Recent Developments in Information Assistance Systems in IP Practice

CHINESE TAIPEI Feb. 27, 2024

1. Patent Document Assistance and Error Detection System

Assist applicants in reducing textual errors in their applications

Reduce the workload on examiners, improving the quality of examination…

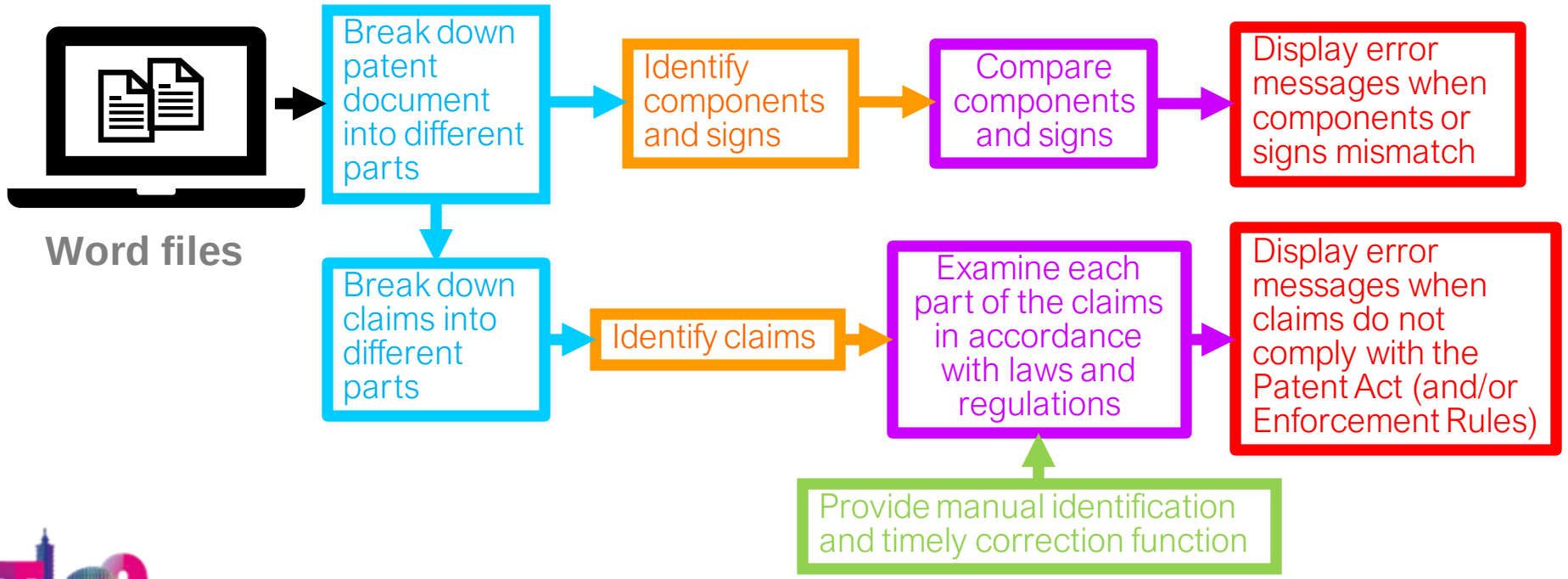
In 2021, Automated Patent Examination System for **Utility Models**
In 2022, Automated Patent Examination System for **Invention Patents**
In 2023, **Patent Document Assistance and Error Detection System**

Available on September 28, 2023 https://www.youtube.com/watch?v=-04NsJgdLv4

100% Programmed by TIPO's Patent Examiner

1. Patent Document Assistance and Error Detection System

System Operation Block Diagram



1. Patent Document Assistance and Error Detection System

SystemInterface

Inconsistent, display error messages

Component Names, Signs, and Brief Descriptions in Diagrams

Content of Patent Documents, Abstract, Technical Field, Prior Art, Description of Utility models, Implementation Methods, Claims

2. IPC Automatic Classification

In 2017, TIPO **launched** the IPC Automatic Classification POC (proof of concept)

In 2020, it was continuously **updated** and integrated into the existing examination processes (Production Pilot Run)

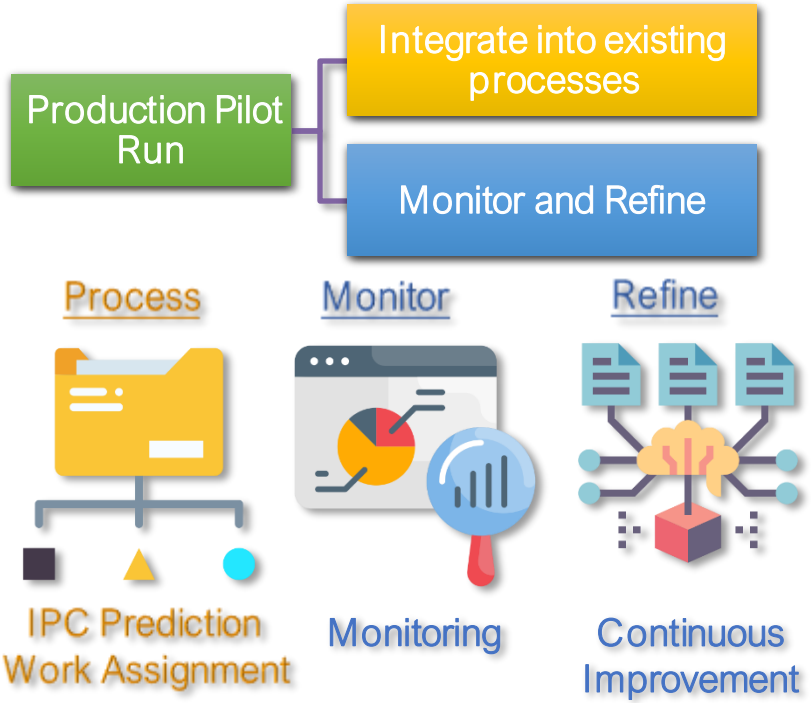
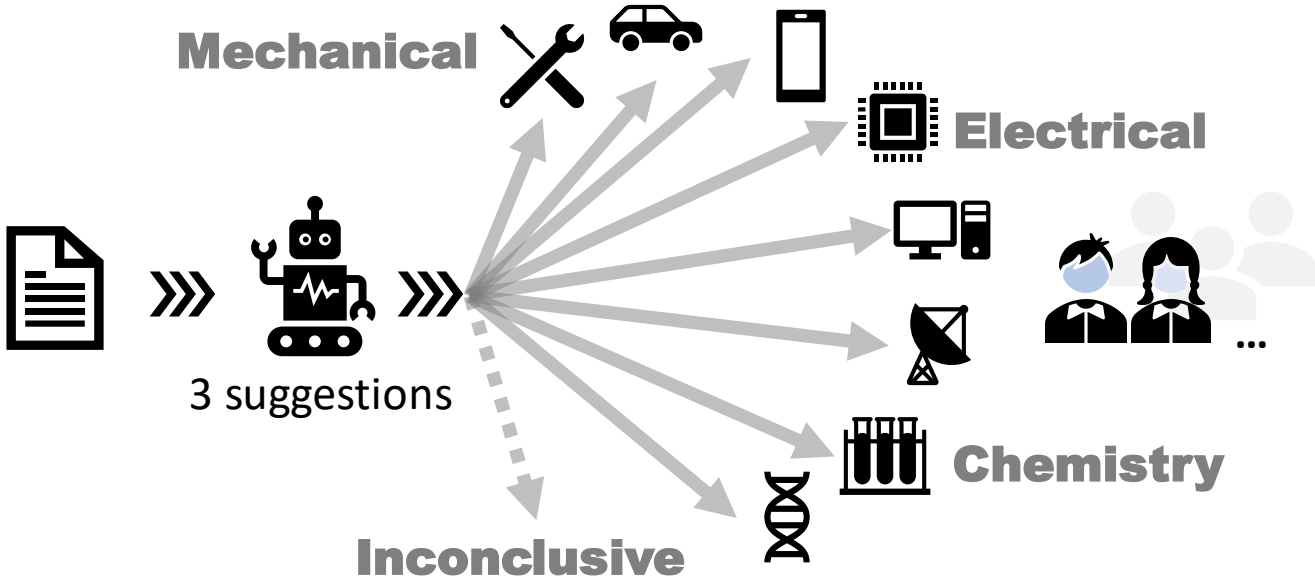


Image: flaticon.com

2. IPC Automatic Classification



In 2022, it **automatically** assigns applications to the examiner of the classification based on the IPC automatic classification prediction results

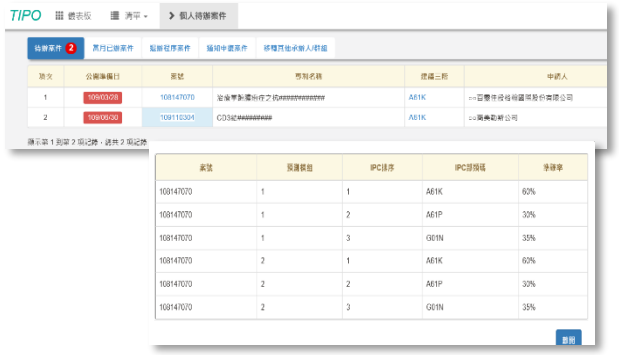
2. IPC Automatic Classification

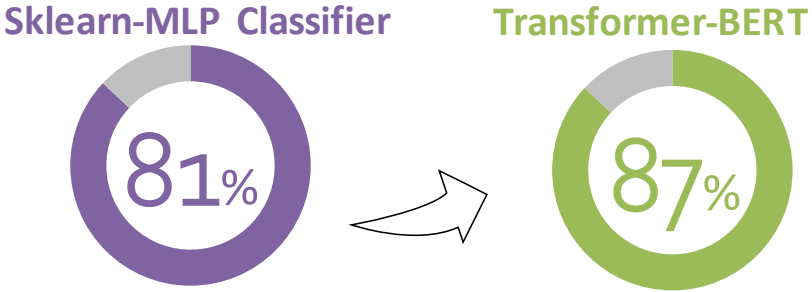
Provides 3 suggestions for each application

In 2023, TIPO developed a **new** automatic classification module using the BERT algorithm

The subclass **accuracy** stands at approximately 87%, while the accuracy for the top 10 main groups is around 85%. The overall accuracy is measured at 64.8%

In 2024, TIPO plans to **integrate** this module into the existing examination process

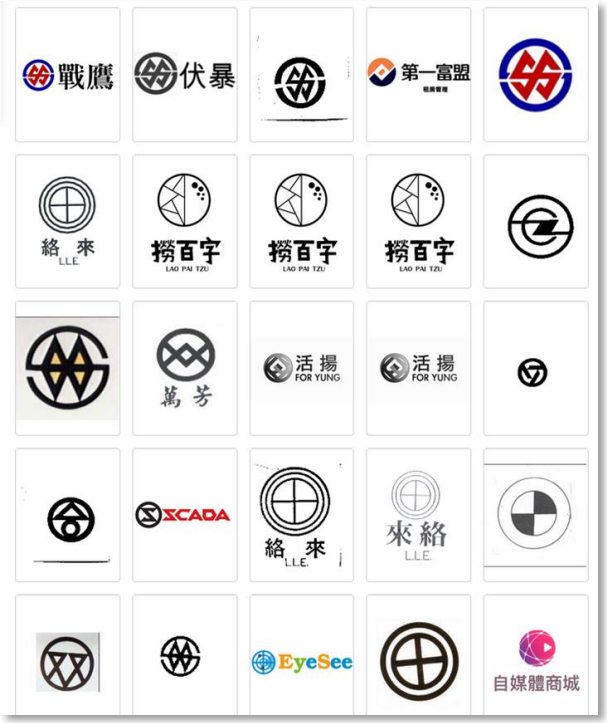




3. Trademark Image Search

Query image

Query image

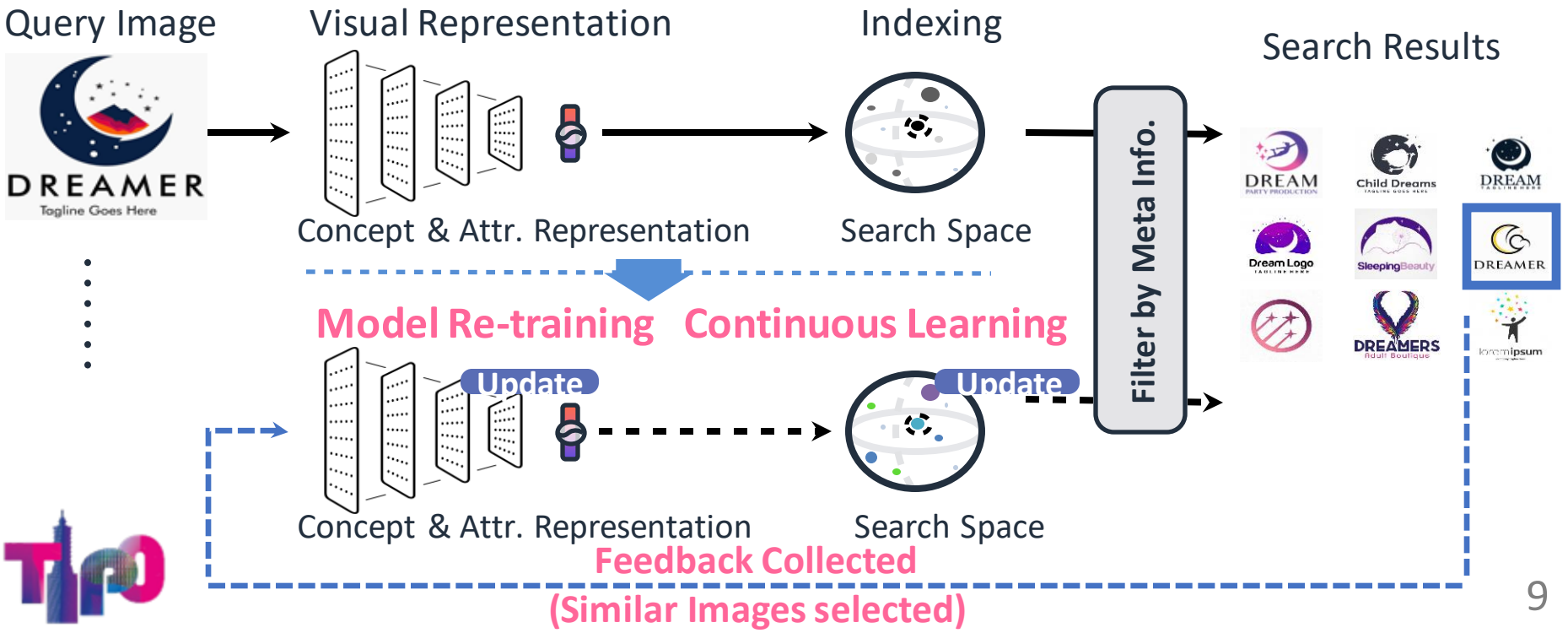


In 2020, TIPO **launched** the Trademark Image Search POC (proof of concept)

In 2022, the **Beta** version of the construction was successfully completed

3. Trademark Image Search

Further Task: Continuous Learning



3. Trademark Image Search

Implementation: Evaluator's feedback for Further Training

Images marked with the "-" feedback will have their rank moved backward after re-training AI model

Images marked with the "+" feedback will have their rank moved forward after re-training AI model

3. Trademark Image Search

Local feature index model

In 2023, TIPO integrated the AI identification **local feature index** model

Within the **first 1,000** retrievals, the detection rate is approximately **64%**

Within the **first 5,000** retrievals, the detection rate is approximately **72%**

3. Trademark Image Search

AI module without local feature identification

3. Trademark Image Search

AI module with local feature identification

Thank you for your attention!