

WIPO  
ICT Leadership  
Dialogue  
(WILD)

# AI tailored approach: WIPO experience

Theme 8:  
Tailored approaches to empowerment  
in the digital age

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World Intellectual Property Organization (WIPO)



# AI tools at WIPO

- Introduction
- Our approach
- WIPO tools
- Generative AI

# Possible AI applications for IPOs



- Game changing use cases in IPOs?
- Build or buy?
- Cost/quality/efficiency?

# WIPO's approach

Build or buy?

- Affordable, fit-for-purpose, plug-and-play, no training data? **buy**
- Open-source, efficient, customizable, enough training data? **build**

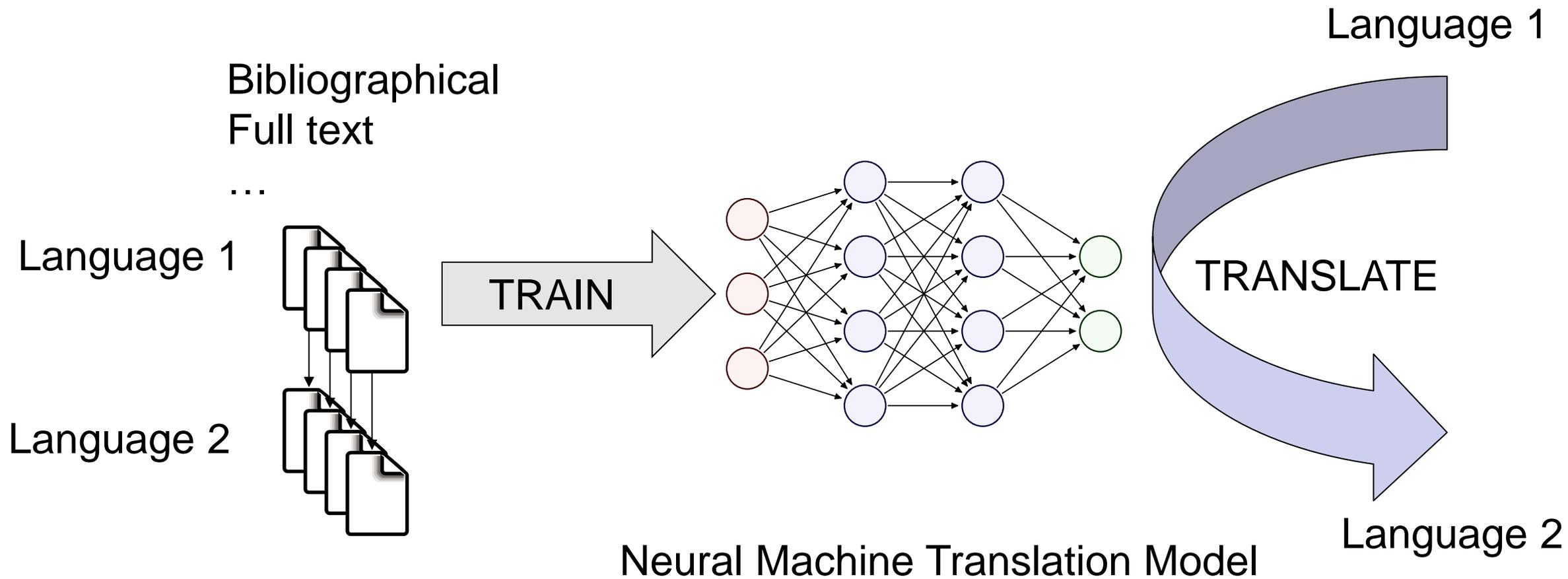
Data is the fuel that powers AI... WIPO has (big) data... and good team

⇒ We developed in-house tailored AI applications

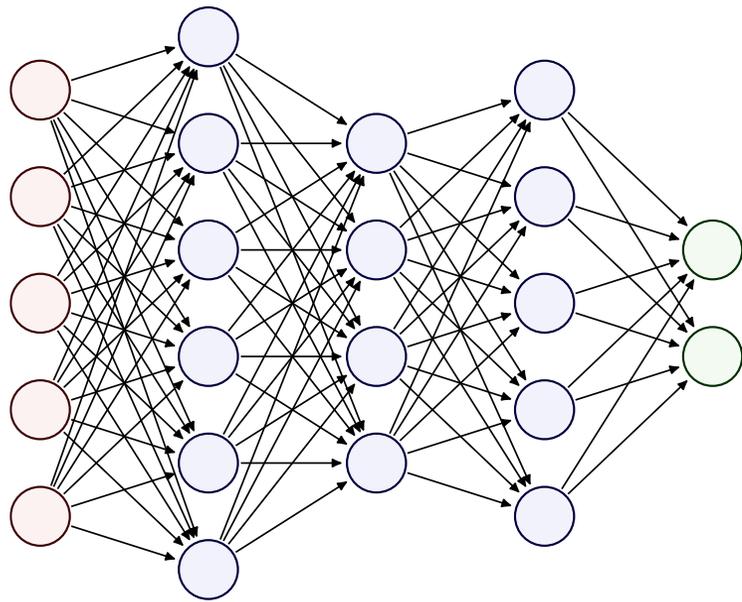
# Three main approaches

- **Full training**
- **Finetuning**
- **Out-of-the-box**

# Full Training example: WIPO Translate

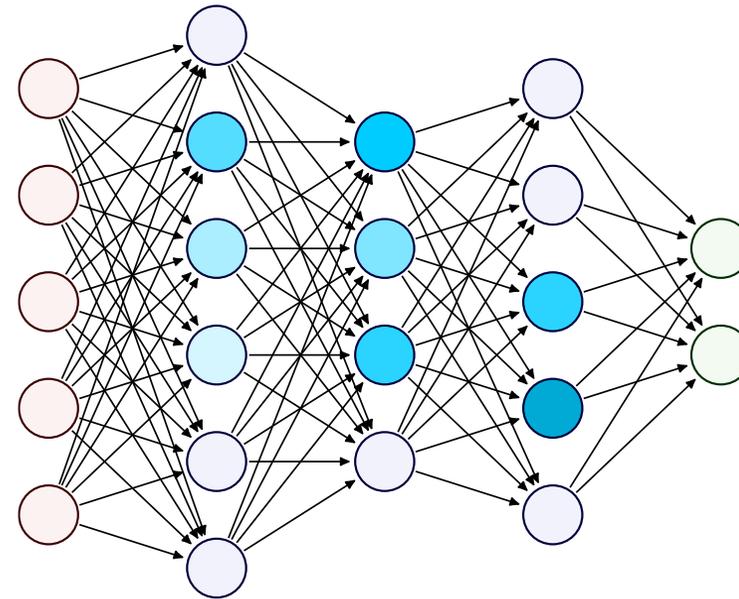
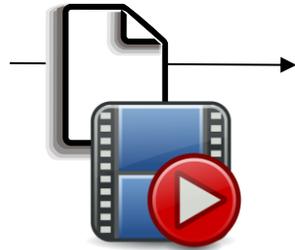


# Fine tuning example: WIPO Speech-to-text

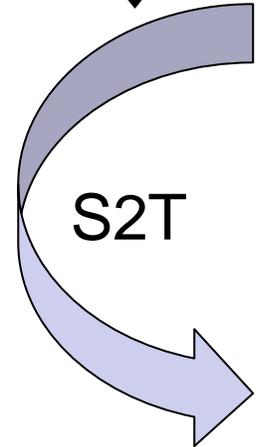


Whisper

WIPO audio + transcripts

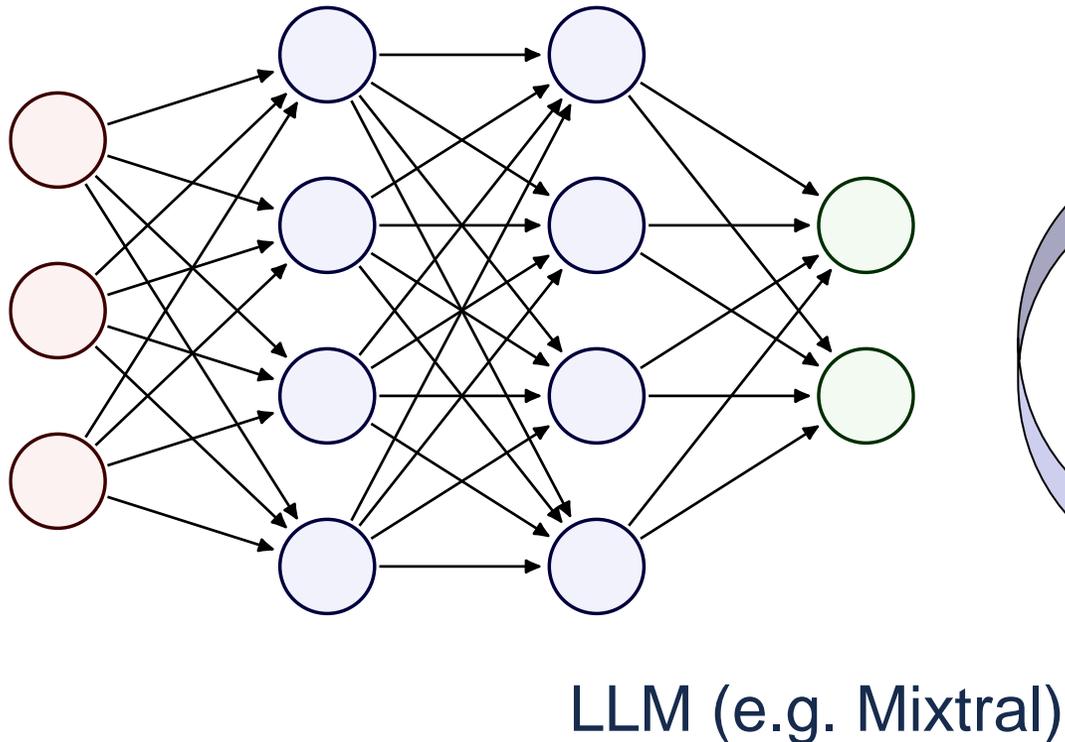


Fine tuned model, same architecture, different weights



Transcript

# Out-of-the box example: Generative AI drafting email



**Prompt:** Write an email from John to Martin informing that he'll be away on mission between the 4th and 10th of June (cover colleague: Marc).

## **Answer:**

Subject: Notification of Temporary Absence from June 4th to June 10<sup>th</sup>

Dear Martin,

I hope this message finds you well. I am writing to inform you that I will be temporarily away on a mission from June 4th to June 10th. During this period, I will have limited access to email and other forms of communication.

I kindly ask for your understanding and patience during my absence. If you have any urgent matters that require my attention, please don't hesitate to reach out to my colleague Marc, who will be more than happy to assist you.

I look forward to catching up with you upon my return and resuming our collaborative efforts.

Thank you for your understanding.

Best regards,

John

# WIPO AI-based Tools and Applications



## **Text processing:**

- WIPO Translate
- Classification: PATCAT
- Search engine



## **Speech processing:**

- Speech to text
- Speech to translated text
- Search in video-audio



## **Image similarity processing:**

- Image classification  
(logos & industrial designs)
- Image-based search



## **Large Language Models:**

- Exploring use cases
- Multimodal

# WIPO Translate - PATENTSCOPE

## 1. CN204406390 - MONKEY TEST SYSTEM

National Biblio. Data Description Claims Drawings Documents

PermaLink Machine translation ▾

Note: Text based on automatic Optical Character Recognition processes. Please use the PDF version for legal matters

[ZH]

### 一种Monkey测试系统

技术领域  
本实用新型涉及终端测试技术领域，尤其涉及一种Monkey测试系统。

背景技术  
Monkey测试(Monkey Test)也称为搞怪测试，即使用稀奇古怪的测试方法去测试被测系统，以测试系统的稳定性。

Monkey是Android中的一个命令行工具，可以运行在模拟器或实际的测试设备中。它向系统发送伪随机的用户事件流(如按键输入、触屏输入和手势输入等)，实现对正在开发的应用程序进行压力测试。Monkey测试是Android自动化测试的一种手段，是测试软件健壮性、稳定性的快速有效方法。

当终端用户触发了例如按键输入、触屏输入和手势输入或一系列系统级别的事件时，它会进一步产生随机脉冲，因此可以用Monkey随机重复的方法去负荷测试对应软件。

中国专利(CN104063324A)公开了一种Monkey测试方法和系统，包括有Java测试平台，安装包名称读取模块，Java Table控件模块，选取模块，Java List类模块，测试执行模块，通过各模块进行语句执行完成对智能终端系统的测试。进而通过软件模拟人手触发按键事件，完成对手机等移动终端的Monkey测试。

但是上述专利中，单纯的使用软件去模拟人手触发事件，并不能真实的模拟用户使用环境，而且测试人员得花大量时间进行重复性的测试工作，降低了工作效率。

因此，提供一种新型的Monkey测试设备以取代纯软件模拟操作的手段成为本领域技术人员致力于研究的方向。

实用新型内容  
鉴于现有技术中的不足和缺陷，本实用新型提供了一种Monkey测试系统，使其在原有Monkey测试方法的基础上进行兼容与扩展，结合机械手臂，更加逼真的去模拟用户点击触摸屏且可以自动重复运行设置好的测试脚本，减少测试人员重复性工作，在产品测试阶段找出软件中存在的问题并进行问题定位。

WIPO TRANSLATE This text has been automatically translated using WIPO Translate and is provided for convenience purposes only. Automated text translation may contain errors. WIPO bears no responsibility for the accuracy and quality of the translation provided. Translate All English

National Biblio. Data Description Claims Drawings Documents

PermaLink

Note: Text based on automatic Optical Character Recognition processes. Please use the PDF version for legal matters

[ZH]

### A Monkey Test System

TECHNICAL FIELD  
The present utility model relates to the technical field of terminal testing, and in particular, to a Monkey testing system.

BACKGROUND  
The Monkey Test (Monkey Test) is also referred to as a high-voltage test, that is, the tested system is tested by using a unique ancient test method, so as to test the stability of the system.

Monkey is a command line tool in Android, and can be run in a simulator or an actual test device. It sends a pseudo-random user event stream (such as key input, touch screen input, gesture input, etc.) to the system, so as to implement a pressure test on the application program being developed. A MongKey test is a means of Android automated testing, and is a fast and effective method for testing robustness and stability of software.

When a terminal user triggers an event such as a key input, a touch screen input and a gesture input or a series of system levels, it further generates a random pulse, so that the corresponding software corresponding to the load test can be removed by using a MongKey random repetition method.

The Chinese patent (CN 104063324A) discloses a Monkey test method and system, comprising a Java test platform, an installation package name reading module, a Java Table control module, a selection module, a Java List module and a test execution module, and the test of the intelligent terminal system is completed by performing statement execution by each module. Furthermore, a key event is triggered by simulating a human hand by means of software, so as to complete a Monkey test of a mobile terminal such as a mobile phone.

However, in the above patent, purely using software to simulate a human hand triggering event cannot truly simulate a user usage environment, and a tester can obtain a large amount of time to perform repetitive testing work, thereby reducing working efficiency.

Therefore, it is a person skilled in the art to provide a novel Monkey test device to replace a pure software simulation operation.

BRIEF DESCRIPTION OF THE DISCLOSURE  
In view of the deficiencies and defects in the prior art, the present utility model provides a Monkey test system, which makes it compatible and extended on the basis of the original Monkey test method, combines mechanical arms, more realistically simulates a user to click a touch screen, can automatically and repeatedly run a set test script, reduces repeated work of testers, finds problems existing in software in a product test stage, and performs problem positioning.

The technical solutions used to solve the above technical problems are as follows:  
A Monkey test system, applied to a Monkey test of a mobile terminal of an Android system, the system comprising: a bearing device, movably disposed on a platform body and fixed with the mobile terminal; an execution module, fixedly arranged on the platform body and in communication connection with the bearing device, and

# WIPO Translate in IPO: DPMA example



German Patent  
and Trade Mark Office

- Access non-English patent literature
  - Full text search in English thanks to WIPO Translate
- High volume translation of documents (March 2025)
  - ZH: 59.8 million
  - JA: 26 million
  - KO: 7.5 million
  - WO: 1 million
  - RU: 2.5 million
  - ES: 1 million
  - PT: 0.2 million
  - + weekly publications
- ~ 1 Mio pages per day
- ~ 50.000 documents per day

# PATCAT: automatic classification in IPC

- Trained on 84 million English patent documents
- Used to classify NPL on Patentscope
- Supports 18 languages when using WIPO Translate (with minimum loss in performance)

단백질과 화합물의 상호작용 구조 예측 방법  
본 개시는 적어도 하나의 컴퓨팅 장치에 의해 수행되는, 단백질과 화합물의 상호작용 구조를 예측하는 방법에 관한 것으로,

...  
상기 화합물 그래프의 노드는 원자 단위보다 큰 상기 화합물의 조각(fragment)과 연관될 수 있다.

Title & abstract

"Method for predicting interaction structure between protein and compound.

The present disclosure relates to a method, performed by at least one computing device, ..., which is greater than an atomic unit."

Predictions:

- G16B 15/30 Drug targeting using structural data; Docking prediction
- G16B 15/20 Protein or domain folding
- G16B 40/20 Supervised data analysis
- G16B 40/00 ICT specially adapted for biostatistics
- G16C 20/30 Detection of binding sites or motif

# Goods and Services Terms Explorer

Available online: <https://goods-and-services-assistant.branddb.wipo.int/>

## Global G&S Terms Explorer

Term  
*(Hit enter to search)*

Search type

Input language

Results in

IP offices

cheddar

Semantic

EN - English

EN - English

offices - Start typing to sugges

Term

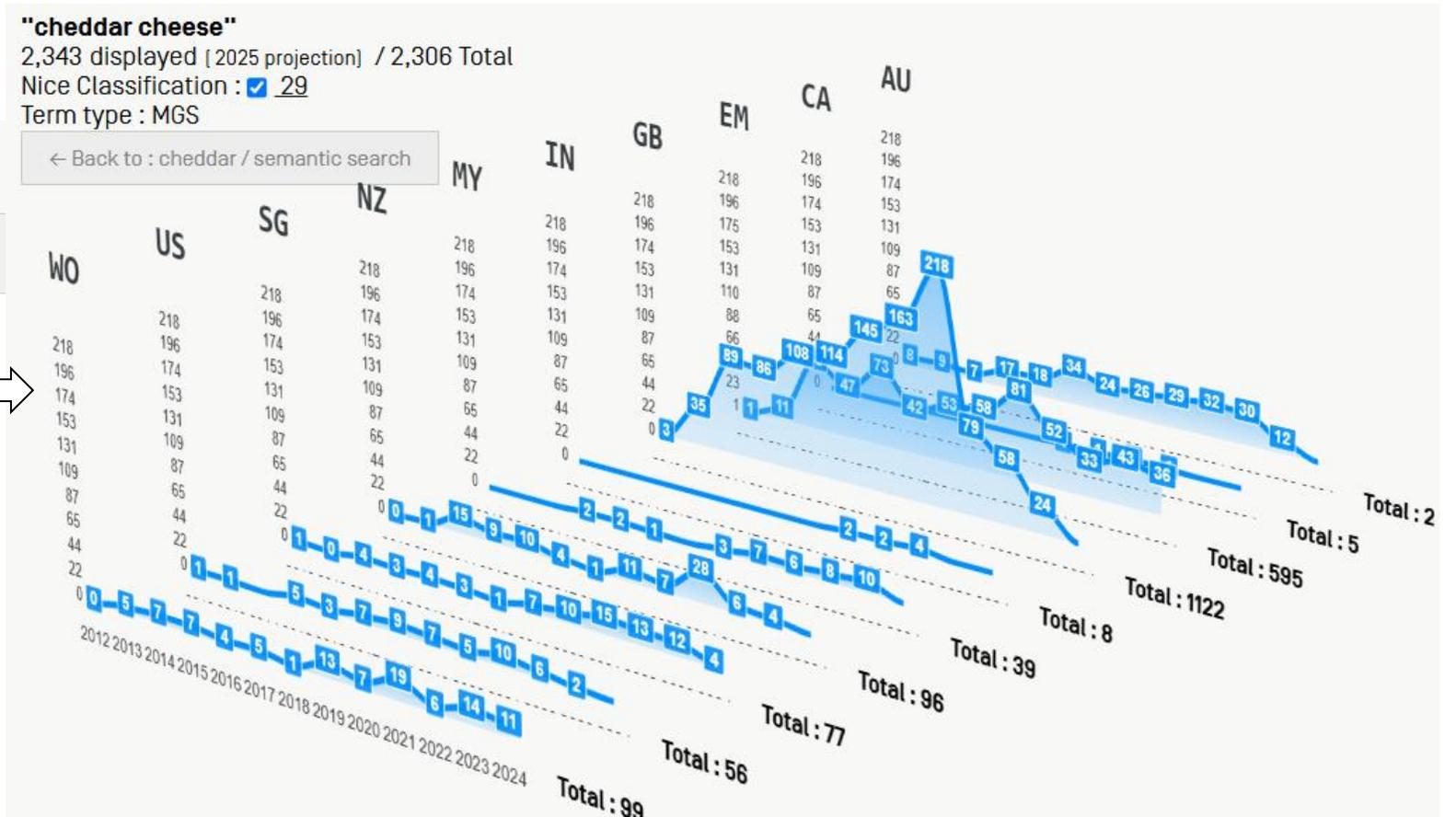
cheddar

cheddar cheese

mozzarella

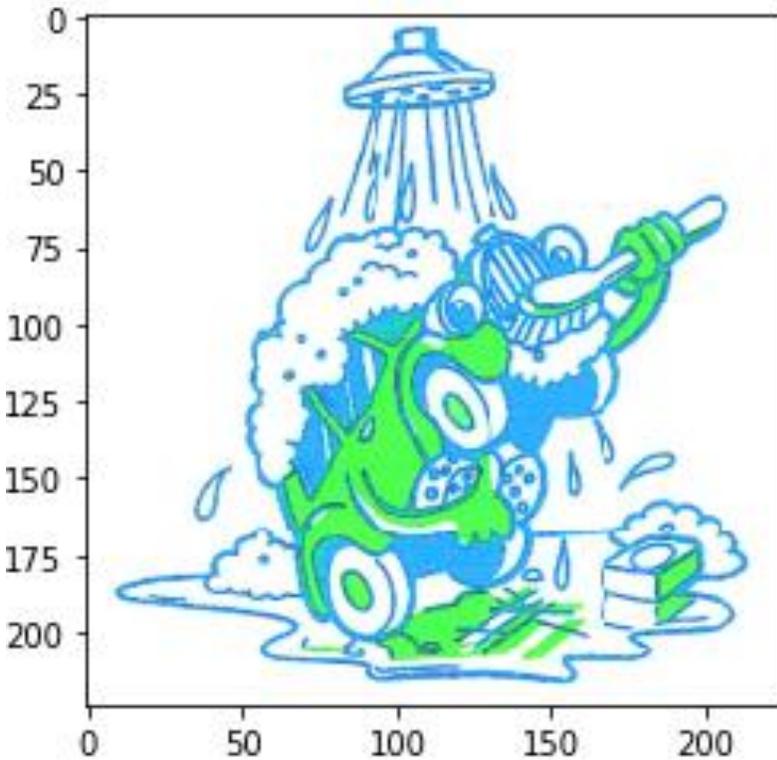
cheese

cheese



# Image classification: full training on image-Vienna class

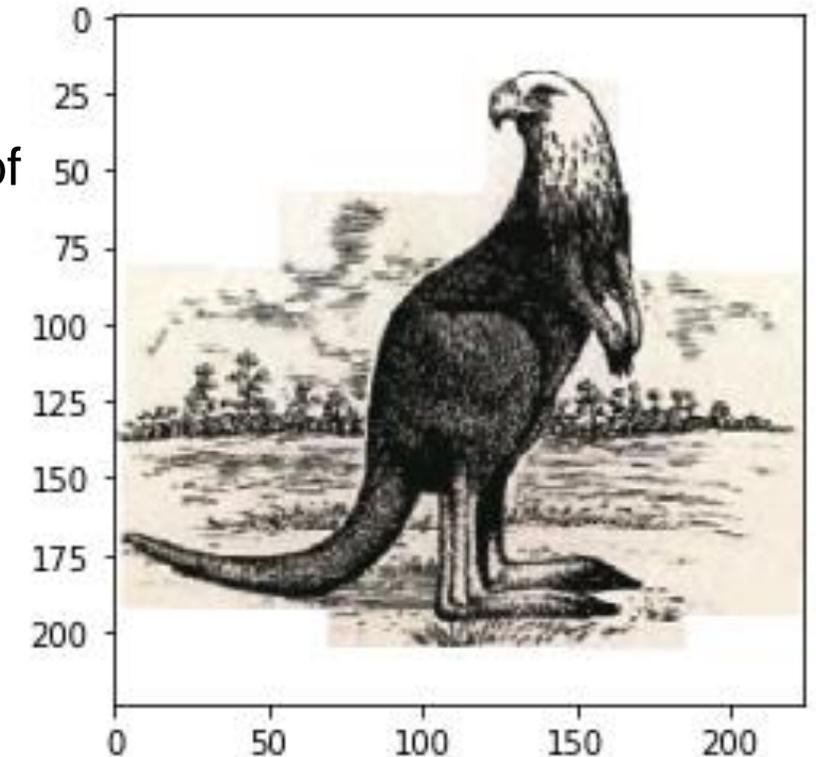
Label: 18.01.07 Motor road vehicles



## Multi-label:

- Personified objects, combinations of objects representing a personage
- shower
- water
- drops
- soap
- brush
- ...

Label: 03.05.26 Animals of Series V standing



*Challenging task*

# Vienna Classification Assistant

Available online: <https://www3.wipo.int/bnd-api/vienna-classification-assistant/>

WIPO IP PORTAL MENU *Vienna Classification Assistant* Covid-19 Update X HELP ENGLISH LOGIN WIPO



added1569402813251.png

Quick add...

Select suggested sections

or start a manual selection on the right.

1 CELESTIAL BODIES, NATURAL PHENOMENA, GEOGRAPHICAL MAPS	2 ★★ HUMAN BEINGS	3 ★★★★★ ANIMALS	4 SUPERNATURAL, FABULOUS, FANTASTIC OR UNIDENTIFIABLE BEINGS	5 PLANTS
6 LANDSCAPES	7 CONSTRUCTIONS, STRUCTURES FOR ADVERTISEMENTS, GAT...	8 FOODSTUFFS	9 TEXTILES, CLOTHING, SEWING ACCESSORIES, HEADWEAR, FOOTWEAR	10 TOBACCO, SMOKERS' REQUISITES, MATCHES, TRAVEL GOODS, FANS,...
11 HOUSEHOLD UTENSILS	12 FURNITURE, SANITARY INSTALLATIONS	13 LIGHTING, WIRELESS VALVES, HEATING, COOKING OR...	14 IRONMONGERY, TOOLS, LADDERS	15 MACHINERY, MOTORS, ENGINES
16 TELECOMMUNICATIONS, SOUND RECORDING OR REPRODUCTION,...	17 HOROLOGICAL INSTRUMENTS, JEWELRY, WEIGHTS AND MEASURES	18 ★ TRANSPORT, EQUIPMENT FOR ANIMALS	19 CONTAINERS AND PACKING, REPRESENTATIONS OF...	20 WRITING, DRAWING OR PAINTING MATERIALS, OFFICE REQUISITES,...
21 GAMES, TOYS, SPORTING ARTICLES, ROUNDABOUTS	22 ★ MUSICAL INSTRUMENTS AND THEIR ACCESSORIES, MUSIC ACCESSORIES,...	23 ARMS, AMMUNITION, ARMOUR	24 ★ HERALDRY, COINS, EMBLEMS, SYMBOLS	25 ★★ ORNAMENTAL MOTIFS, SURFACES OR BACKGROUNDS WITH...
26 ★★★★★ GEOMETRICAL FIGURES AND SOLIDS	27 ★★★ FORMS OF WRITING, NUMERALS	28 INSCRIPTIONS IN VARIOUS CHARACTERS	29 COLOURS	

# Image similarity: trademark logos

Conceptual similarity for 

Edit your search TMview

Displaying 1-60 of 16,964 results (Most relevant first)

Change layout Sort results Results per page Download results Results view Statistics view

Select all

Available online, as part of global brand database(\*)

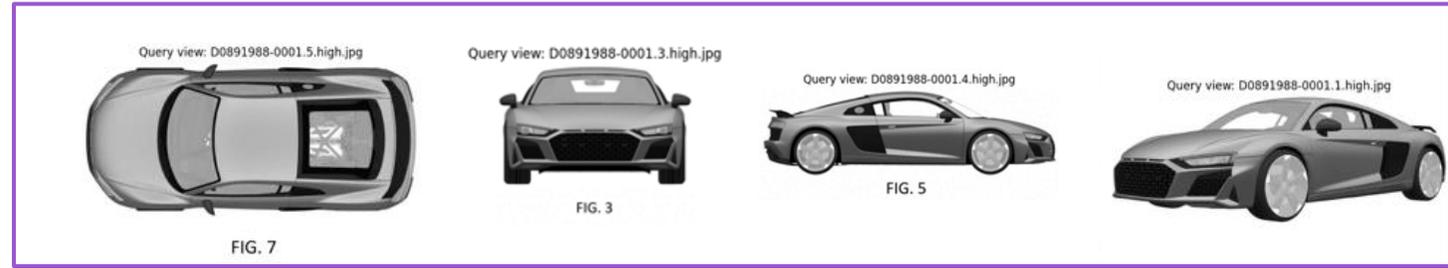
(\*) <https://www.wipo.int/en/web/global-brand-database>

# Image similarity on industrial designs *(in development)*

Multi-view image similarity search - Industrial Designs

Search with 4 views

Query design: USD0891988



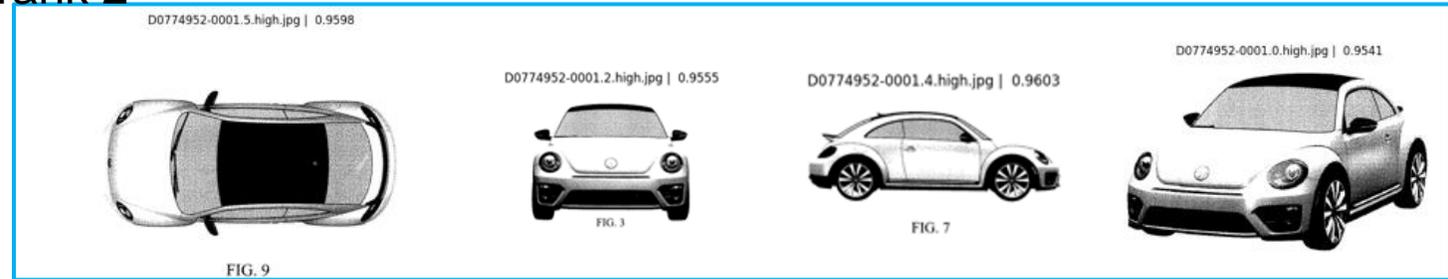
Design rank 1

Rank 1:USD0775550 | False | Avg score: 0.9608



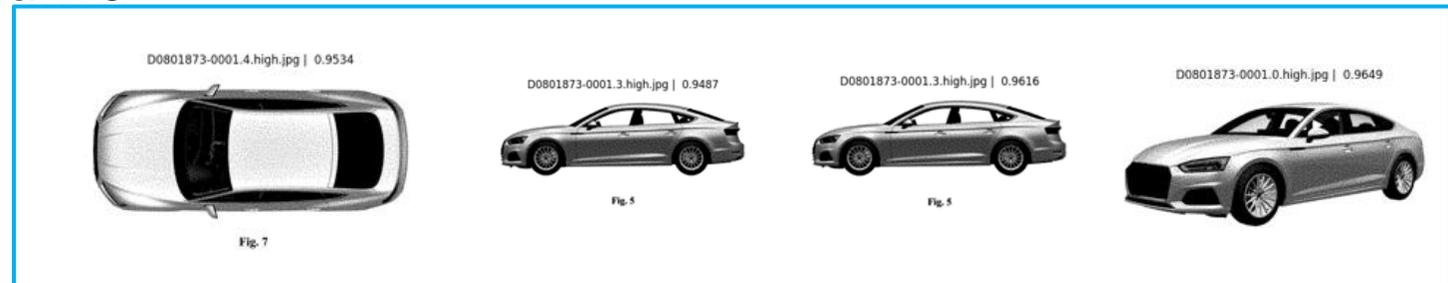
Design rank 2

Rank 2:USD0774952 | False | Avg score: 0.9574



Design rank 3

Rank 3:USD0801873 | True | Ava score: 0.9571



# WIPO speech-to-text

## ROUNDTABLE DISCUSSION ON WOMEN IN SCIENCE SHAPING THE FUTURE - WIPO UNESCO KIPO ACAD GE 23

26 Apr 2023 13:19:59 GMT+2



TRANSCRIPT ▾

ENGLISH ▾

### TIMELINE

- Tirado
- 03:04:09 Ms. Malathi Lakshmikumaran
- 03:04:40 Ms. Tiffany Norwood
- 03:09:50 Ms. Malathi Lakshmikumaran
- 03:11:32 Ms. Jane Catherine Ngila
- 03:16:28 Ms. Malathi Lakshmikumaran
- 03:16:42 Ms. Najat Aoun Saliba
- 03:18:26 Ms. Malathi Lakshmikumaran
- 03:19:00 Audience Question
- 03:20:41 Ms. Malathi Lakshmikumaran
- 03:22:54 Ms. Ana Peršić
- 03:24:17 Ms. Malathi Lakshmikumaran
- 03:24:25 Ms. Altaye Tedla Desta**
- 03:29:34 Ms. Tiffany Norwood

### INFO SPEAKERS



Ms. Altaye Tedla Desta

### RELATED DOCUMENTS

## TRANSCRIPT

↓ Options

Search in the transcript



at least you are the one deciding as Tiffany has shown us. Others by not doing it, by not looking at the value of what you have created, you are also letting others decide on what happens to your inventions and innovations. So this is really why we would like scientists to come together with those scientists who have used IP and have experienced the benefit and with entrepreneurs such as Tiffany who has really gone beyond also to really focus on

. Available online: [webcast.wipo.int](https://webcast.wipo.int)

# Generative AI

- ChatGPT release changed public perception
- Interactive chat user interface
- General tool for non-experts
  
- Impressive... but only Language Model:

“next word prediction”

✦ GPT-4

MI

How can I save energy?



Saving energy is beneficial for both your wallet and the environment. Below are some strategies for reducing energy consumption:

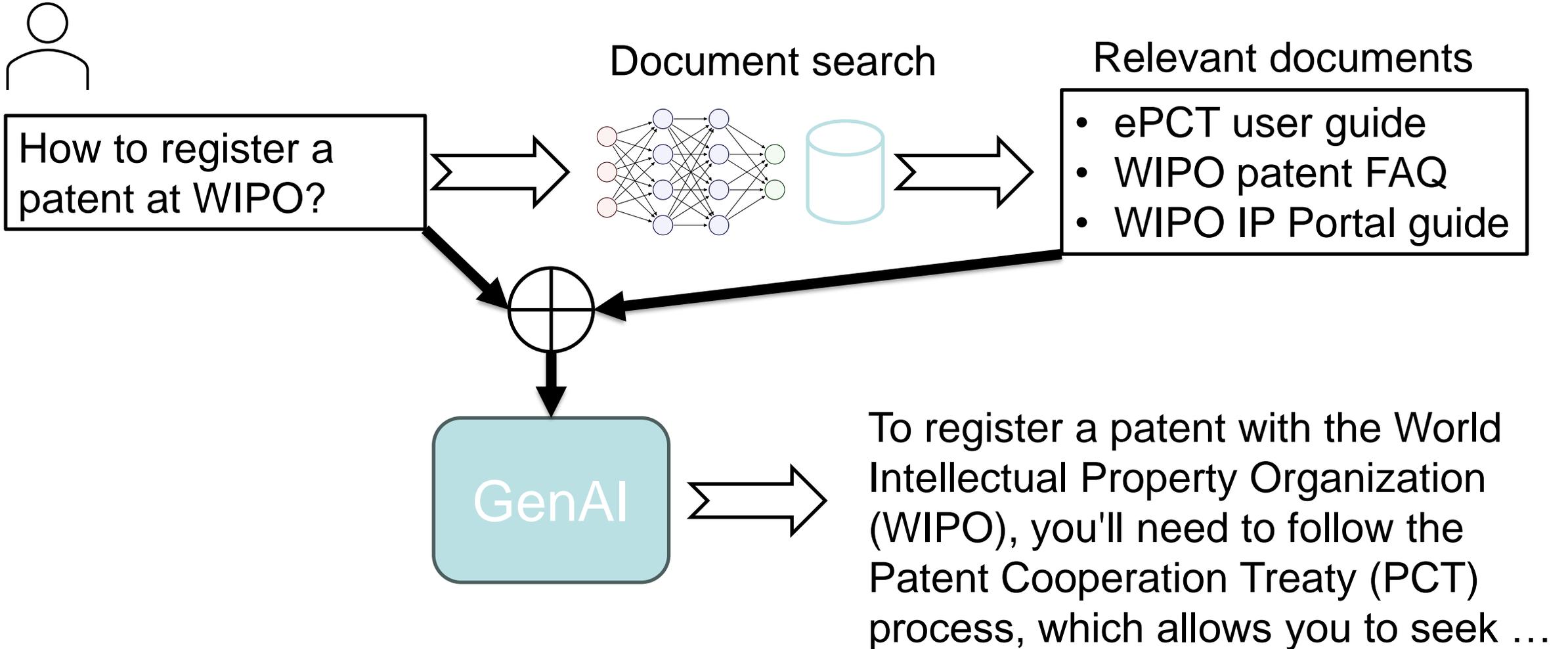
## At Home

1. **Switch to LED Bulbs:** LED lights consume much less electricity than traditional incandescent bulbs and last longer as well.
2. **Unplug Devices:** Even when they're turned off, some electronic devices draw power. Unplug them or use a power strip to turn off multiple devices at once.
3. **Insulate Your Home:** Proper insulation can significantly reduce heating and cooling costs.
4. **Use Energy-Efficient Appliances:** Look for the Energy Star label when purchasing new appliances like refrigerators, washers, and dryers.
5. **Temperature Control:** Use a programmable thermostat to control the temperature when you're not at home. Keeping the temperature a few degrees lower in winter and higher in summer can make a significant difference.
6. **Close Windows and Doors:** Make sure windows and doors are closed when the heat or A/C is on.
7. **Use Natural Light:** During the day, make use of natural light instead of turning on the lights.
8. **Reduce Water Heating Costs:** Lower the thermostat on your water heater and consider using a tankless water heater.
9. **Seal Leaks:** Use weatherstripping and caulk to seal any leaks in doors and windows.
10. **Efficient Cooking:** Use microwave ovens or toaster ovens for small meals rather than your large stove to save energy.

# Current Trends

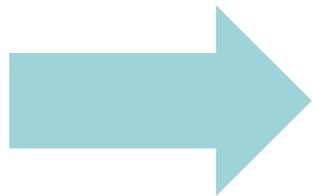
- Retrieval augmented generation (RAG)
- Fine tuning
- Multimodal models
- Chain of thought
- Agentic AI
- ...

# RAG example: answering a query using “local” documents



# Why own and train our own systems?

- Specialized for the task and domain, highly customized
- High Confidentiality requirements
- Integration with other systems
- Cost effective, especially at scale



Can be shared with member states IP offices

# WIPO's AI tools available to offices

- WIPO Translate on premises in use by DPMA, KIPO and EAPO
- PATCAT
- WIPO TM image similarity search API, in use by four IPOs (Germany, Uruguay, Australia and Mexico)
- Other existing tools to be discussed

## Notes:

- WIPO Translate and image similarity are also used by private companies
- WIPO speech-to-text used by other international organizations (UN-Geneva, WTO, ILO, European Court of Justice ...)

Thank you

