ARTIFICIAL INTELLIGENCE AT INPI

RÉPUBLIQUE FRANÇAISE

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INTRODUCTION

ARTIFICIAL INTELLIGENCE DEFINITION

▶ Artificial intelligence is a set of theories and techniques used to produce computer programs, computational models and algorithms to enable machines to reproduce a form of intelligence.

▶ In recent years, artificial intelligence has almost always been associated with learning capabilities such as machine learning, which uses statistical methods to enable computers to learn from data.
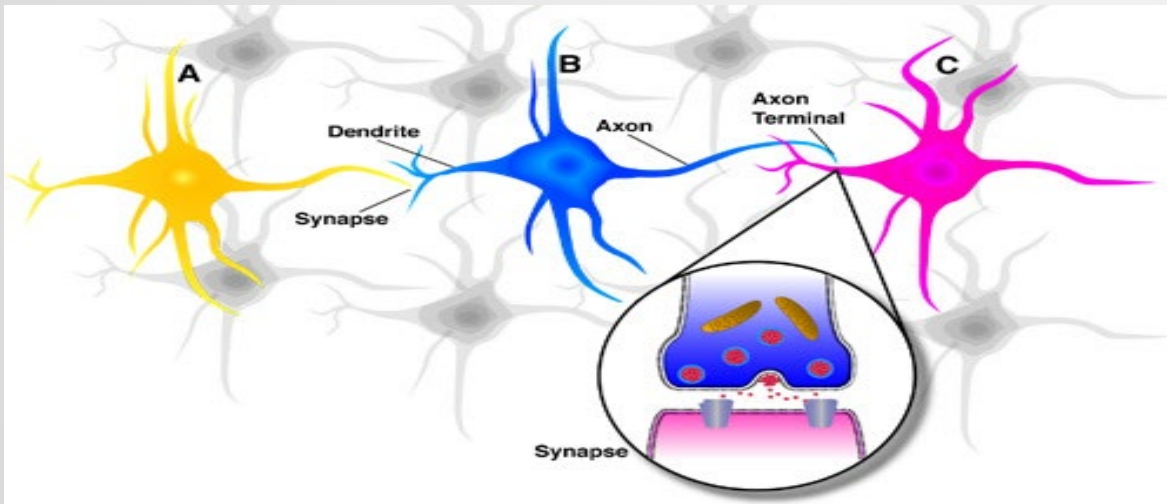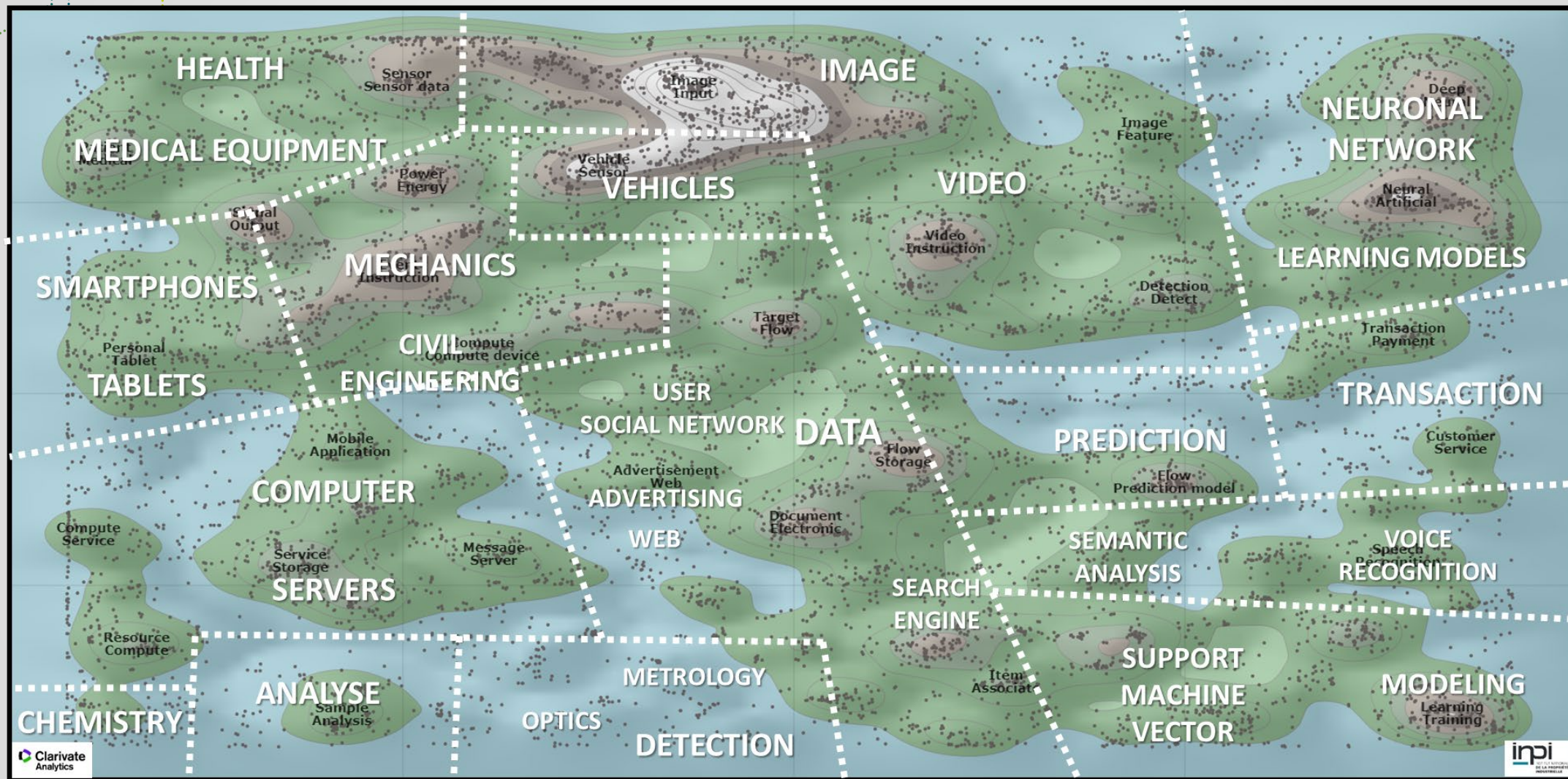
EXPONENTIAL INCREASE OF AI APPLICATIONS

Worldwide and France share of IA related patent families
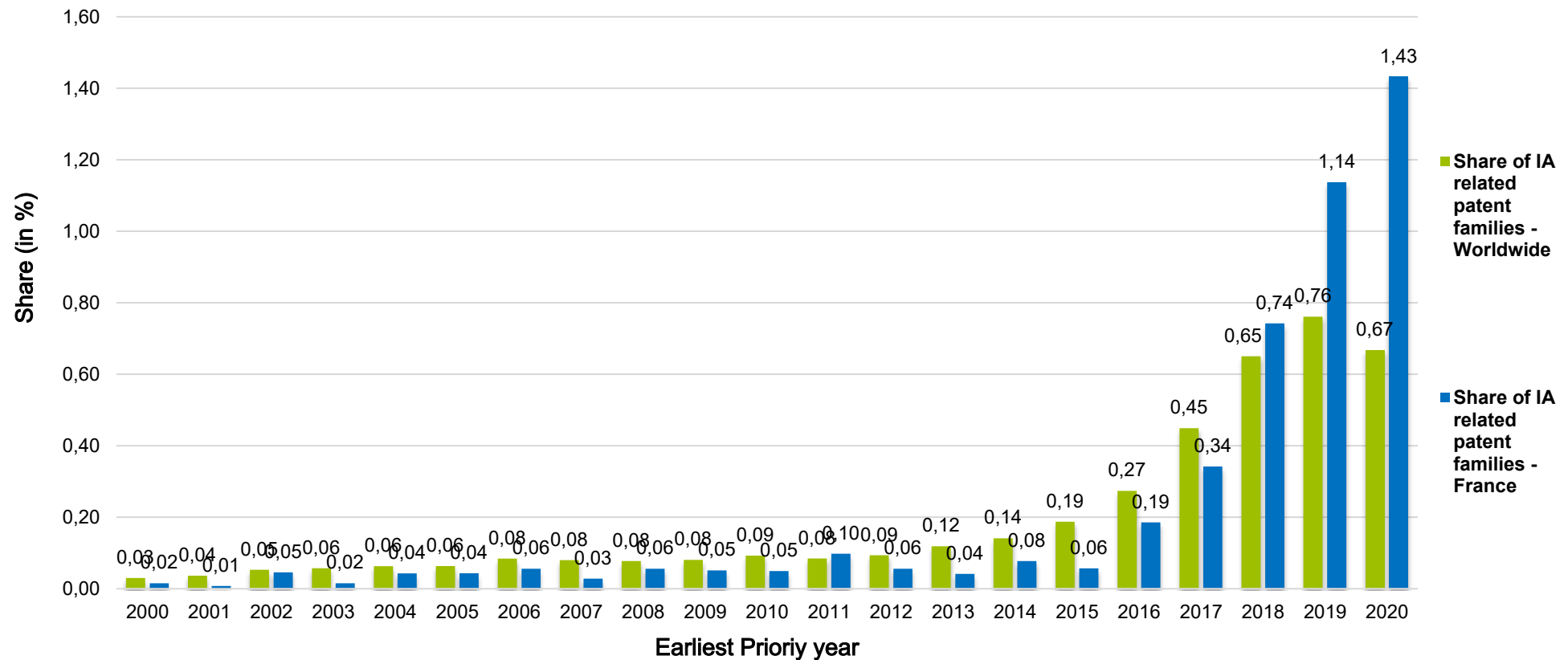
CARTOGRAPHY OF ARTIFICIAL INTELLIGENCE

AI is impacting all technological fields => AI expertise decentralized in all examination divisions

REMINDER

Article L611-10 paragraph 1 of the French Intellectual Property Code

*"Patentable inventions are <u>**inventions**</u> in all fields of technology, which are new, involve an inventive step and are capable of industrial application."*

Article L611-10 paragraphs 2 and 3 of the French Intellectual Property Code

"2. The following are not considered to be inventions in the meaning of paragraph 1 of this article:

    a) *Discoveries and scientific theories and **mathematical methods**;*
    b) *Aesthetic creations;*
    c) *Schemes, rules and methods for performing mental acts, playing games or doing business, and **programs for computers**;*
    d) *Presentations of information."*

*"3. The provisions of paragraph 2 of this article only exclude the patentability of the subject-matter or activities referred to in the above provisions to the extent that a patent application or patent relates to such subject-matter or activities **as such**."*

➤ The same exclusions **are to be found** in the European Patent Convention: Art 52(2) and (3) EPC = Art L.611-10 2° and 3° of the French Intellectual Property Code.

DEFINITION IA INVENTION AS CII

✓ **A computer-implemented invention (CII)**

▶ An invention that involves the use of:
  - ➤ A computer
  - ➤ A computer network
  - ➤ Or other programmable hardware.

▶ Having one or more features that are realised wholly or partly by means of a computer program.

✓ **Special cases of CII**
  - ➤ Mathematical Methods, Simulation, Computer Assisted Design and Modelling,
  - ➤ **Artificial Intelligence**

▶ **Updating of INPI directives in this respect in October 2019**

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INPI EXAMINATION GUIDELINES

Artificial Intelligence – INPI guidelines

▶ **About patentability (Section C- Chapter VII - Paragraph 1.3.2)**

➢ **AI = mathematical method as such**

  ✓ Because it is based on computational models, artificial intelligence is considered by definition to be a **computer -implemented mathematical method** .

  ✓ The use of expressions such as: "support vector machine (SVM)", "genetic algorithm", "artificial neural network (ANN)" or "automatic/deep learning" **is not sufficient in itself to confer a technical character** to the claimed subject matter.

  ✓ Example 1

  Word processing, such as the use of a tool to extract business related keywords from content in order to enable their identification and indexing by means of artificial intelligence was found to be non-technical.

  ✓ Example 2

  Predictive analysis, such as a process using artificial intelligence to predict stock market prices, has been deemed to be non-technical.

Artificial Intelligence – INPI guidelines

BREVETS inpi

➢ **Technical character**

✓ A contribution can be made to the technical character of an invention by providing a **technical solution to a technical problem** by **non-generic technical means** or by **processing measured technical data**.

✓ Example 1: **Computer vision,** for the processing, recognition and/or classification of images and/or videos

✓ Example 2: **Speech recognition** and/or man-machine dialogue

✓ Example 3: **Robotics** and/or **monitoring/control processes**

✓ Example 4: **Predictive analysis:** the use of a neural network in a heart monitoring apparatus to detect an irregular heartbeat is considered to be a technical contribution

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POST-PACTE-LAW
EVOLUTION

CONSEQUENCES OF «PACTE» LAW AT INPI

▸ **Examination of the inventive step criterion for applications from May 22, 2020**

  ▸ Assessment of inventive step for inventions related to AI with a mix of technical and non-technical features => similar to EPO's "COMVIK" approach

▸ **Creating a new opposition procedure for patents granted from the April 1 st, 2020**

  ▸ Sufficiency of disclosure as an opposition ground, which is not considered during grant procedure

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IA TASKFORCE at INPI

▶ **Group of few experts:**

   ▶ case law monitoring,

   ▶ discussions with other IP offices, with patent associations and economic stakeholders

   ▶ AI events participation (including WIPO Conversation on Intellectual Property and Frontier Technologies)

▶ **Point out key questions about IA inventions and evolution of practices, tools, guidances**

LEGAL ASPECTS OF CONCERN

► **Inventive step:**

  ► **Definition of the person skilled in the art** :

  ► The person skilled in the art has always been a physical person

  ► Could the person skilled in the art be defined as **a specialist of the technical field with an AI** (the same way as a pluridisciplinary team)?

  ► **Obviousness assessment**:

  ► Among different AI applications, it seems to be difficult to settle wich one is better than the other

  ► AI can make the obtaining of an invention in a particular field easier, so it can be used by the person skilled in the art.

LEGAL ASPECTS OF CONCERN

► **Sufficiency of disclosure:** two distinct cases

- ► Case of AI used by the inventor to obtain the invention but where the invented product can be made without an AI: **disclosure of the AI not necessary.**

- ► Case where algorithms are parts of the invention and AI is part of the invention: **necessity of disclosure**, otherwise the person skilled in the art could not make the invention (black box phenomenon). But how far does one need to disclose types of algorithm, data training samples, hyper-parameters, etc.?

LEGAL ASPECTS OF CONCERN

► Other monitored aspects:

► AI as an inventor (DABUS case)

► AI as a tool for IP offices (classification, prior-art research, etc.)

► **Data as a service for final users:** data collect and structure with AI, TDM (text and data mining), creation of added value

► **Copyrights:** Use of training data: exception for AI training without commercial use? Facilitate granting of licence? What about personnal data?

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CONCLUSION

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▸ IA inventions is a legitimate concern but solutions could already exist in the different approaches developped by IP offices for 20 years about computer implemented inventions with few adaptations and/or case law evolutions regarding inventive step and sufficiency of disclosure assessments.

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