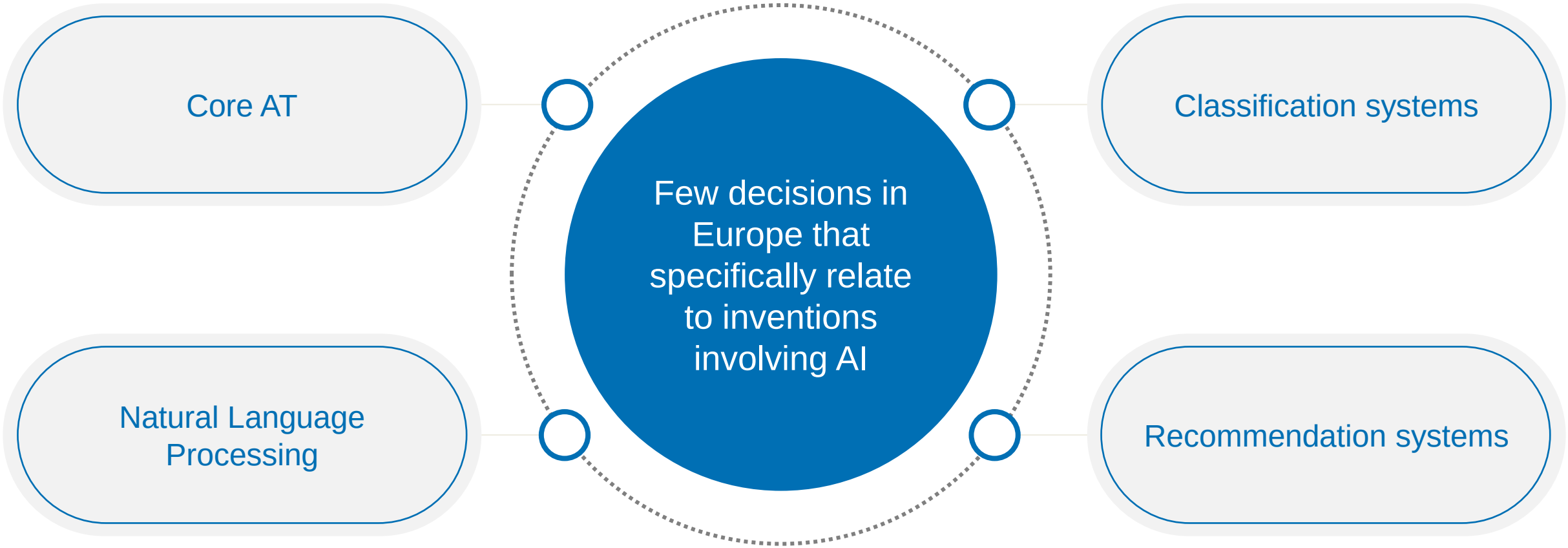
Mathematical method is **particularly adapted** for that implementation.

Data collection

Interaction between hardware elements to collect the data

Picture source: Istock.com

Patentability of Some AI Technologies



Core AI

Fundamental building blocks of AI and machine learning, as opposed to the applications of AI

Difficult to file patent applications on innovations in this “Core AI”. EPO considers it not to be “technical”.

Overcome by specifying in detail

Implementation of the system, e.g. in chip – see Emotional Perception [2023] EWHC 2948 (Ch)

(19) European Patent Office
Office européen des brevets
Europäisches Patentamt
Bundesamt für Geistige Eigentum

(11) EP 3 352 135 B1

(12) EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention of the grant of the patent: 11.09.2019 Bulletin 2019/37

(51) Int Cl.: G06T 7/11 (2017.01) G06T 7/136 (2017.01)

(21) Application number: 18151415.9

(22) Date of filing: 12.01.2018

(54) METHOD AND APPARATUS FOR SEGMENTATION OF BLOOD VESSELS
VERFAHREN UND VORRICHTUNG ZUR SEGMENTIERUNG VON BLUTGEFÄSSEN
PROCÉDÉ ET APPAREIL DE SEGMENTATION DES VAISSEAUX SANGUINS

(84) Designated Contracting States: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

(30) Priority: 19.01.2017 PT 109064

(43) Date of publication of application: 26.07.2018 Bulletin 2018/30

(73) Proprietor: INESC TEC - Instituto de Engenharia de Sistemas e Computadores, Tecnologia e Ciência 4200-465 Porto (PT)

(72) Inventors:
- TERROSO DE ARAÚJO, Ricardo Jorge 4200-465 Porto (PT)
- PINTO DE OLIVEIRA, Hélder Filipe 4200-465 Porto (PT)

(74) Representative: Harrison, Robert John
24IP Law Group
Sonnenberg Fortmann
Patent- und Rechtsanwälte
Postfach 33 08 65
80068 München (DE)

(56) References cited:
- LANGE CHRISTOPHER J ET AL: "Automating Perforator Flap MRA and CTA Reporting", JOURNAL OF DIGITAL IMAGING, SPRINGER-VERLAG, CHAM, vol. 30, no. 3, 17 January 2017 (2017-01-17), pages 359-357, XP0562204[illegible], ISSN: 0897-1889, DOI: 10.1007/S10278-017-0043-Z [retrieved on 2017-01-17]
- MUMBAWATT VACHARA ET AL: "The Planeonsdel scar and its implications in DIEP flap harvest: a clinical anatomic study", EUROPEAN JOURNAL OF PLASTIC SURGERY, HEIDELBERG, DE, vol. 39, no. 1, 5 January 2016 (2016-01-05), pages 41-48, XP0359[illegible]473, ISSN: 0930-343X, DOI: 10.1007/S00238-015-1176-0 [retrieved on 2016-01-05]

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 3 352 135 B1

Printed by Jouve, PARIS (FRANCE)

Application of algorithm

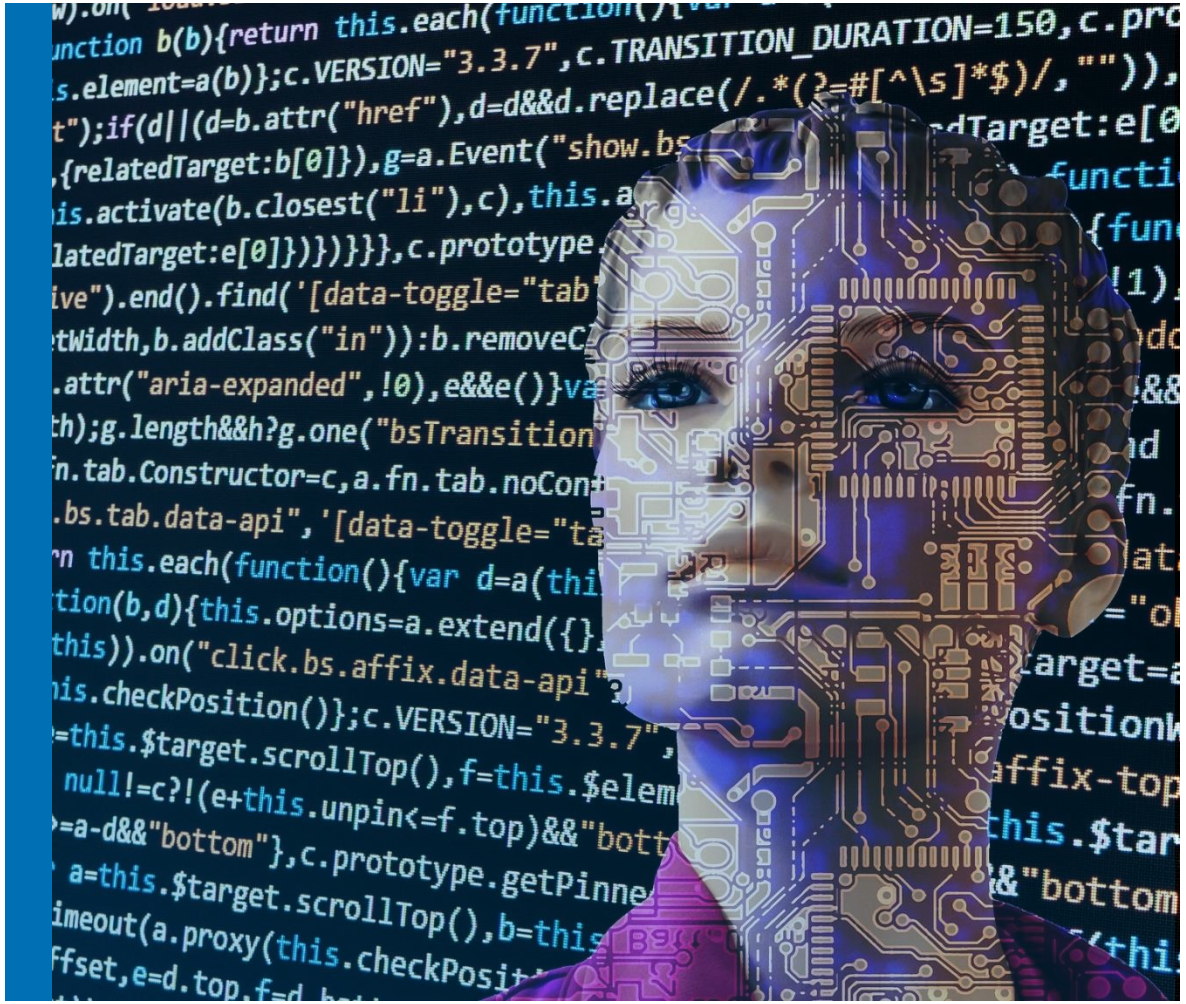
Picture source: Pixabay.com

Natural Language Processing

Allows a computer to interpret inputs, and to generate outputs, in languages such as English, German or Japanese.
Example – Amazon's Alexa System

These virtual assistants use a range of NLP techniques, such as

- Speech recognition to transcribe a user's speech into text
- Natural language understanding;
- Natural language generation to produce a response.



Picture source: Pixabay.com

EPO considers some NLP techniques to be more patentable than others

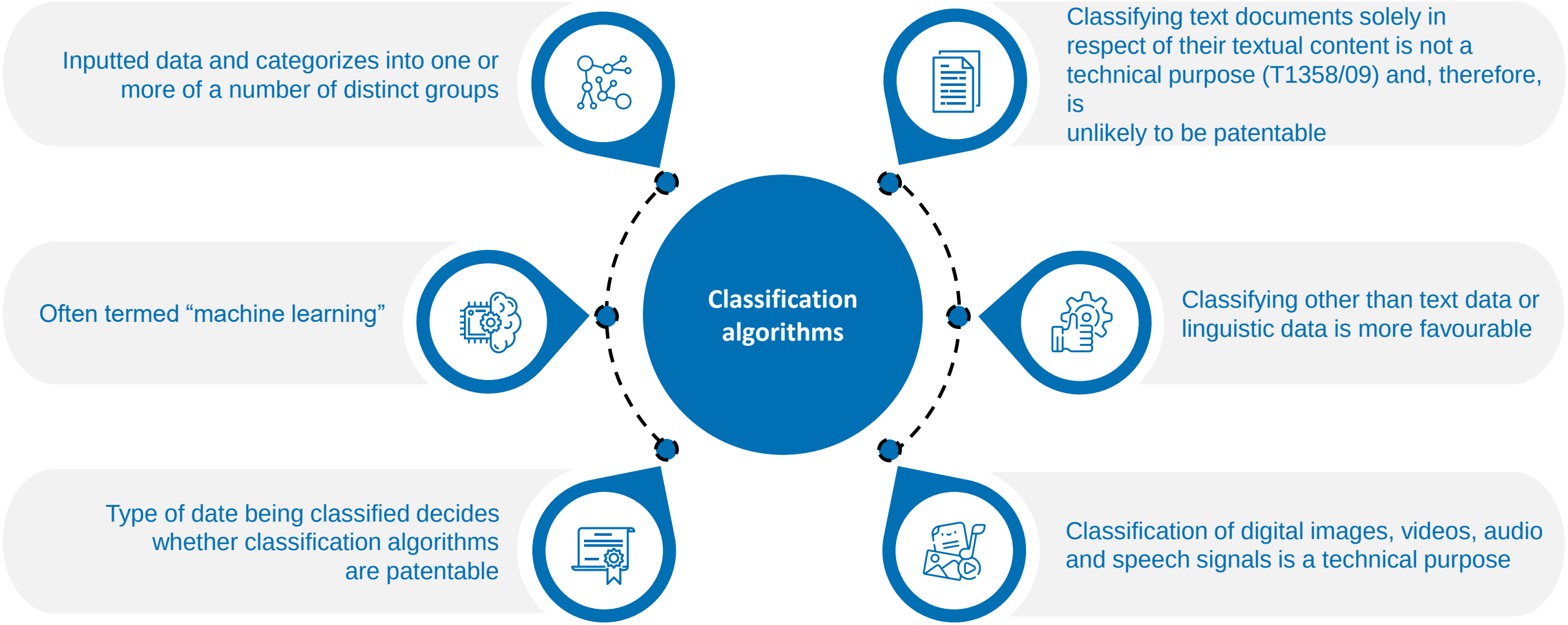
Speech recognition, which the Guidelines expressly recognize as a “technical purpose” is readily patentable

Natural language understanding or comprehension, is considered more difficult to patent

NLP is not a recent technology and the difficulties in patenting NLP, and other technologies involving linguistics, are longstanding

Picture source: Istock.com

Classification Algorithms



Recommendation Systems

Recommendation systems provide suggestions for content that is likely to be of interest to a particular user

Book selling websites often employ a recommendation system to suggest new books that a reader might enjoy

amazon.com

Great commercial significance but extremely difficult to patent

Picture source: Freepik.com

Claiming AI-Related Inventions

AI-related inventions may have three potentially patentable aspects

Generating training data for use in training a model, such as an artificial neural network;

Training the model using the training data (machine learning); and

Using the trained model to analyze new data

Each of these aspects should have separate independent claims

Picture source: Istock.com

Trained model may be difficult to define in concrete technical terms

"Product-by-Process" claim
e.g., Emotional Perception

Even if a product-by-process claim is not allowable, a well-drafted claim to a method of training a model will confer protection on the model itself under Article 64(2) EPC

Picture source: Freepik.com

Inventive Step

Not “could” the skilled person arrive at the invention but “would” they do so?

- Large number of parameters
- No obvious relationship
- Human selection of training parameters

Problem-Solution approach is required
Solution must be in the technical sphere

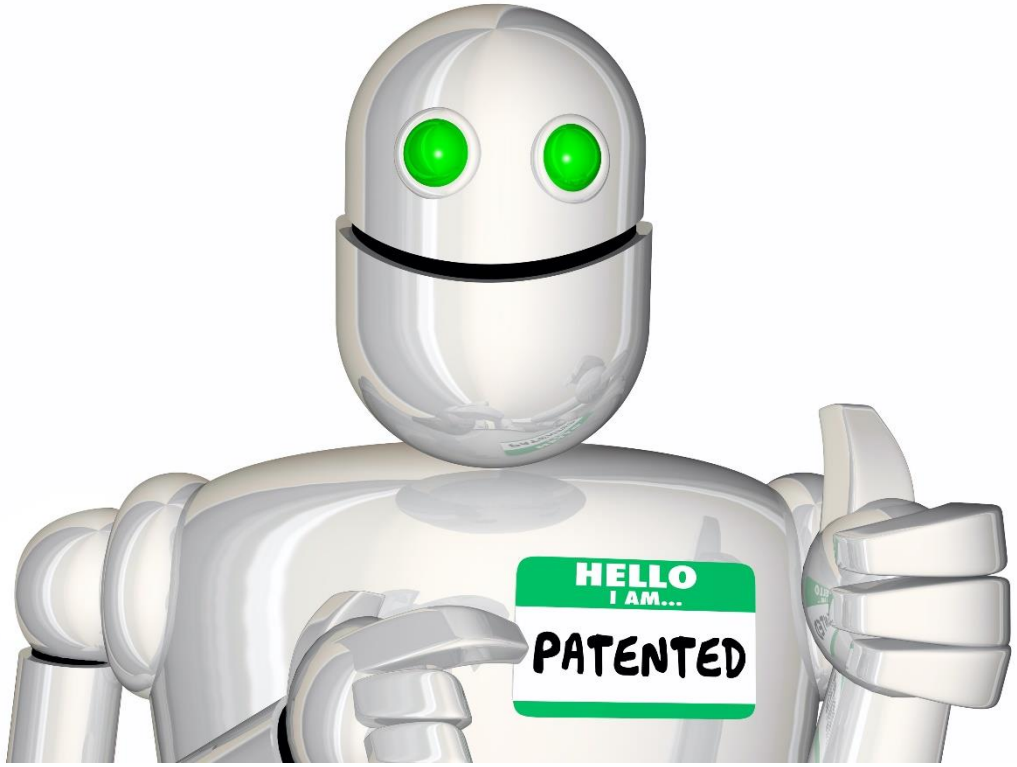
Picture source: Freepik.com

AI as Inventor or Creator

EPO US UK : No (EPO - J0008/20)
South Africa: Yes
Germany: No – but include in description

US Copyright Office: Creator must be a human being

"…the inventor designated in a European patent must be a natural person … the understanding of the term inventor as referring to a natural person appears to be an internationally applicable standard, and that various national courts have issued decisions to this effect."



Picture source: Adobe

ChatGPT

IP and other legal issues from massive language models

Uses copyrighted information + non-copyrighted data

Produces useful and useless information

Liability?

Many unanswered questions

Picture source: Istock.com

Conclusions – Protection of AI Innovations

- Data can be protected
- Copyright for programs
- Patenting possible in certain circumstances

Picture source: Istock.com

Contact

Thanks!

Dr. Robert Harrison
Sonnenberg Harrison Partnerschaft mbB
+49 1511 2066 303
www.sonnenbergharrison.law
Email: robert.harrison@shp.law
Munich | Berlin | Paris | Vienna | Zürich | London
https://www.linkedin.com/in/robertharrison/

Picture source: Freepik.com