国家知识产权局 公共服务司
CNIPA. Public Service Department

Application of Artificial Intelligence in Intellectual Property in China

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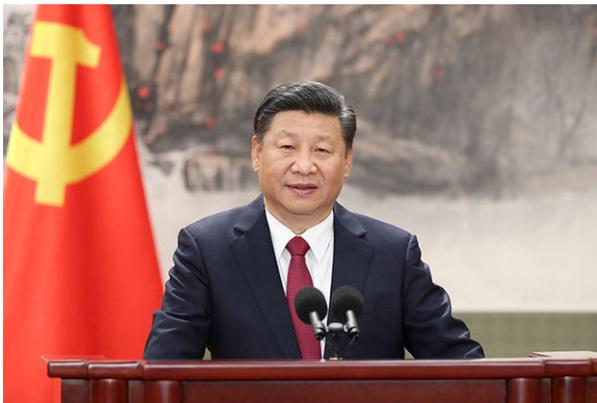| 2 | Development and Application of AI in Intellecual Property |

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Situation of the Development of AI

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1.1 The Chinese government attaches great importance to the development of AI

General Comference of Academicians

National Working Conference on Cyber Security and Informatization

Accelerating the development of new-generation AI is a strategic issue, key for China to seize the opportunities in the new round of technological revolution and industrial transformation.

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1. Situation of the Development of AI

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1.1 The Chinese government attaches great importance to the development of AI

| State Council | Development plan for the new generation of AI |

| State ministries and commissions; Local governments | Multiple kinds of policies to encourage the development of AI |

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1. Situation of the Development of AI

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1.2 The development of artificial intelligence technology

A new round of scientific and technological revolution and industrial transformation is deepening;
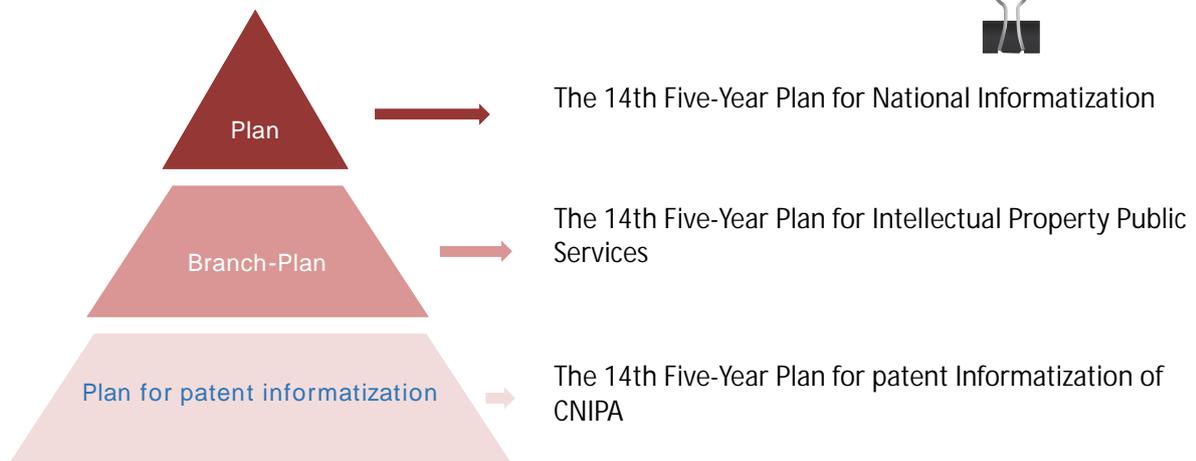
The innovation and integration of new information technology and international exchanges are increasing.

It is increasingly urgent to build an innovative country and achieve high-quality development.

The patent information system is the underlying support for the high-quality development of intellectual property and scientific and technological innovation.

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1.3 Top-level design of patent informatization

Plan → The 14th Five-Year Plan for National Informatization

Branch-Plan → The 14th Five-Year Plan for Intellectual Property Public Services

Plan for patent informatization → The 14th Five-Year Plan for patent Informatization of CNIPA

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2 Development and Application of AI in Intellecual Property
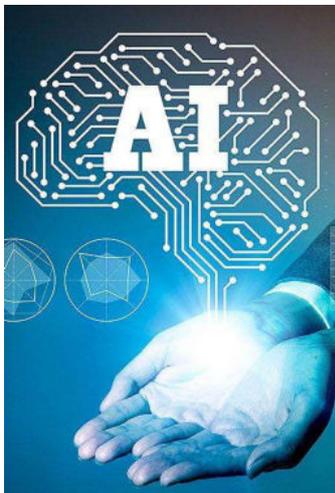
2. Development and Application of AI in Intellecual Property

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2.1 Research on AI

- Research on patent value evaluation index system based on technical feature mining

- Application of AI in patent retrieval

- Research on the application of semantic analysis technology in patent examination

- Research on CPC intelligent Classification based on AI technology

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2. Development and Application of AI in Intellecual Property

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2.2 Improving the quality of machine translation by applying AI technology

As early as 2008, the China Patent Information Center launched the first Chinese-English Machine Translation system for Chinese patent documents based on mixed strategies, providing online Chinese-English machine translation service for Chinese patent information to the public through the website of the CNIPA.
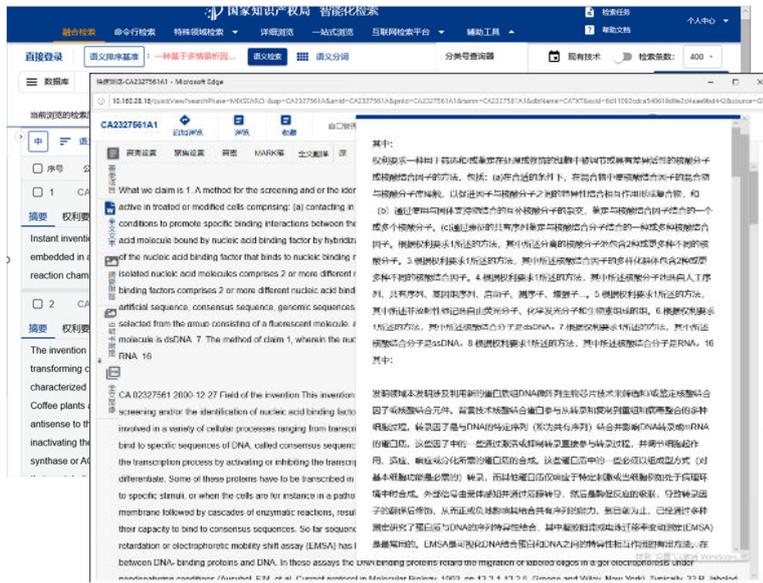

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2.2 Improving the quality of machine translation by applying AI technology

In 2019, the China Patent Information Center introduced the neural network machine translation technology into the patent domain.

The multi-lingual neural network machine translation system has been successfully applied to the national intellectual property bureau's intelligent patent review and retrieval system.

2.3 Initially realizing intellectualized patent management by applying AI technology

China Patent Technology Development Corporation has made full use of patent big data, independently developed intelligent patent value assessment and patent management products (IP7 + patent hierarchical management system), and taken advantages of intelligent tools to release the potential of big data and accelerate the activation of patent assets.

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2.3 Initially realizing intellectualized patent management by applying AI technology

The intelligent rating and valuation of patents are realized by applying big data, cloud computing, distributed computing, and AI technologies such as deep learning, semantic recognition, etc.

By referring to the scores given by big data and experts, the patent value is classified, and the classification management and the label management can be carried out.

The system uses AI algorithm to analyze the target patent citation big data, and intelligently recommends the potential demanders, competitors, and industry-university-research partners of the target technology.
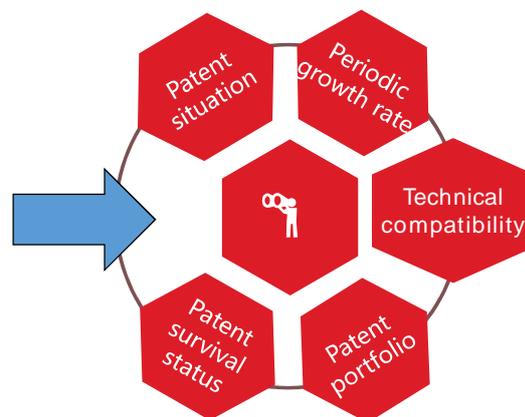
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2.3 Initially realizing intellectualized patent management by applying AI technology

The patent information analysis system is a platform tool which integrates patent information cleaning, retrieval, management and analysis. It can be used for patent analysis data statistics and intelligent processing of auxiliary work.
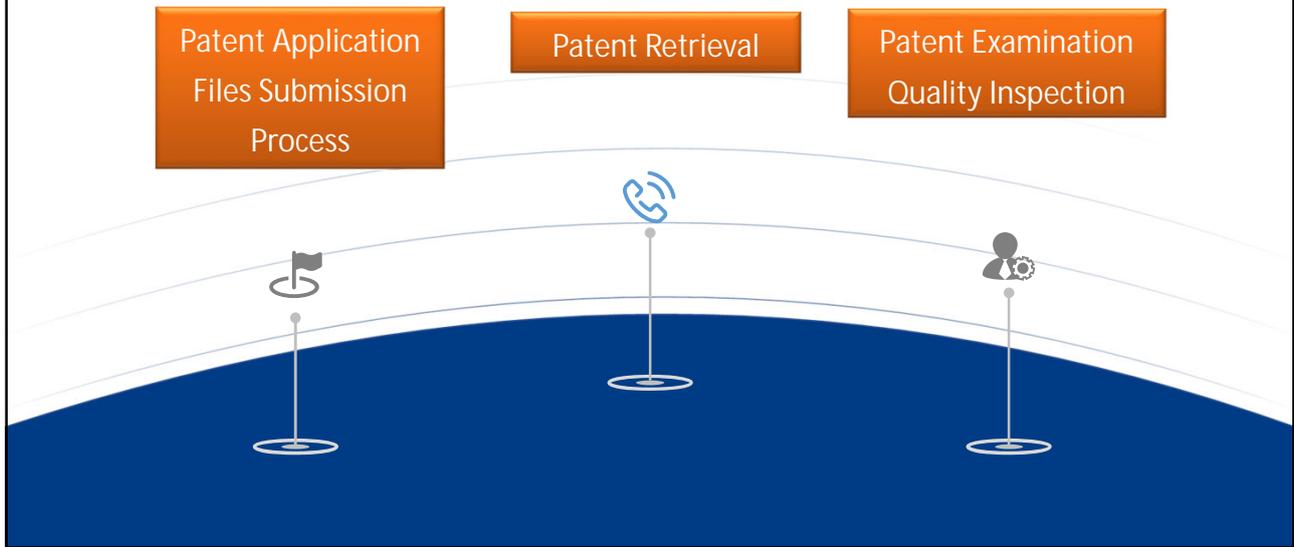
Patent situation
Periodic growth rate
Technical compatibility
Patent survival status
Patent portfolio

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2.4 Improving the quality and efficiency of patent examination by applying AI technology

Patent Application
Files Submission
Process

Patent Retrieval

Patent Examination
Quality Inspection

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2.5 Patent classification and data processing by applying AI technology

Automatic
Patent IPC
Classification

Intelligent
processing of
Patent Data

Intelligent
Indexing of
Patent
Industrial
Classification

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Prospects for Future Development of AI Application in IP

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3. Prospects for Future Development of AI Application in IP

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3.1 Strengthening the accumulation of basic data and technologies for AI

Data is fundamental to the application of AI.

Continuous applied research will be carried out in the field of AI.

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3. Prospects for Future Development of AI Application in IP

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3.2 Consistently improving AI application system functions, and exploring new application scenarios of AI in the field of IP.

Improving the functions of the existing AI application system.

➢ Multilingual neural network machine translation system
➢ Intelligent IP value assessment and management products
➢ Intellectualized system for IP examination and retrieval
➢ Other systems

Exploring new application scenarios of AI in the field of IP.

➢ Further exploring the application scenarios of AI in the field of IP
➢ Particular focus on the possible applications of AI technology in the information system of IP public services

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3. Prospects for Future Development of AI Application in IP

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3.3 Strengthening international exchanges and cooperation in AI technology

Strengthening the international exchanges and cooperation in IP informatization via various channels, especially in the application of the new technologies such as AI, big data, and cloud computing, to help countries complement each other and jointly promote the rapid development and improvement of the informatization of IP, thus better serving the market entities and the public.

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Thank you for
listening !