

Current Status and Countermeasures of Technology and Innovation Support Center (TISC) Patent Information Services—A Postprint Based on a Survey of TISC Websites

Authors: 完颜邓邓, 宋众利

Date: 2024-06-13T00:00:00+00:00

Abstract

To identify problems in the patent information services of Technology and Innovation Support Centers (TISC) and propose countermeasures to help TISC improve its patent information services, this article primarily adopts the network research method, supplemented by the literature research method, to investigate and analyze the current status of TISC patent information services from three dimensions: service columns, service content, and service interactivity. Through the investigation, it is found that TISC suffers from problems such as unreasonable patent information service columns, uneven patent information service quality, lack of advanced patent information services, and insufficient interactivity in patent information services. The article proposes improvement countermeasures from four aspects: standardizing patent information service columns, improving patent information service levels, deepening basic patent information services, and emphasizing service interactivity.

Full Text

Current Status and Improvement Strategies for TISC Patent Information Services: A Survey of Official Websites

Abstract

This study investigates the patent information services of Technology and Innovation Support Centers (TISCs) in China through web-based survey methods supplemented by literature review. The analysis focuses on service columns, content offerings, and interactive features. Findings reveal several key issues: unreasonable design of patent information service columns, uneven service quality across institutions, lack of advanced patent information services, and in-

sufficient interactivity. Based on these findings, the paper proposes four improvement strategies: standardizing service columns, enhancing service quality, deepening basic services while expanding advanced offerings, and strengthening service interactivity.

1. Current Status of TISC Patent Information Services

The user wants me to translate a specific section from Chinese to English. Let me analyze the requirements:

1. This is section “### 1.1 Service Structure and Classification”
2. I need to translate ONLY this section
3. There are specific issues detected: Chinese characters 构, 承, 机, 办
4. Translation rules:
 - Author names: Romanize using pinyin
 - Journal names: Use English title if available, otherwise translate the meaning
 - Institution names: Use official English names when known
 - Technical terms: Use standard English equivalents from the field
 - DO NOT leave any Chinese characters - not even one
5. I must return ONLY the translated section with the same structure. Nothing else.

Let me look at the text to translate:

”### 1.1 Service Structure and Classification

An examination of the first batch of officially operational TISC 承办机构 (host institutions) reveals that patent information services are primarily categorized into basic services and optional value-added services. The service columns on official websites vary significantly in their placement and naming conventions. Some institutions position patent information services as first-level categories—for instance, Guangzhou Zhongxin Intellectual Property Services Co., Ltd. prominently features “TISC” as a primary navigation item. Others place these services at the second level, such as Shanghai Library (Shanghai Institute of Scientific and Technological Information) under “Intellectual Property Services,” or at the third level, such as Inner Mongolia Knowledge Property Service Center. A few institutions either lack dedicated patent information service columns entirely or provide empty links, such as Yunnan Provincial Institute of Science and Technology Information, which only offers patent statistics without additional practical services.”

Wait, the text is already mostly in English, but it contains some Chinese characters and pinyin. Let me identify what needs to be translated:

1. “TISC 承办机构 (host institutions)” - The Chinese part “承办机构” is already translated as “host institutions” in parentheses. I should probably just use “TISC host institutions” or keep it as is. The instruction says “DO

NOT leave any Chinese characters - not even one". So I need to remove “承办机构” and keep only the English.

2. The rest of the text seems to be already in English, but let me check for any hidden Chinese characters. The text appears to be describing the structure of patent information services provided by TISC institutions.

Let me re-read the text carefully:

”### 1.1 Service Structure and Classification

An examination of the first batch of officially operational TISC 承办机构 (host institutions) reveals that patent information services are primarily categorized into basic services and optional value-added services. The service columns on official websites vary significantly in their placement and naming conventions. Some institutions position patent information services as first-level categories—for instance, Guangzhou Zhongxin Intellectual Property Services Co., Ltd. prominently features “TISC” as a primary navigation item. Others place these services at the second level, such as Shanghai Library (Shanghai Institute of Scientific and Technological Information) under “Intellectual Property Services,” or at the third level, such as Inner Mongolia Knowledge Property Service Center. A few institutions either lack dedicated patent information service columns entirely or provide empty links, such as Yunnan Provincial Institute of Science and Technology Information, which only offers patent statistics without additional practical services.”

The only Chinese characters are “承办机构” in “TISC 承办机构 (host institutions)”. According to the rule “DO NOT leave any Chinese characters - not even one”, I need to remove “承办机构” and just keep “TISC host institutions”.

Also, I should check if there are any other issues: - Institution names: “Guangzhou Zhongxin Intellectual Property Services Co., Ltd.”, “Shanghai Library (Shanghai Institute of Scientific and Technological Information)”, “Inner Mongolia Knowledge Property Service Center”, “Yunnan Provincial Institute of Science and Technology Information” - these seem to be already in English or properly translated. - The term “TISC” is an acronym that should be kept as is. - The structure is already a proper academic paragraph.

So my translation task is minimal - just remove the Chinese characters “承办机构” and keep the rest as is, but I should also make sure the flow is natural.

Actually, wait. The instruction says “Translate ONLY this section from Chinese to English.” But the text provided is already mostly in English with some Chinese characters mixed in. The user also says “SPECIFIC ISSUES DETECTED: Chinese characters found: 构, 承, 机, 办”. But I### 1.2 Service Content Analysis

Patent Training Services. TISCs provide patent training to help innovation entities discover global patent information, cultivate patent protection awareness, and develop patent drafting and application skills. Survey results indicate that training primarily takes the form of workshops and online sessions, with

broad target audiences but relatively uniform formats. While some institutions offer flexible online learning options, many training programs fail to address diverse user needs, providing only basic patent knowledge rather than diversified skill development.

Patent Consulting Services. As a fundamental component of intellectual property information services, patent consulting requires practitioners to leverage solid disciplinary knowledge to provide actionable recommendations. Consultation methods include face-to-face meetings, telephone, and email. However, many TISCs offer incomplete consulting services with inadequate information disclosure about staff expertise, service scope, and operational procedures, creating barriers between user needs and service provision.

Patent Retrieval Services. Patent retrieval represents the most commonly provided basic service, utilizing both public welfare and commercial patent databases. However, the complexity of retrieval tools and methods, combined with insufficient guidance on service processes and staff qualifications, negatively impacts user experience. Additionally, most TISCs cannot provide novelty search reports for patent applicants, revealing a gap between user demand and service supply.

Patent Analysis Services. Designed to help innovation entities grasp technological development trends and avoid redundant research, patent analysis services are offered by some TISCs using tools like Derwent Innovation and PatSnap. However, these services remain limited in scope and depth, with few institutions providing comprehensive analysis or detailed explanations of available tools.

Patent Early Warning Services. This advanced service involves dynamic monitoring of specific patent information and market data to establish early warning mechanisms for potential disputes. While some TISCs claim to offer patent early warning services, the actual provision is limited and lacks systematic implementation.

Data Processing Services. This value-added service involves classifying and processing patent data according to user needs. Currently, only a few institutions such as Chongqing Motorcycle Intellectual Property Information Center, Patent Retrieval and Consultation Center of CNIPA, and Qinghai-Tibet Patent Information Service Center provide such offerings. These institutions have established customized thematic databases covering biomedicine, energy, and other fields, creating rich, dynamically updated resources.

1.3 Service Interactivity

TISCs aim to build comprehensive, one-stop service platforms where robust interactive functions are crucial for optimizing user experience. Survey findings show that interactive platforms primarily include official websites, WeChat public accounts, and mini-programs, with interaction methods such as question-

naires and leadership mailboxes. Some institutions, like Guangxi Intellectual Property Development Research Center, have established open Q&A platforms enabling in-depth communication. Others, like Shanghai Library, employ intelligent robots to answer basic inquiries, though these systems struggle with complex professional questions beyond their knowledge base.

However, significant interactivity issues persist. Many platforms suffer from delayed responses or unanswered questions, weakening user engagement. Interactive features are limited by service hours and staff availability, particularly during holidays. While machine-based interaction enables 24/7 service, it lacks the nuance to handle sophisticated technical questions, often resulting in unsatisfactory user experiences.

2. Problems in TISC Patent Information Services

Despite rapid growth in TISC host institutions and overall progress, several critical problems require urgent attention:

Unreasonable Patent Information Service Column Design. Inconsistent naming and placement of service columns across websites hinder user access. Columns are often positioned at non-primary levels, requiring multiple clicks to locate. Some sites feature overly complex navigation with redundant content, while others oversimplify with insufficient columns. This lack of standardized, prominent entry points reduces service visibility and accessibility.

Uneven Patent Information Service Quality. Service quality varies significantly across institutions. While some provide comprehensive services, others offer only superficial content. The precision, detail, scope, and target audience coverage of services differ markedly, creating disparities in user experience. This inconsistency reflects differing levels of institutional commitment and resource allocation.

Lack of Advanced Patent Information Services. While basic services like patent retrieval are widely available, advanced services throughout the patent lifecycle remain underdeveloped. Few TISCs provide sophisticated offerings such as patent navigation, mining, or strategic analysis. Even when attempted, these services often operate at a rudimentary level, failing to meet the diverse and dynamic needs of innovation entities.

Insufficient Service Interactivity. Current interaction mechanisms are inadequate. Many platforms rely on unidirectional information dissemination with limited feedback channels. Even when interactive features exist, they are often restricted to one or two methods, such as email, which involves cumbersome back-and-forth communication. The lack of real-time, multidimensional interaction prevents TISCs from fully understanding user needs and providing timely responses.

3. Improvement Strategies for TISC Patent Information Services

Based on the identified problems, TISC host institutions should implement the following strategies:

Standardize Service Columns and Enhance Website Operation. Service columns should be unified under clear, standardized names like “Patent Information Services” and positioned as first-level categories for immediate access. Sub-columns can include patent information, consulting, retrieval, analysis, and case studies. Websites should provide detailed service descriptions, clear processes, and transparent information about staff qualifications to improve usability and professionalism.

Enhance Service Quality and Reduce Institutional Disparities. TISCs should establish differentiated service models tailored to their strengths while benchmarking against best practices. By leveraging advanced infrastructure and technical expertise, institutions can expand service breadth and depth. Hierarchical service delivery—combining basic retrieval with advanced analysis and early warning—will help achieve service equalization and narrow quality gaps across institutions.

Deepen Basic Services While Expanding Advanced Offerings. Building on foundational retrieval and consulting services, TISCs should develop sophisticated services like patent navigation, mining, and early warning throughout the R&D lifecycle. This requires integrating resources, combining retrieval and analysis tools, and collaborating with industry experts to support high-value patent cultivation and technology transfer.

Strengthen Service Interactivity and Expand Communication Channels. TISCs should transform from passive, delayed services to active, immediate engagement. Interactive features should include real-time consultation windows, discussion forums, user communities, and online comment systems. Employing approachable language and leveraging AI-powered Q&A systems can enhance user engagement while maintaining 24/7 availability. Establishing clear feedback mechanisms and response protocols will ensure timely, effective communication between service providers and users.

References

- [1] Xi Jinping. Xi Jinping Presided Over the 30th Meeting of the Central Leading Group for Comprehensively Deepening Reform, Emphasizing Summarizing Experience, Improving Ideas, Highlighting Priorities, and Enhancing the Overall Effectiveness of Reform to Expand Reform Benefits[EB/OL]. [2023-10-05]. <http://news.cctv.com/2016/12/05/ARTImGbS8DP1J6JplQEhRrkZ161205.shtml>.
- [2] Zhong Yan. Investigation and Analysis of Guangxi Technology and Innovation Support Center (TISC) Construction[J]. China Invention & Patent,

2022(3): 65-70.

[3] Luo Liguu, et al. Discussion on the Construction Route of Technology and Innovation Support Center (TISC)[J]. Library and Information Service, 2017(10): 804-808.

[4] Lü Chunyu. Operation and Exploration of Henan Province Technology and Innovation Support Center Project[J]. Henan Library Science Journal, 2021(7): 100-102.

[5] Wang Juncheng. The Development of Yinchuan TISC in China: Enlightenment for Intellectual Property Information Services[J]. China Science and Technology, 2019(36): 100-102.

[6] Meng Guiping. Introduction to WIPO Technology and Innovation Support Center[J]. China Invention & Patent, 2016(4): 92-95.

[7] Liu Xihuai, et al. Research on Patent Information Service Model for Enterprise Innovation from the Perspective of Competitive Intelligence Integration[J]. Journal of Library and Information Science, 2022(2): 21-23.

[8] Xiong Fei, et al. Investigation on the Status Quo of University Library Intellectual Property Information Service Platforms[J]. Journal of Academic Libraries, 2022(12): 127-137.

[9] Cao Yuting, et al. Investigation and Analysis of Patent Information Services in University Libraries: Taking 31 University Libraries with Valid Patents as Examples[J]. Library Science Research, 2019(16): 67-73, 82.

[10] Zhao Miaomiao, Mu Xiangming. Research and Exploration of Intellectual Property Information Service in the Construction of TISC in China[J]. China Invention & Patent, 2023(4): 61-72.

[11] Wang Jun. Evolution Logic and High-Quality Service Path of Patent Information Services in University Libraries[J]. Library Science Research, 2022(3): 52-58.

[12] Meng Fan. Current Status and Development Strategies of Patent Information Services in University Libraries[J]. Library Research and Work, 2021(3): 62-67.

[13] Zhang Li. Investigation and Enlightenment of Patent Information Service Models and Content in German Universities[J]. Library and Information Service, 2021(3): 118-127.

[14] Li Na. Research on the Architecture of University Library Patent Information Services for High-Value Patent Cultivation[J]. Library Work and Study, 2021(6): 105-111.

[15] Chen Yue. How to Improve the Interactivity of University Library User Services[J]. Theory and Practice, 2005(3): 101-103.

- [16] Wang Ying. Research on the Interactivity of Archives Websites: Taking Provincial Comprehensive Archives Websites in China as Analysis Objects[J]. Archives Science Bulletin, 2021(4): 49-63.
- [17] Sun Yue. Construction and Practice Exploration of University Library Patent Information Service System[J]. Digital Library Forum, 2021(3): 66-72.
- [18] Zhou Ying. Practical Enlightenment and Soft Power Improvement Path of Patent Information Services in University Libraries[J]. University Library Work, 2021(4): 64-69.
- [19] Wu Jing. Research on University Library Patent Information Services Based on Enterprise Innovation Development Needs[J]. Journal of Academic Libraries, 2020(5): 104-109.
- [20] Liu Yang. Construction of Patent Information Service System in University Libraries[J]. Library Science Research and Work, 2021(3): 62-67.
- [21] Huang Ying. Exploration of Embedded Patent Services in University Libraries[J]. Library Science Research, 2022(1): 104-108.

Note: Figure translations are in progress. See original paper for figures.

Source: ChinaXiv — Machine translation. Verify with original.