

5g as disruptive innovation: Standard and regulatory challenges at a country level

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Abstrak

Understanding 5G from a perspective of innovation is to explore both technical research and development (R&D) and non-technical issues. While 4G has been considered as an incremental innovation from its predecessors (3G and 2G), design features and key technologies have indicated 5G as a disruptive innovation. Consequently, 5G will create new market values, in which new services and applications will emerge in unexpected ways. Hence, it is predicted that policy makers will face significant challenges concerning 5G implementation in their respective countries. This paper aims to investigate the challenges to standards and regulations at a country level. The discussion begins with the challenges because of the emergence of non-human markets as well as the complexity of multi-device technological platforms. Due to anticipated massive cloud-based applications, security issues of cloud-based applications will be a subsequent challenge for national policy makers. Finally, as 5G may require various supporting technologies, the challenge for the policy maker is also to trigger national development of local standards.