Who is leading 5G development?

A transparent assessment of 5G patent leadership

Many sources have reported on which companies are leading 5G development in recent months, often concluding that Huawei (or China generally) is in the lead. But such studies paint an incomplete picture, as they are over-simplistic or flawed. For example, they count patent declarations made to standards bodies when measuring each company’s share of the 5G “essential patents”, even though not all declared patents are essential. When using a broader range of metrics, we show that European, South Korean, Chinese, and US companies can all take the top spots.

What is 5G?

Fifth generation (5G) cellular technology is heralded as a game changer. With vastly increased data speeds, ultra-low latency, and massive connectivity, it has the potential to disrupt or kick-start many industries — from automotive to medical to leisure. However, the English High Court recently overturned a landmark UK patent case in which Chinese companies are leading the 5G patent race.

Essentiality audits are necessary to estimate 5G leadership

When counting standard essential 5G patents (i.e. “SEPs”), many studies rely on previously-declared families. This unfairly disadvantages newer companies from South Korea, China generally) is in the lead. However, declarations are not of technical innovation, and we argue that more precise inputs, European, South Korean, China generally) is in the lead. However, declarations are not of technical innovation, and we argue that more precise inputs, European, South Korean, and US companies can all take the top spots.