



The structure and construction of the Intellectual Property Network of the Chinese Academy of Sciences (CAS)

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ABSTRACT

This article describes the structure and construction of the Intellectual Property Network of the Chinese Academy of Sciences (IPNCAS). The objective of IPNCAS is to promote the transfer of IP, to integrate IP resources effectively, to standardize management of IP, and to improve the provision of information for IP work. In exploring IPNCAS, we discuss the details about each sub-system, such as the portal, IP database, IP online analysis and IP information service.

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1. Background

Along with the accelerated process of economic globalization and the rapid development of science and technology, the importance of IP is increasingly prominent in China.

CAS has always attached importance to IP work. Since 2008 CAS has decided to establish IP management and support service system, to strengthen IP strategic research, to improve incentive mechanism of IP creation and transfer, to enhance IP training. And CAS decided to establish IPNCAS in 2008. The target is to promote transfer of IP, to integrate IP resources effectively, to standardize management of IP, to improve the level of provision of information in IP work [1]. Some earlier efforts to provide improved IP and information networks have been described in Haxel [14], Idris [15], and Luo and Liu [16].

2. Framework of IPNCAS

2.1. Construction frame of IPNCAS

As shown in Fig. 1, IPNCAS provides services of four types. They are information service of IP transfer, information service of IP creation, information service of IP management and information service of IP resources [2].

Information service of IP transfer is comprised by collection and release system of IP achievement, collection and release system of enterprise and online communication system of IP transfer.

Information service of IP creation is comprised by patent online analysis system and training system of IP.

Information service of IP management is comprised by IP management system of institutes and IP database of CAS.

Information service of IP resources is comprised by IP information resources service system.

Almost all the content of IPNCAS is in Chinese language.

2.2. Technology frame

IPNCAS is a complex system involving multiple sub-systems, the technical architecture is complicated. Most of the sub-systems are based on the Microsoft WINDOWS operating systems, database systems are based on Microsoft SQL-SERVER. Because it needs to be compatible with the old system, IP management system is unique, it is based on the LINUX operating system and ORACLE database system. More detailed information is shown in Fig. 2 [3,4].

3. The details of sub-systems

3.1. Portal

IPNCAS is a complex and full-featured IP information integrated service system. The establishment of IPNCAS portal can effectively integrate multiple sub-systems of the service, and regulate the management of the various sub-systems. The information that comes from the sub-systems can be integrated and managed on the portal. This integrated service approach is conducive for the user to access information conveniently [5].

As shown in Fig. 3 one function of Central Portal is user unified authentication. Almost all the content of the portal is access free for public. A little part is only for the user of CAS such as the IP training courseware. In accordance with the difference of service

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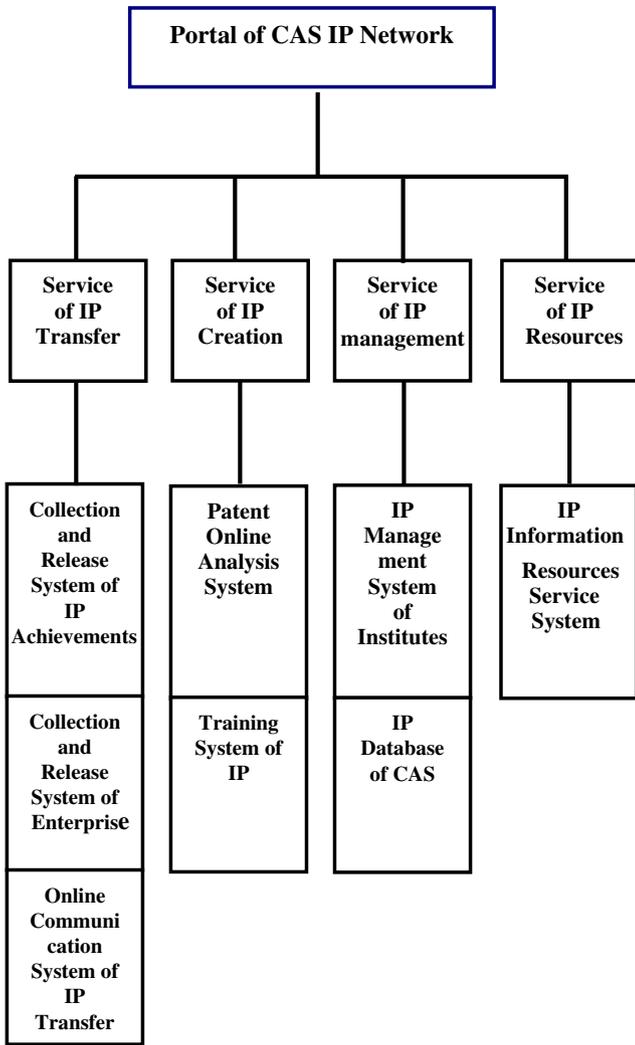


Fig. 1. Framework map of IP network of CAS.

content and object, Central Portal take three levels of authentication mode. They are: access free, IP authentication mode, the user login authentication mode.

The other function is Resources Unified Release. Central Portal can extract approved information from the various sub-systems and release them on the central portal.

The third function is Resources Unified Push. Registered users only need to customize demand and push frequency in the system, the system will push the latest information which meet user's need to user automatically.

3.2. Collection and release system of IP achievements

The core of CAS IP work is to ensure the validity of IP rights owned by CAS, while the transfer is one of the most important ways to achieve the value of IP rights. So the objective of this system is to collect and evaluate the IP of CAS and release them to community timely and accurately [6].

As shown in Fig. 4, the system can extract IP achievements data from IP database. Then by combination of market information and the evaluation factor, the evaluators can give a comprehensive assessment of these IP achievements.

The enterprises of the world can register in IPNCAS only if they are interesting in IPNCAS. In accordance with the registration information of the enterprises, the system can automatically and regu-

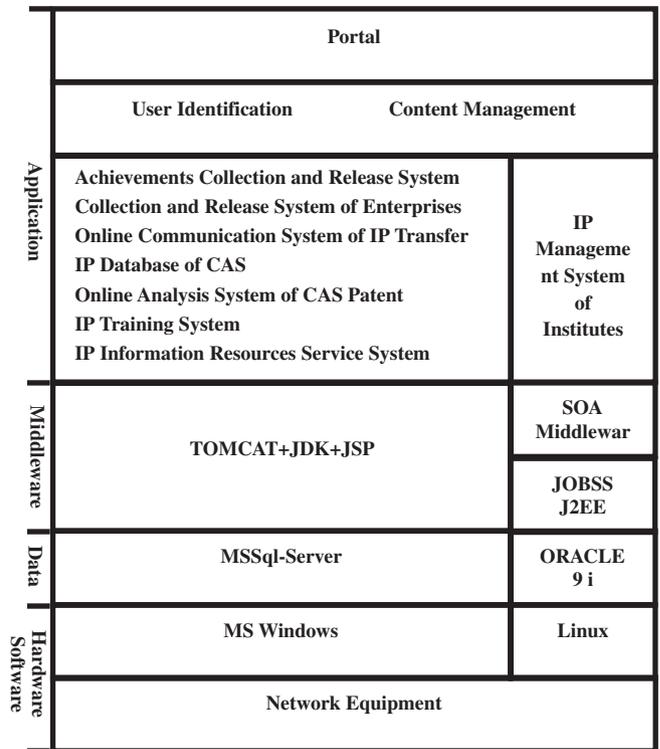


Fig. 2. Technology frame of IP network of CAS.

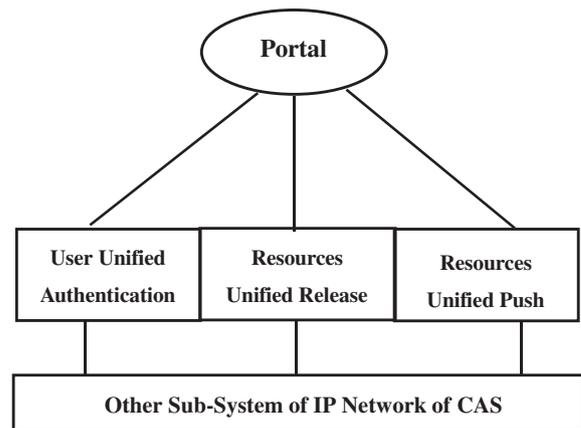


Fig. 3. Function of portal.

larly push the information that meets their requirements to enterprises, so that enterprises can easily access the latest achievements of CAS through multiple channels [7].

3.3. Collection and release system of the enterprise requirements

Another key of transfer of IP is that we should fully understand the technology needs of local enterprises. We should collect a wide range of scientific and technological needs of enterprises. By the cooperation with enterprises the IP owned by institutes can be more valuable.

This system is similar to Collection and Release System of IP Achievements, but the work process is opposite. The system can collect the enterprise requirement and technology problem, and accurately and timely send the information to Institutes of CAS.

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