



European IP Helpdesk

Stay ahead of the innovation game.

IP and Artificial Intelligence

29 November 2022
Robert Harrison





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



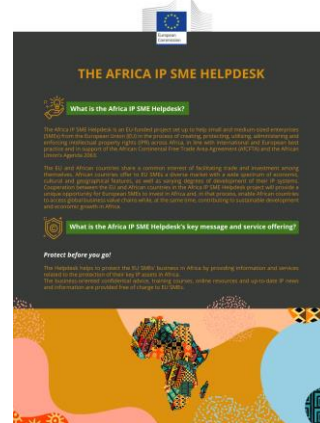
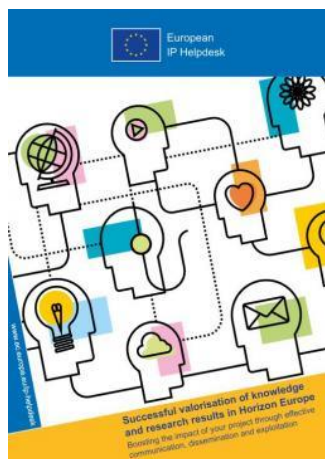


The EC IP Helpdesks





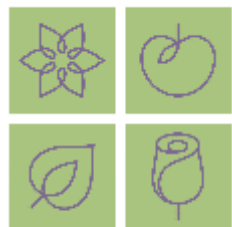
EC IP (SME) Helpdesk Hub – Gateway to Information











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



Training cooperation with the Community Plant Variety Office and CIOPORA



CIOPORA

17 FEB 2022	TRAINING AND WORKSHOPS EU - Webinar & CPVO coop: The essential role of Quality Auditing examination offices for EU Plant Variety Rights  Live streaming available	12 APR 2022	TRAINING AND WORKSHOPS EU - Webinar CPVO Coop: Constraints and opportunities for edited varieties. Is the GMO legal framework impacting the creation of new plants?  Live streaming available
21 JUN 2022	TRAINING AND WORKSHOPS EU Webinar - CPVO Coop Webinar: Introduction to Community plant variety rights: creation of new plants and their protection in the EU  Live streaming available	08 SEP 2022	TRAINING AND WORKSHOPS EU - Webinar CPVO Coop: The interface between plant variety rights and patents  Live streaming available
28 SEP 2022	TRAINING AND WORKSHOPS EU - Webinar & CIOPORA coop: Growers' Guide to Intellectual Property Protection for Plants  Live streaming available	10 OCT 2022	TRAINING AND WORKSHOPS EU - Webinar CPVO Coop: What's in a name: plant variety denominations and their interface with trademarks and geographical indications  Live streaming available
02 NOV 2022	TRAINING AND WORKSHOPS EU - Webinar CIOPORA coop: Enforcement practices for Plant Variety Rights in the EU  Live streaming available	06 DEC 2022	TRAINING AND WORKSHOPS EU - Webinar CPVO Coop: The impact of protected new plant varieties in the European Union market.  Live streaming available



Ambassador Scheme

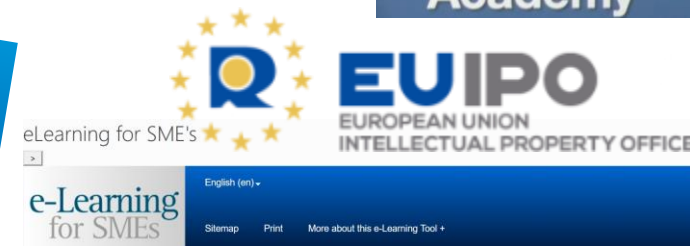
- **Cooperation scheme** with the Enterprise Europe Network (EEN): 44 ambassadors – 27 countries
- **Building IP capacities** among European SMEs
- **Overcoming language barriers**
- Making the topic **more accessible**
- Exchange and feedback from ambassadors on **needs of SMEs**
- Local **awareness**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





Further learning opportunities:

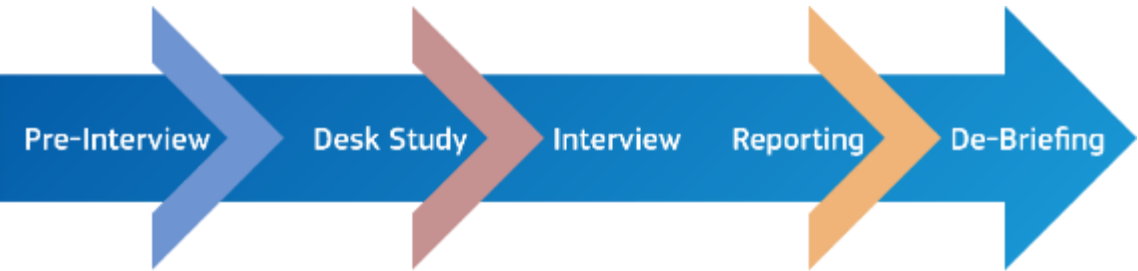
1. [European IP Helpdesk Ambassadors and EEN](#)
2. [EUIPO learning portal](#)
3. [EUIPO – Ideas Powered for business website](#)
4. [WIPO Academy / Diagnostics](#)
5. [The Ideas Powered for business SME Fund](#)
6. [IPA4SME](#)
7. [Horizon IP Scan](#)
8. [\(IP Booster\)](#)
9. [Horizon Results Booster](#)
10. [Leadership4SMEs](#)
11. [EPO Academy](#)
12. [4IPCouncil](#)





Horizon IP Scan

IP Support Service for SMEs in Collaborative EU-funded Research Projects



14
JUL
2022

INFO DAYS
Horizon IP Scan - Info Session
 Live streaming available

14
SEP
2022

INFO DAYS
Horizon IP Scan - Info Session
 Live streaming available

14
NOV
2022

INFO DAYS
Horizon IP Scan - Info Session
 Live streaming available

17
AUG
2022

INFO DAYS
Horizon IP Scan - Info Session
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11
OCT
2022

INFO DAYS
Horizon IP Scan - Info Session
 Live streaming available

14
DEC
2022

INFO DAYS
Horizon IP Scan - Info Session
 Live streaming available



www.horizon-ipscan.eu



Thank you!

- www.ec.europa.eu/ip-helpdesk
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- training@iprhelpdesk.eu
- Twitter [@iprhelpdesk](https://twitter.com/iprhelpdesk)
- LinkedIn [/european-ipr-helpdesk](https://www.linkedin.com/company/european-ipr-helpdesk)





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About me

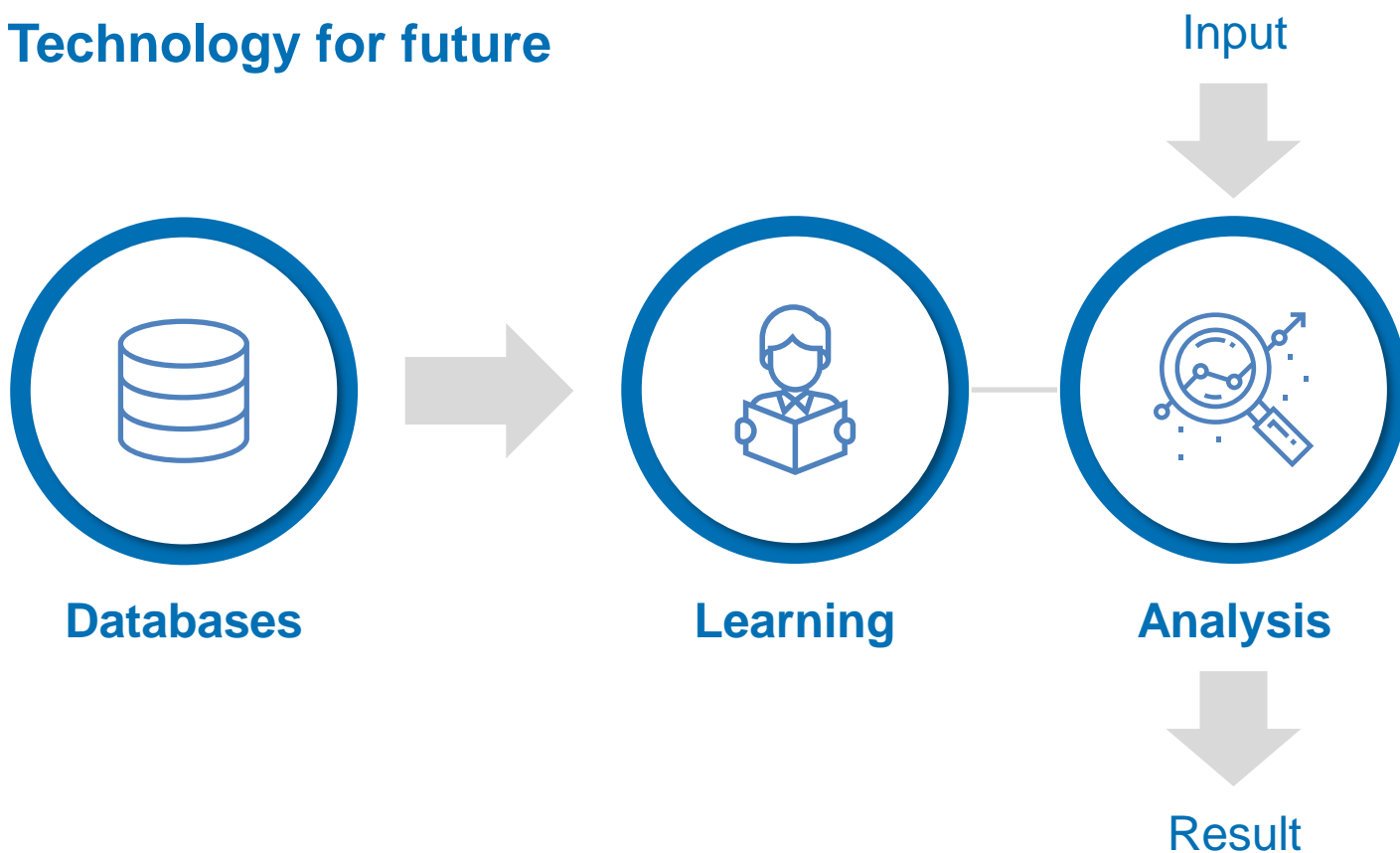
- BA Physics, Oxford University
- MSc Physics, Sheffield University
- PhD Semiconductors Sheffield University
- EPO Examiner – the Hague
- IBM Germany – Patent Engineer
- W.L.Gore & Associates – European IP Counsel
- Sonnenberg Harrison Partnership
- Advisory Board Member
- IP Strategy



Artificial Intelligence

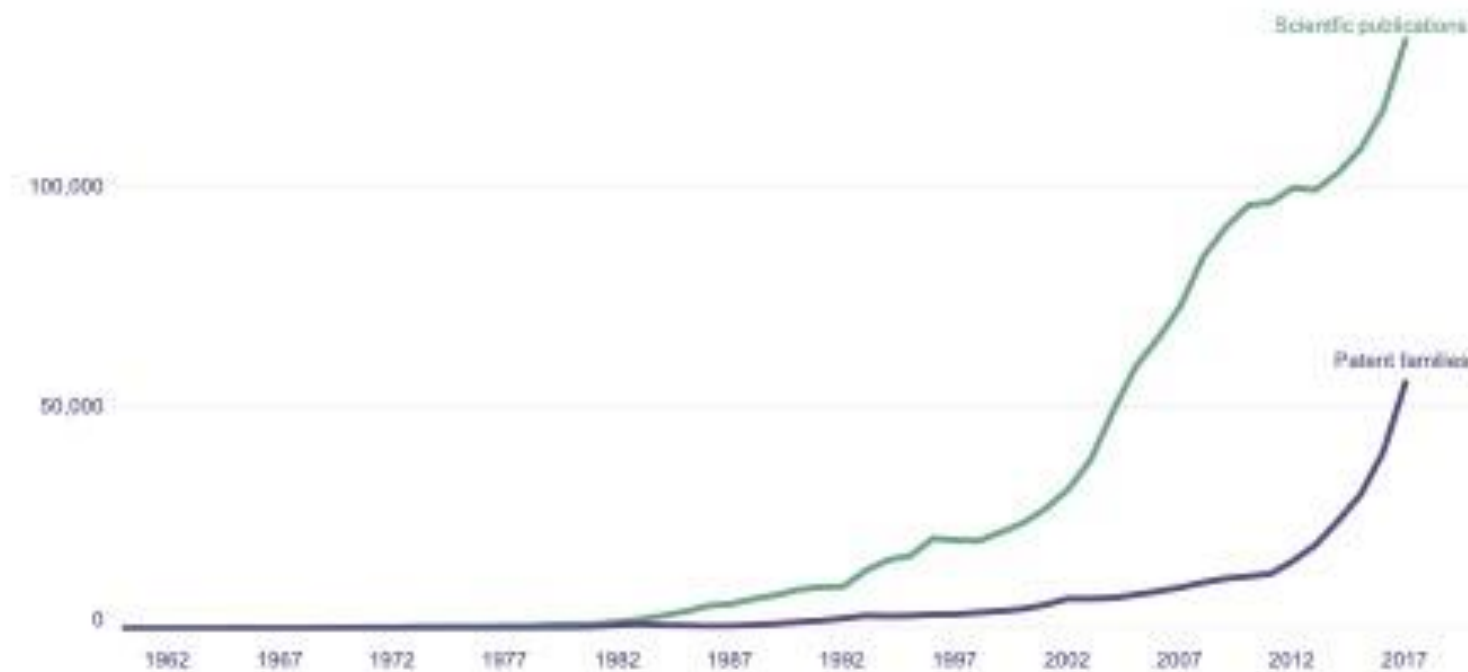
What do we mean?

Technology for future





Increase in Patent Applications





IP and Digital Innovations



Data ownership



Database Rights



Contractual Rights



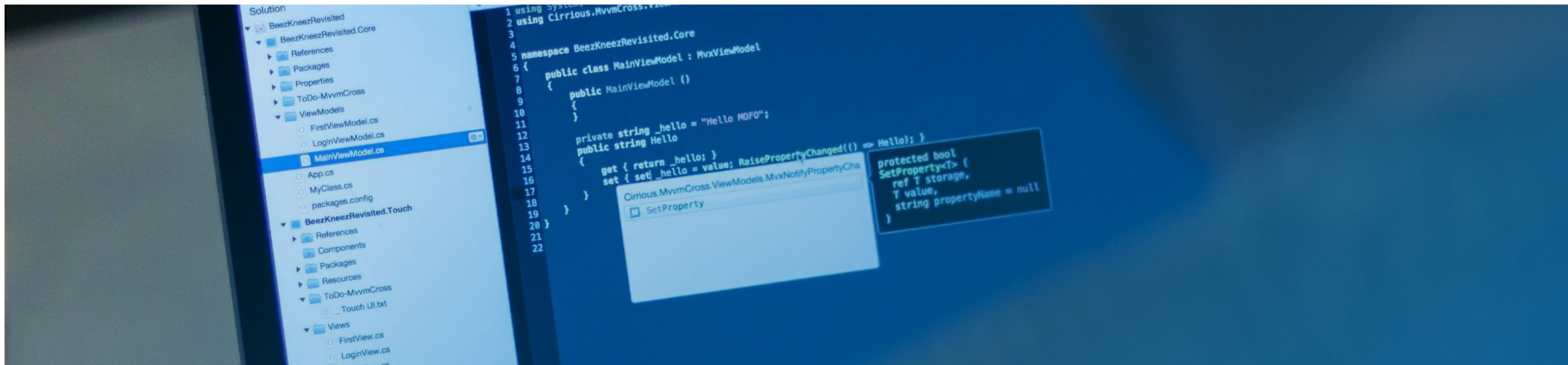
Patents



Data Rights and Ownership



Who owns data?



**Can we really talk
about “ownership”?**

Different countries have different legal concepts

European Commission discussing various data rights laws including a Data Governance Act



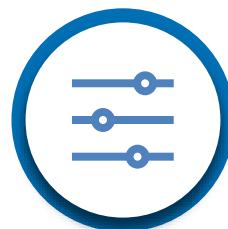
Copyright



Copyright Ownership



Level of Creativity Required for
Copyright Protection



Data per se will not have this level



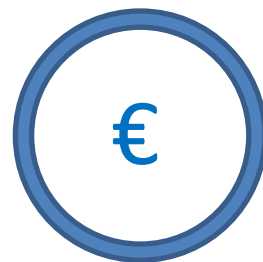
Software is protected – under
Berne Convention



Database Rights (Europe)



Protects
collection of data



Significant
Investment



Not individual
data items



Contracts



Contractual Arrangements



Use of input data



Curation of data



Exploitation of data



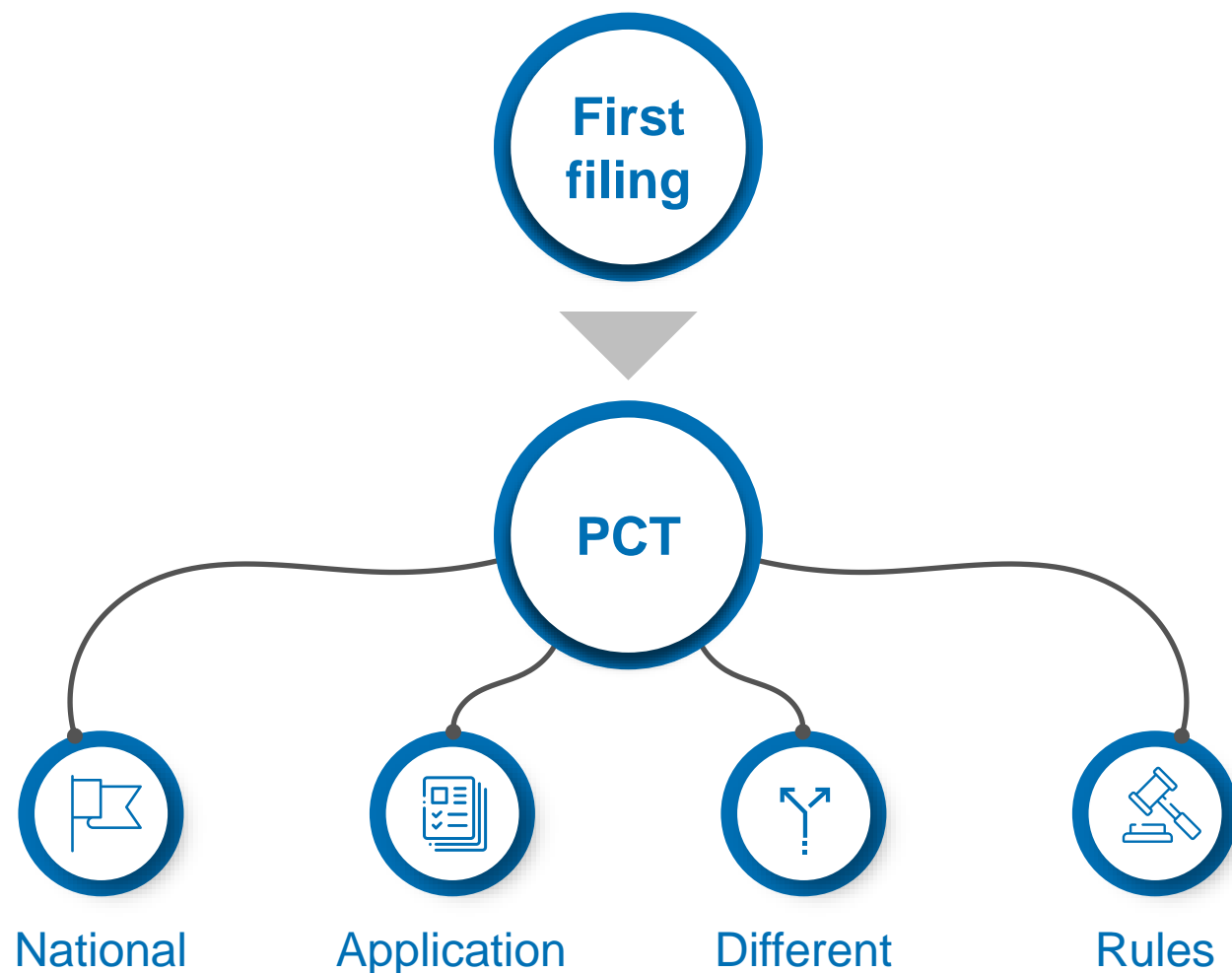
Exploitation of results



Patent Rights



Filing a Patent Application





National Rights



Different countries treat AI differently



AI is often seen as software-based



US – rejects “abstract idea”
§101 rejections

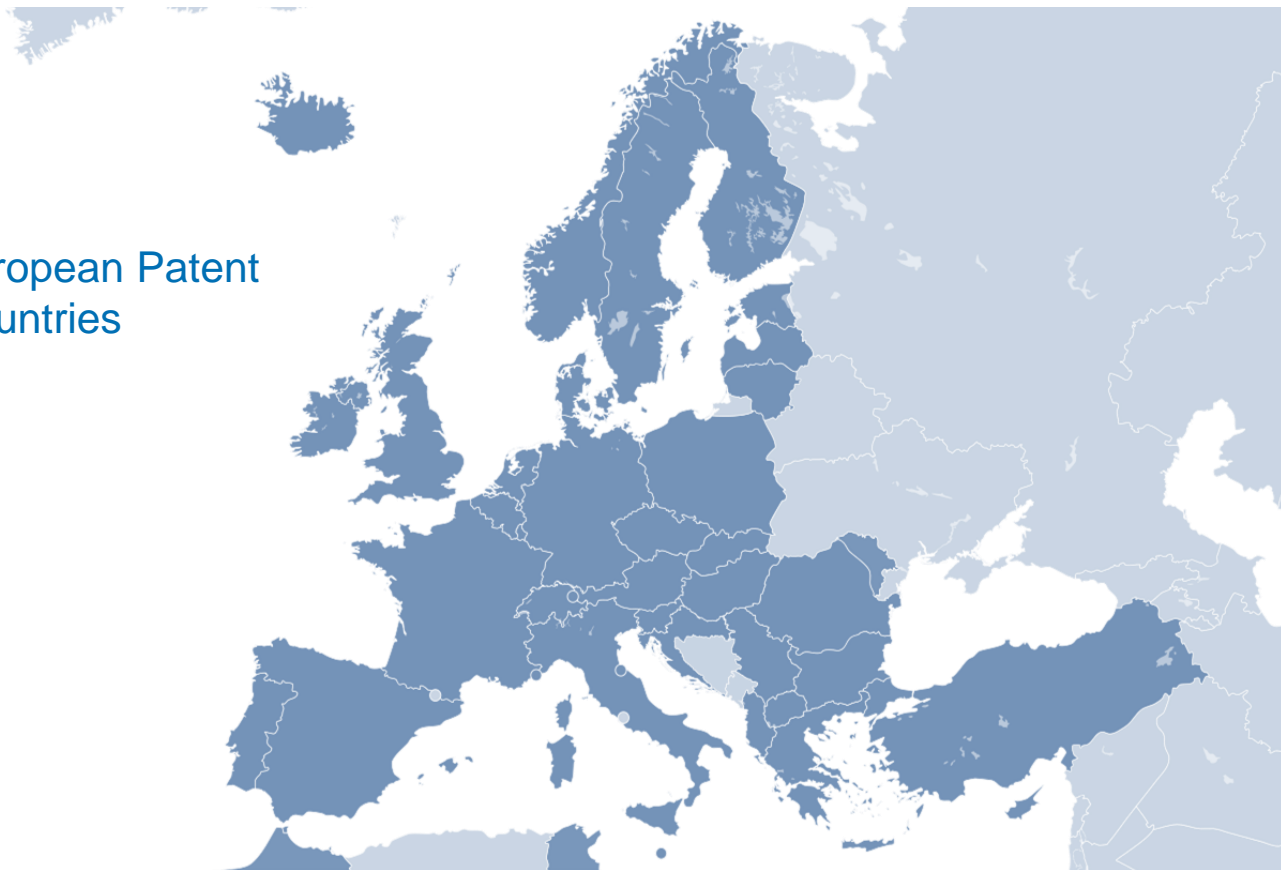


EU – “software excluded from patents per se”



Focus on Europe

● European Patent
Countries



Picture source: European Patent Office

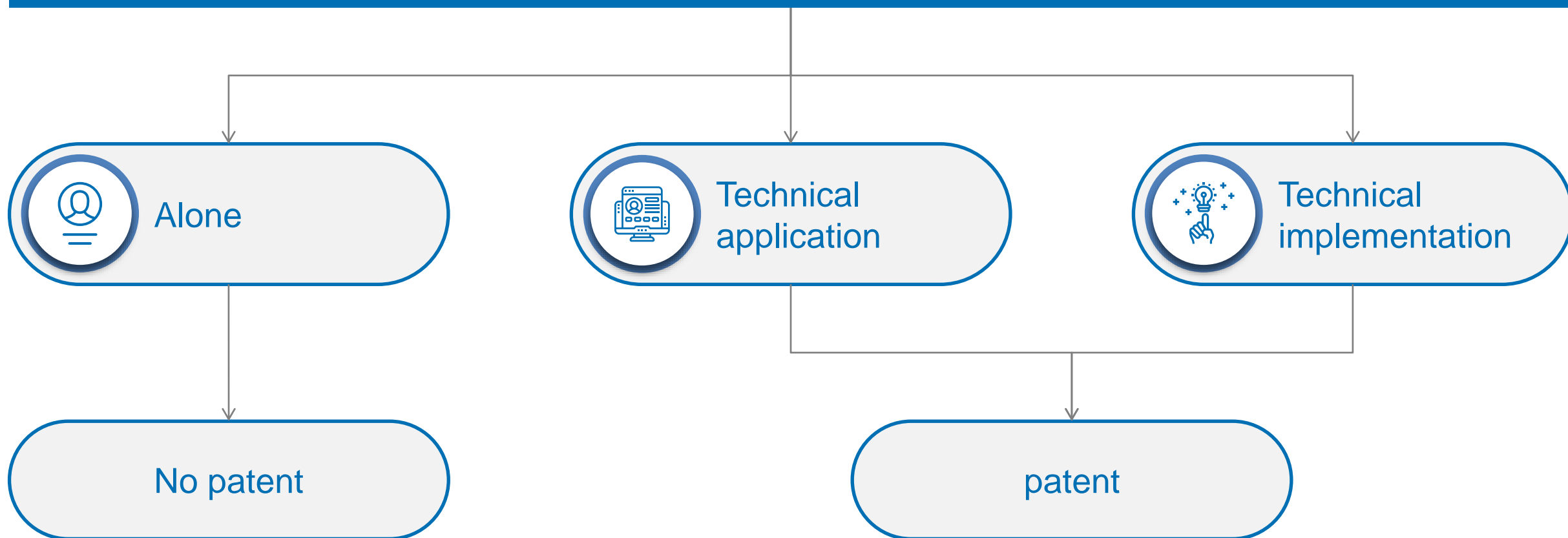


Picture source: [google.com/maps](https://www.google.com/maps)



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

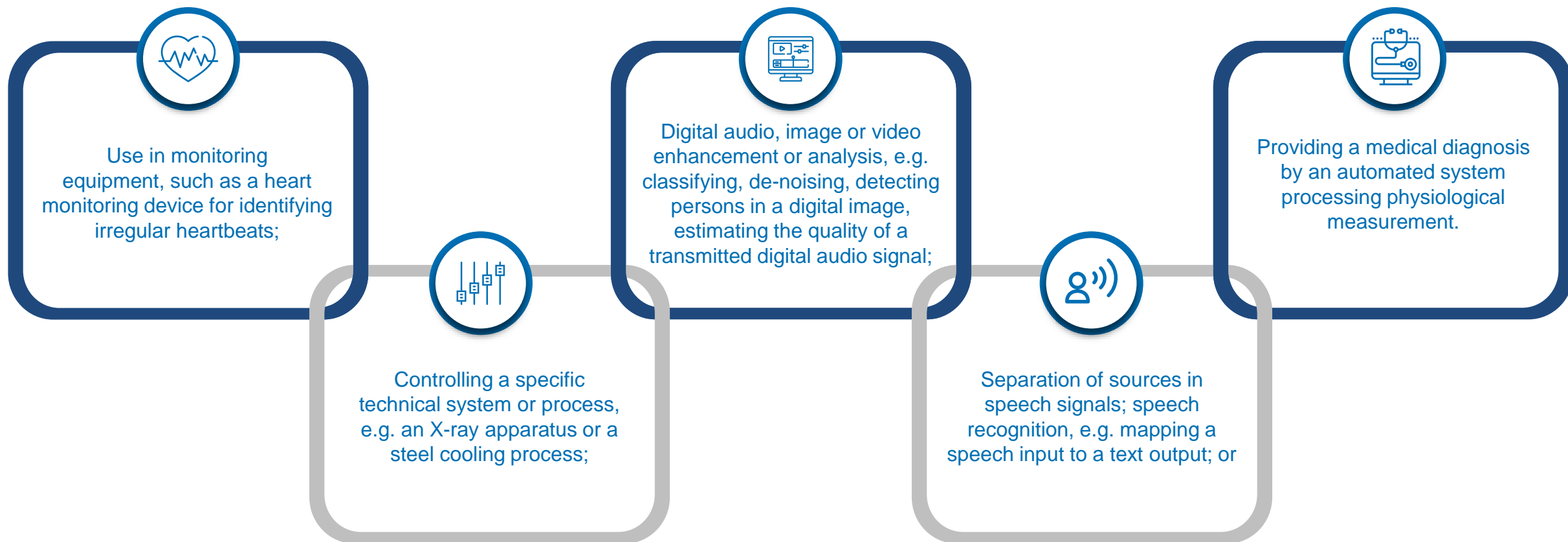
Examined as inventions involving **mathematical methods**





Technical Application

First Case – Technical Application of a mathematical model



This technical purpose must be specific



Technical Implementation

Second Case - Technical Implementation of a mathematical model



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



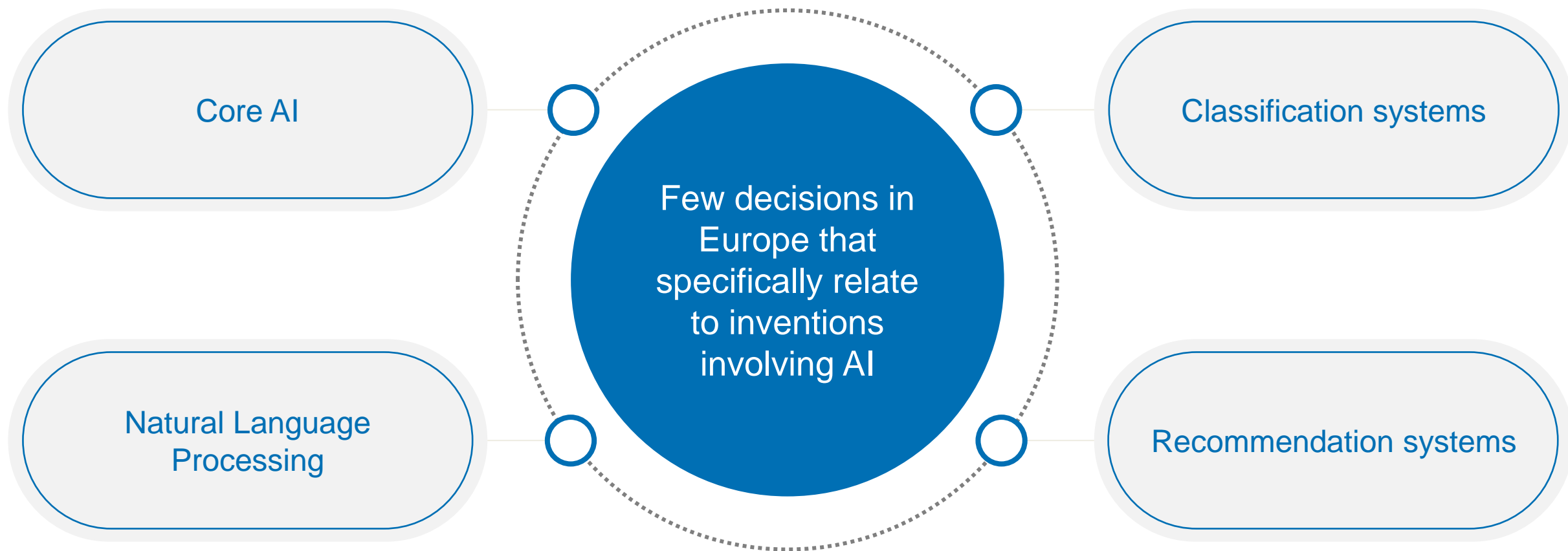
Data
collection



Interaction between
hardware elements
to collect the data



Patentability of Some AI Technologies



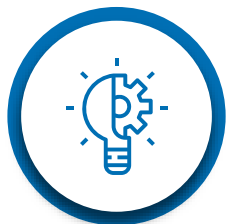


Core AI

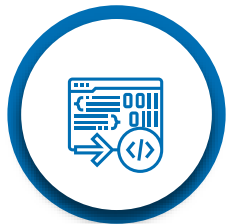
Fundamental building blocks of AI and machine learning, as opposed to the applications of AI

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

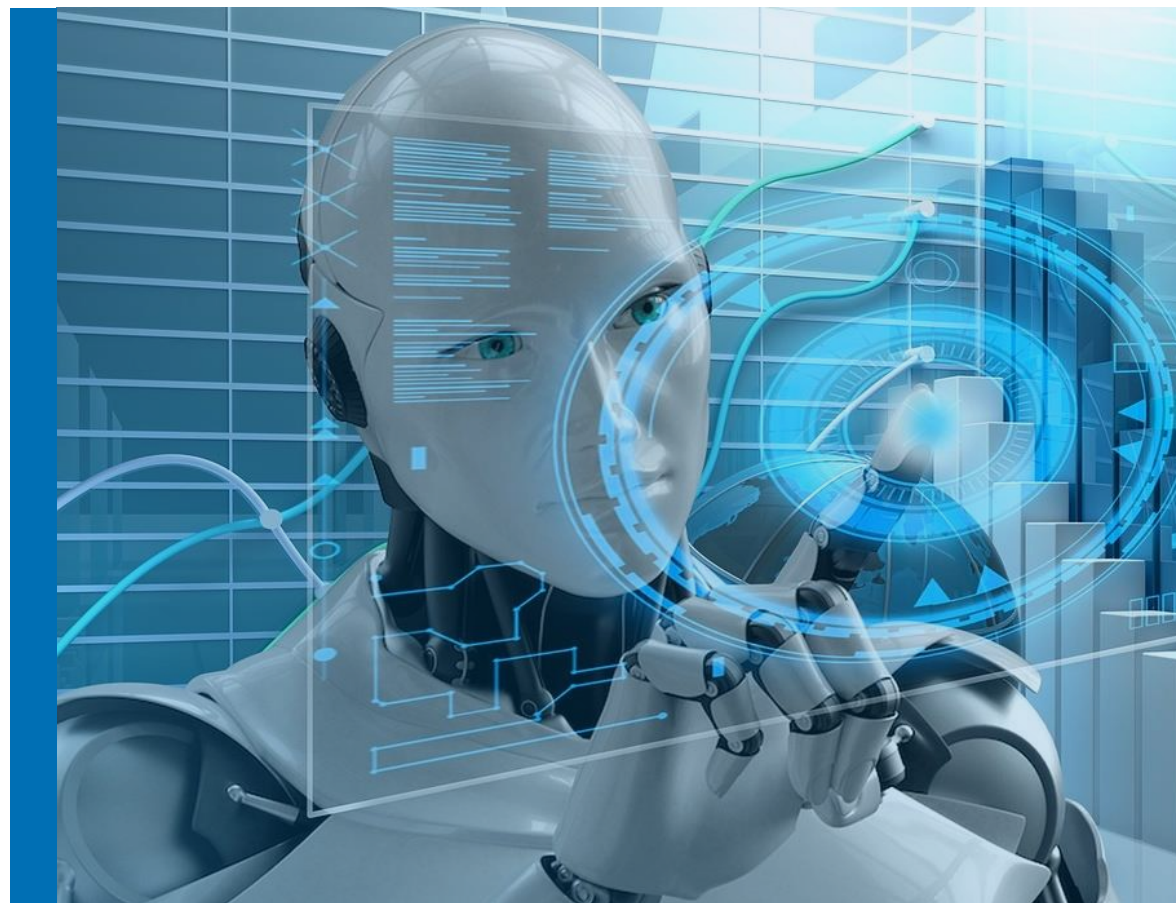
Overcome by specifying in detail



Implementation of the
system



Application of the
algorithm

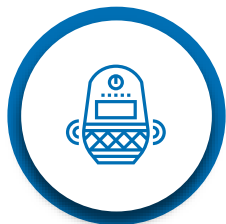




Natural Language Processing

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



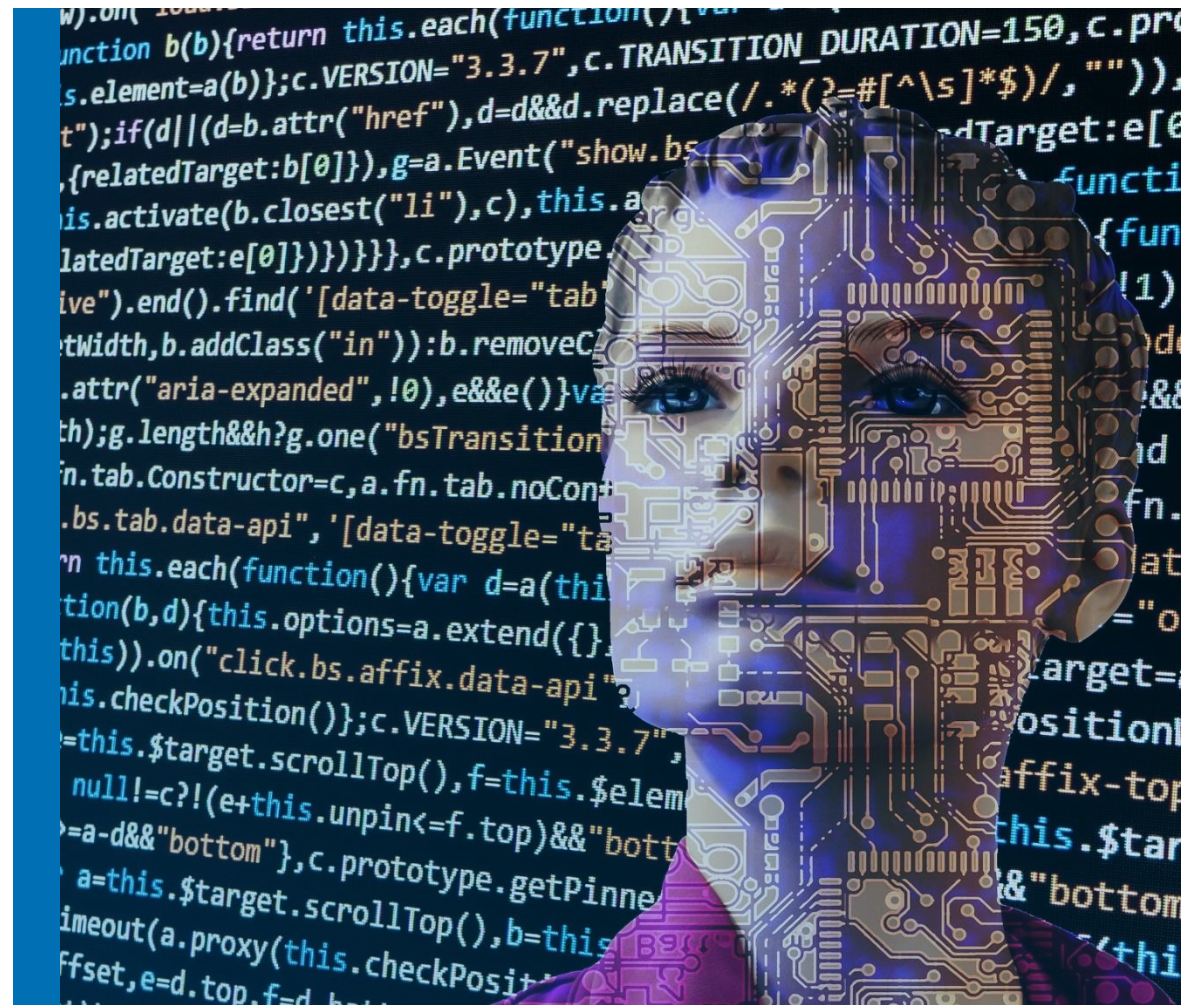
Speech recognition to transcribe
a user's speech into text



Natural language understanding;



Natural language generation to
produce a response.





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



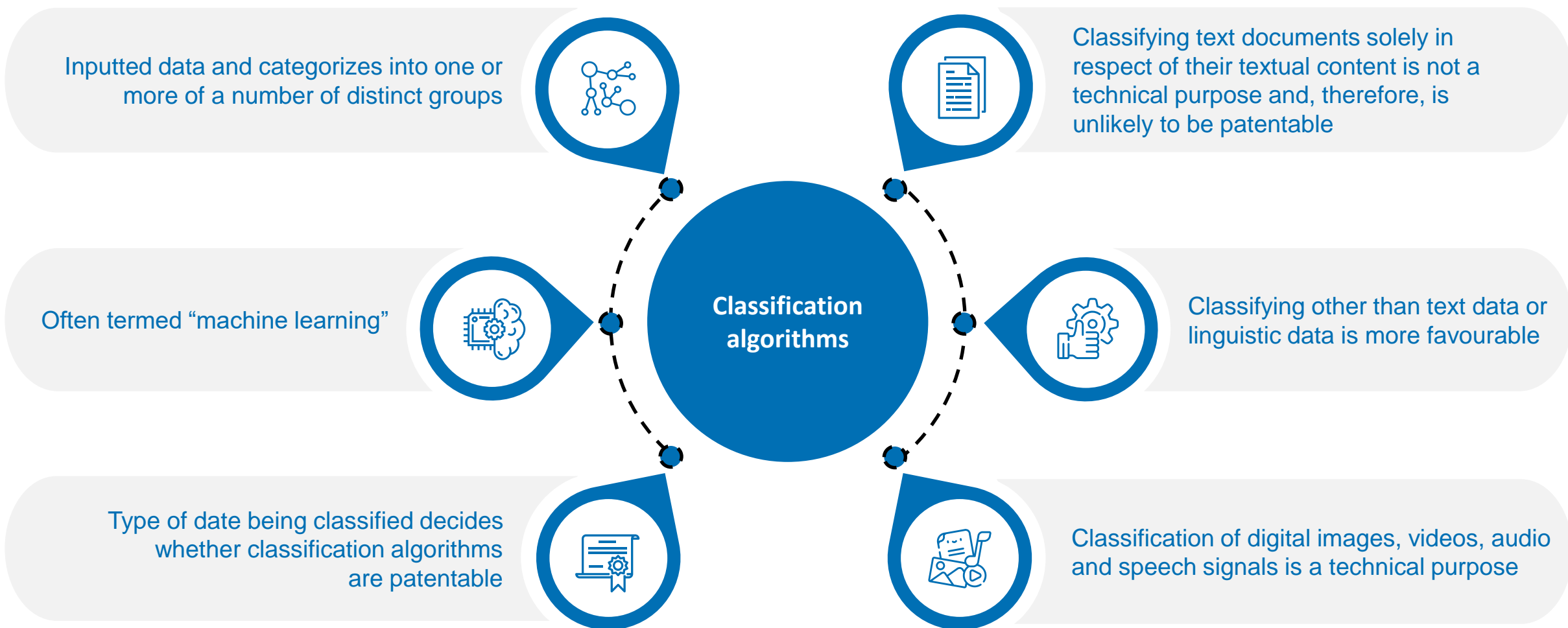
Natural language understanding or comprehension, is considered more difficult to patent

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





Classification Algorithms





Recommendation Systems



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



For example, book selling websites often employ a recommendation system to suggest new books that a reader might enjoy



They are of great commercial significance but extremely difficult to patent as was decided



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;

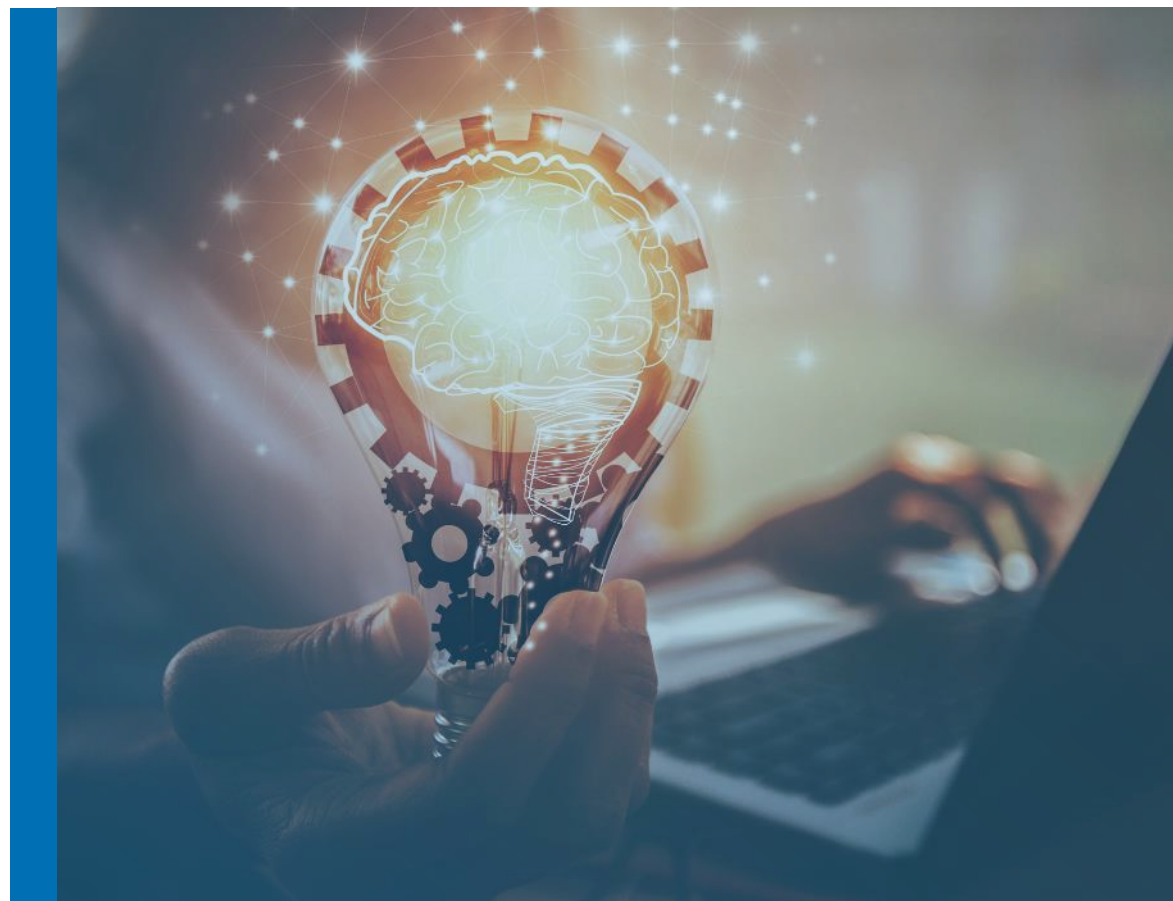


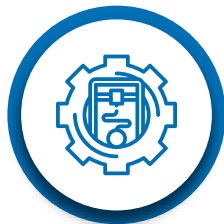
Training the model using the training data (machine learning); and



Using the trained model to analyze new data

Each of these aspects should have separate independent claims





Trained model may be difficult to
define in concrete technical terms



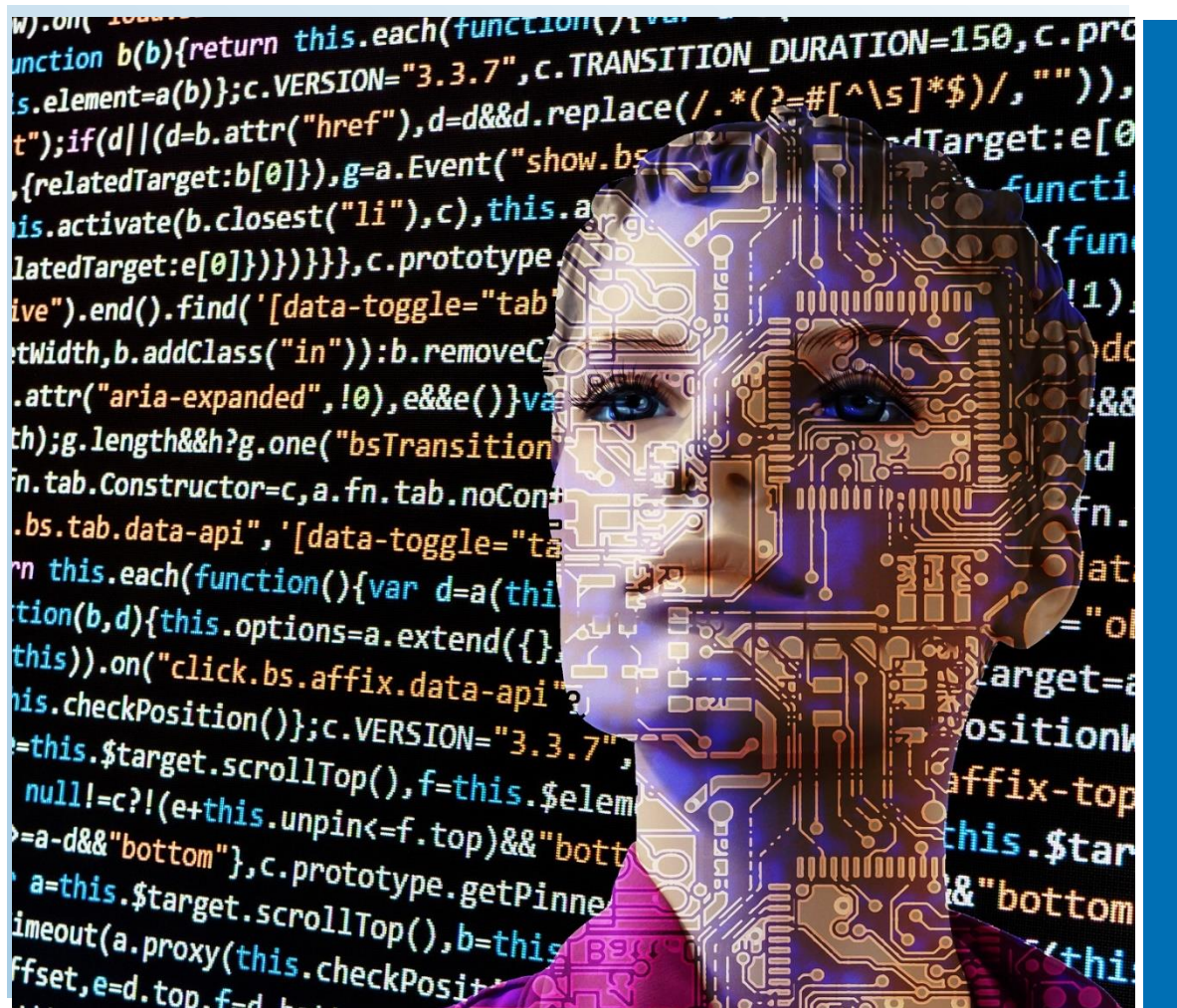
“product-by-process” claim

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





Inventive Step



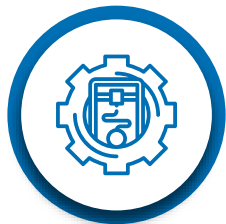
Not “could” the skilled person arrive at the invention but “would” they do so?



- Large number of parameters
- Human selection of training parameters
- Details required in the patent application



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

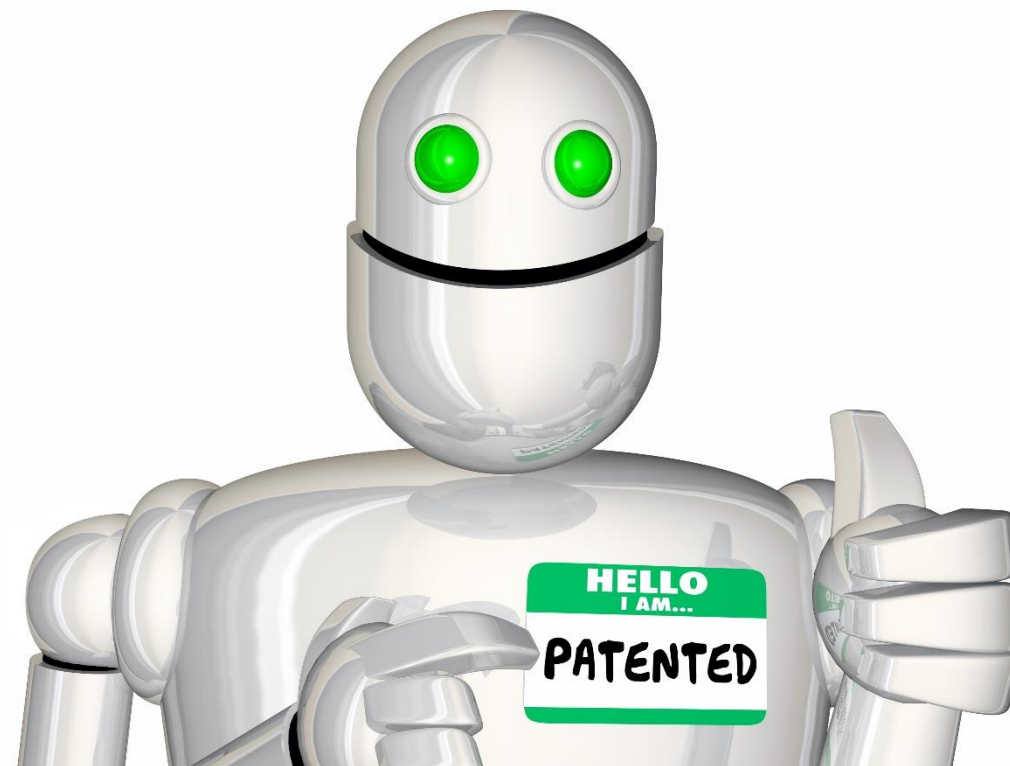


Can an AI program be an
“inventor”



EPO USPTO UK Australia : NO
South Africa: YES (?)

“...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.”





Contact

Thanks!

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