# Ericsson corporate intervention

## WIPO Conversation on AI 2023

## Introduction

Ericsson has been one of the top PCT filers for many years and was 2022 the #1 European filer and in top 5 overall with 2,158 PCT applications. Ericsson sees AI as a prioritized technical field and one that permeates all branches of the business. Ericsson AI technology is a key enabler for current and future uses of communication networks, such as remote surgery, autonomous driving, critical traffic prioritization, disaster response and factory automation, where ultra high requirements are placed on network parameters such as latency, bandwidth, responsiveness and adaptability.

## Opportunities

Generative AI is a tool that has many uses for R&D in Ericsson. The foundation of Generative AI lies in the transformer model, a deep learning architecture that excels in comprehending context and meaning by tracking relationships within sequential data, such as the words in this very sentence.

GenAI has already shown potential to solve big problems in society, for example accelerating and improving medical diagnosis and facilitating communication for people with serious medical conditions. In telecommunications, genAI has the potential to, for example, improve management and resolution of faults in the networks, particularly where maintaining connectivity is critical.

## Challenges

As well as opportunities, we see multiple challenges, many of which remain unresolved. In the context of intellectual property rights, there are questions around the use of IP-protected data, for example copyrighted textual or graphical creations, for training such models. Although copyright is just an example of an IP right that is directly affected through widespread use of genAI technologies, it is probably just a matter of time before we will see analogous issues arise in the fields of other IP rights, such as patents.

Another issue is a range of biases that are introduced and replicated in such systems inter alia through the use of training data that may be biased itself. This has implications for the quality of AI contributions, such as their accuracy.

## Challenge: machine inventorship

Even though AI systems are helpful for assisting in creating new inventions, it will for the foreseeable future be limited to the role of – even if advanced and powerful – but still a tool. Even so, Ericsson maintains that the role of the inventor shall be reserved for humans also further down the line.

Ericsson makes substantial investments in R&D and promotes innovation which is embedded in our DNA. This would not happen without people and the culture that fosters their creativity. The current patent system was designed to reward human creativity for example by explicitly naming inventors on patent documents. Ericsson believes in developing communication technology for the good of society. Analogously, we believe in a patent system for the benefit of society. This purpose is not advanced by extending the inventorship to machines. For these reasons, we do not support the idea of allowing machines to be named as inventors.

## Challenge: prior art thickets

It is natural that publications are made by parties in order to prevent patenting of a matter. We have seen that AI tools have been employed for this purpose, and this is a phenomenon that we predict will become more common. With the advent of generative AI it has become harder to distinguish between a traditional disclosure and an AI generated piece of a massive prior art thicket. Going from a mere collection of technical terms – previously typical of mass-produced AI generated content – to a fluid disclosure with content that can be seen as enabled to remove novelty of a patent claim. If this practice is allowed to scale unregulated, it will eventually lead to flooding of the patent system by preventing legitimate inventions protection due to published disclosures that no human had read.

## Solutions

There are promising signs that regulators have started to address some of the more pressing problems that pose a risk to the use of genAI in society. Ericsson is committed to responsible use of AI technologies, so that rights of third parties, such as copyright, privacy and contractual obligations are respected.

It is promising to see technological development that attempts to address some of these problems. For instance, advances in the field of fingerprinting of AI-generated content may potentially find applications in identification and thus mitigating negative effects of large-scale, automated generation of technical texts of dubious quality.

## Conclusion

Generative AI shows promises for technology and society, but also threats that need to be mitigated through regulation. These threats include prior art thickets and machine inventorship.