

## The PRH and IPRally collaborate on the application of AI in patent examination

*Artificial intelligence (AI) opens up new opportunities to examine the patentability of inventions. The combination of AI and specialist work produces results with increased effectivity also in a telecommuting environment.*

The Finnish Patent and Registration Office (PRH) has started using an AI-based patent search technology provided by IPRally Technologies Ltd. The technology is used particularly in the early stage of examining new patent applications, where it is important to quickly find the publications that might prevent patenting the invention.

The technology provided by IPRally is based on automatically generating technical feature graphs both about the inventions to be patented and about prior art publications. The artificial intelligence then compares the graphs to each other to recognise the relevant prior art.

The technology uses fast-developing graph-based and deep-learning neural networks.

– IPRally's graph-based method opens up many new opportunities. For example, it is much easier for many inventors to understand graphs than the complicated language used in patent applications, says Mr Jorma Lehtonen, Director of Customer Relations at the PRH.

– In the current exceptional circumstances, most patent offices are almost entirely telecommuting. Our patent examiners are eager to improve their skills and adopt new tools, and in this unusual situation, we are even more active in developing new working methods and means, Mr Lehtonen adds.

Patent offices around the world collaborate on a wide scale and compare their experiences, as AI in its various forms offers an opportunity to improve the quality of activities throughout the entire innovation chain, from the first person developing an idea to the patenting authority and the risk investors.

IPRally's main motivation for collaborating with the public sector is to maximize their impact on the very traditional patent field.

– We use data produced by patent examiners to train the AI, so it is great to be able to help the examiners in turn, says Mr Sakari Arvela, co-founder and CEO of IPRally.

– We also evaluate the performance of the AI on a regular basis by comparing the results it gives to human examiners' views. That makes it meaningful to develop the product.

### **The Finnish Patent and Registration Office (PRH) in brief:**

The PRH comes under the administrative sector of the Ministry of Economic Affairs and Employment (MEAE). In industrial property matters, the PRH grants patents and utility models for inventions, legal protection for designs, and trademarks for goods and services. The PRH is an International Searching Authority (ISA) and International Preliminary Examining Authority (IPEA) for international PCT patent applications.

**IPRally Technologies Ltd in brief:**

IPRally is a start-up founded in 2018. The company provides on its web service platform explainable AI for patentability examinations and patent invalidation searches. The service is suitable for technology corporations, patent law firms and research organisations.

**For more information, please contact**

Mr Jorma Lehtonen  
jorma.lehtonen@prh.fi  
Tel. +358 29 509 5904

Mr Sakari Arvela  
sakari.arvela@iprally.com  
Tel. +358 50 347 0646

