

AIs and Blockchains, computer implemented inventions on the rise

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Widespread use of automation, networking, and distributed software services in all the human endeavors is a matter of fact, and in the near future a constant growth and adoption thereof in all the industries is foreseen.

In this frame, the computing power of nowadays computers and high-speed data exchange provided by the network infrastructure made possible the diffusion and constant development of so called "Artificial Intelligence", AI for short, systems. These AI systems usually are software solutions comprising algorithms based on machine learning, ML for short, to complete a task and, at the same time, increasing its proficiency in performing such task.

Thanks to the same high computing power and speed in digital communications, the distributed ledger technologies, such as Blockchain and Hashgraph technologies, gave birth to an awful lot of software products, overlay networks, protocols, cryptocurrencies, tokens, *etc.*, which constitute an environment rapidly developing and always increasing in complexity.

It goes without saying that all the improvements made to existing products and the new products rely on the ingenuity of their creators and the smart solutions devised by them, and for which a patent is best suited to provide protection from competitors.

Since its inception, THINX had the opportunity of continuously assisting university researchers, dynamic startups and enterprises in patenting computer implemented inventions, and particularly AI and Blockchain based inventions in the fields of automotive, distributed computing and software services, heating, healthcare, telecommunications, home and industrial automation.

During these years the team at THINX developed a deep insight in what constitute a computer implemented invention as defined by the EPO, to identify what in an invention may be the subject matter of a patent. This translates in a good command in the nuances of technical and non-technical features, a continuous attention to the decisions issued by the (E)BoAs of the EPO such as the famous G1/19 that, basically, just confirmed the Comvik Approach (T 641/00). Finally, we do not forget to keep an eye on overseas opinions on the eligibility of software patents emerging from landmark decisions such as in *Alice Corp. v. CLS Bank International*, *Enfish LLC v. Microsoft Corp.*, and *Amdocs Ltd. v. Openet Telecom Inc.*

In the field of AI related inventions, patentability is assessed in quite a strict manner, therefore a deep analysis of the AI inventions in every aspect to find the "right stuff" to be claimed. For example, sometimes even to the surprise of our clients, the key of an AI system, able to provide an edge over the prior art, resides in a clever manner of training the underlying ML algorithm rather than the plain use of the AI within a system.

The same thorough approach is required for inventions based on distributed ledger technology. Being a still a relatively new technology, the general inclination is to patent a "something" done or registered on the blockchain (as was for the early days of computer implemented invention at large – especially in the US – when the patents were filed on the key feature of "using a computer"). Again, the devil, and the subject-matter of a patent application, hides in the details. Indeed, clever ways to connect a decentralized system, like a blockchain, to a centralized system, like a SaaS, or the capability to managing clients with a low latency time while solving a cryptographic requires a great deal of times are technical solutions that are not instantly evident but provide that key advancement over existing solutions.