

## **Empirical study on the Effectiveness of the Intellectual Property Information Analysis through the Use of Artificial Intelligence**

In consideration of the purposes of finding new markets, developing new products/services and IP business matching, each of which is important to promote businesses for small and medium-sized enterprises (SMEs), this study investigated the possibility of using artificial intelligence (AI) in order to create opportunities for SMEs to use intellectual property information more easily, quickly and at low cost, and at the same time, to get aware of the possibility of using intellectual property and its importance.

In order to realize the above investigation, prototypes of three analysis models including A. Simple model to analyze competing companies, B. IP business matching model for registered patents, and C. Idea creation model for existing technologies, were developed using AI which is trained by technical information including IP information. To understand the effectiveness of each model, workshops and/or interviews were conducted with the cooperation of SMEs, SME supporters, and financial institutions to examine whether each analysis model is useful to support SMEs.

In addition, an expert committee, which was consisting of experts in IP utilization such as IP business matching, experts in patent information utilization, and experts in innovation creation methods such as design thinking, was established to hold discussions four times. The opinions and suggestions were reflected in the design and the improvement of the models.