

Title	AIと弁理士の協働による進歩性判断 - 先行特許文献調査システムの発明現場への導入 -
Author(s)	白坂, 一
Citation	
Issue Date	2021-03
Type	Thesis or Dissertation
Text version	ETD
URL	http://hdl.handle.net/10119/17468
Rights	
Description	Supervisor:神田 陽治, 先端科学技術研究科, 博士

Abstract

This study is directed to a cooperation between artificial intelligence (AI) and patent attorneys in determining inventive step. Normally, the inventor consults with a patent attorney for acquiring a patent. The patent attorney conducts a prior art search for the subject invention to find the closest documents and determine whether the invention is novel, which is objective novelty, or whether it has inventive step, which indicates that the invention is not easy for a person with an ordinary skill in the art. In the prior art search, the patent attorney designs a search expression, narrows down the large number of prior patent documents to a few hundred prior patent documents, and then reads them to compare the target invention with the narrowed prior patent documents to find which portion of the target invention is novel over the narrowed prior patent documents. The patent attorney then, from the viewpoint of inventive step, determines the quality of creativity of the invention on the basis of his/her own knowledge and experience. This tacit knowledge determination ability is referred to as “intuitive grasp of patentability” in this thesis. The patent attorney becomes proficient in this “intuitive grasp of patentability” by accumulating their legal knowledge, technical knowledge from obtained by reading many prior patent documents, and experience obtained by filing patent applications to achieve patent rights.

On the other hand, with the rapid progress of AI technology in recent years, we have discovered the possibility of instantly searching prior patent documents and determining inventive step using natural language processing, and have developed an AI-equipped prior patent document search system. To prevent the AI from turning into a black box, the prior patent document search system includes a function that clearly shows the relationship between the target invention and the prior patent documents by outputting the data in the form of a claim chart, which is used by patent experts to determine inventive step. However, although the effectiveness of this prior patent document search system was verified and a certain level of effectiveness was observed, it was not always well accepted by patent attorneys that are in the field of invention.

Therefore, the present study is novel in that it explores what factors, other than the knowledge and experience, contribute to patent attorneys’ “intuitive grasp of patentability” when the prior patent document search system is introduced to the field of invention, and suggests that the use of AI makes this ability more proficient and enables collaboration between the AI and patent attorneys.

Keyword: Artificial Intelligence, Inventive Step, Patent Attorney, Invention, Claim Chart