

Ricoh and RIKEN Develop a Proprietary Algorithm to Detect Indicators of Technology Commercialization

Advancing previous algorithms to perform multi-analysis on keywords commonly appearing in patents and technical papers

TOKYO, June 4, 2024 – Ricoh Company, Ltd. (President and CEO: Akira Oyama) and the RIKEN Interdisciplinary Theoretical and Mathematical Sciences Program (iTHEMS; led by Senior Visiting Scientist Hideaki Aoyama and Visiting Scientist Wataru Souma) have developed a new algorithm that applies their previously developed technology to perform multi-analysis of keywords commonly appearing in both patents and academic papers.

This algorithm identifies technologies that have completed the research phase in academia, such as universities and research institutions, and are transitioning to the commercialization phase in the business sector as having “signs of commercialization.” It enables the detection of these indicators through numerical evaluation. This technology has already been patented.

In June 2023, Ricoh and RIKEN jointly developed an algorithm that quantitatively measures and identifies new trend critical junctures from existing technical literature data. However, it was challenging to quantitatively determine whether these indicated the early stages of research or the approach toward commercialization. The new algorithm, developed by applying the previous one, efficiently detects the commercialization phase by analyzing the increase and decrease patterns of keywords that commonly appear in both patents and academic papers through coordinate analysis.

In recent years, there has been an increase in the development and utilization of data-driven research methods to grasp technological trends comprehensively and quantitatively. Ricoh’s use of this technology in data-driven research initiatives aims to enhance the comprehensiveness and speed of theme exploration activities in research and development. This will contribute to the discovery of new research themes and the creation of valuable intellectual property.

Related Information

A method to detect indicators of practical application of technology

https://www.ricoh.com/technology/tech/133_detect_indicators_of_practical_application_of_technology

Visualization Method for Detecting Indicators of Emerging Technology

https://jp.ricoh.com/technology/tech/125_detect_indicators_of_emerging_technologies

Ricoh Group’s Initiatives in Intellectual Property

<https://www.ricoh.com/technology/rd/ip>

Related News

Ricoh and RIKEN develop a proprietary algorithm to visualize critical junctures of technological trends from literature data

https://www.ricoh.com/release/2023/0614_1

For inquiries about the technology

https://webform.ricoh.com/form/pub/e00114/technology_inq_en

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RIKEN is Japan's largest research institute for basic and applied research. Over 2500 papers by RIKEN researchers are published every year in leading scientific and technology journals covering a broad spectrum of disciplines including physics, chemistry, biology, engineering, and medical science. RIKEN's research environment and strong emphasis on interdisciplinary collaboration and globalization has earned a worldwide reputation for scientific excellence.

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Ricoh is a leading provider of integrated digital services and print and imaging solutions designed to support digital transformation of workplaces and optimize business performance.

Headquartered in Tokyo, Ricoh's global operation reaches customers in approximately 200 countries and regions, supported by cultivated knowledge, technologies, and organizational capabilities nurtured over its 85-year history. In the financial year ended March 2024, Ricoh Group had worldwide sales of 2,348 billion yen (approx. 15.5 billion USD).

It is Ricoh's mission and vision to empower individuals to find Fulfillment through Work by understanding and transforming how people work so we can unleash their potential and creativity to realize a sustainable future.

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