


# Framework on Sharing of AI Classification/Reclassification Development (CNIPA)



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## General situation of AI Classification/Reclassification in CNIPA

- In recent years, CNIPA continues to enhance tracking of AI (artificial intelligence) and computer-aided classification technologies and actively advances its research and application in diverse scenarios for patent classification.

IPC pre-  
classification

IPC  
reclassification

CPC  
classification

## AI Classification/Reclassification in CNIPA

**IPC pre-classification**——IPC classification engine with AI.

IPC classification symbols of subclass hierarchy is automatically given for patent application.

Patent application is assigned to classifier in respective domain based on first classification number.

Classifiers give complete group hierarchy classification symbols.

## AI Classification/Reclassification in CNIPA

### IPC reclassification

- **Based on AI**——The results are not ideal, and retraining for model is required at higher cost as reclassification involves different technical fields each year.
- **Based on retrieval strategies**——Forming classification rules by building retrieval strategies.

**CN focuses more on assisted IPC automatic reclassification based on retrieval strategies, with relevant work and research in process of advancing. Furthermore, CN will continue to focus on AI technology research in IPC reclassification.**

# AI Classification/Reclassification in CNIPA

## CPC classification

- CPC Intelligent Assisted Classification Studies and Mini-Batch Tests were conducted on **back file of Chinese Patent documents with IPC Classification symbols**, i.e. On basis of IPC Classification symbols, one or more CPC Classification symbols are automatically given using AI technology.

## Difficulties of AI Classification/Reclassification in CNIPA

- In recent years, as Chinese patent applications continue to grow, CN's efforts in classifying continue to grow and have enormous workloads.

### Application of AI Technology in Patent Classification in CNIPA

Open the new  
**door** for patents  
classification  
methods

At the same time  
**difficulties and  
challenges** are  
encountered

## Difficulties of AI Classification/Reclassification in CNIPA

### 1. High input to AI Assisted Classification Development

- The high input of training and minor adjustment of AI models, particularly introduction of large models.
- It is difficult in market to find pre-trained model that fits patent classification.
- The reusability of AI models of reclassification is poor due to different fields involved each year.



## Difficulties of AI Classification/Reclassification in CNIPA

### **2. AI classification results are not yet achieve the desired expectation.**

- From practical applications, artificial can be substituted in terms of pre-classification
- There is still large gap compared to manual classification results in terms of complete classification and reclassification.

## Difficulties of AI Classification/Reclassification in CNIPA

### 3. Absence of Unified Performance Assessment Metrics and Methods for AI Assisted Classification

- The metrics and criteria used by all offices to evaluate performance of AI assisted classification are not exactly same.



**THANK YOU**

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