

5G Mobile Communication Network's Key Technology

Pradeep V¹, Fathima Thahiba², Diya H B³, Deekshith⁴, Devadiga Likhith Kumar Ganesh⁵

Assistant Professor, Department of Information Science and Engineering¹

Students, Department of Information Science and Engineering^{2,3,4,5}

Alva's Institute of Engineering and Technology, Mijar, Mangalore, Karnataka, India

Abstract: *This article describes what a 5G network is and the direction in which 5G network technology is headed on the basis of information about 5G networks released by various organizations and communication companies. The major focus of this article is an analysis of the prospective wireless technology for the 5G network. It also explains the fundamental ideas, benefits, and difficulties of large-scale antenna technology, ultra-dense networking technology, and the use cases for full-spectrum access technology.*

Keywords: Full spectrum access technology; large scale antenna technology; 5G mobile communication network

REFERENCES

- [1]. GUPTA A, JHARK. A survey of 5G network: architecture and emerging technologies [J]. IEEE Access, 2015, 3:1206-1232.
- [2]. E. G. Larsson, F., O., and T. L. Marzetta. Massive MIMO for next generation wireless systems. IEEE. 2014.
- [3]. Zhang Jianmin, Xie Weiliang, et al. Analysis of 5G cellular network architecture[J]. Telecommunications Science, 2015, 31(5): 46-56.
- [4]. TULLBERG H, POPOVSKI P, GOZALVEZ-SERRANO D, et al. METIS system concept: the shape of 5G to come[J]. IEEE Communications Magazine, 2015.
- [5]. IMT-2020(5G) Promotion Group. 5G Wireless Technology Architecture White Paper [R]. 2015.
- [6]. ZTE. Pre5G, using technology innovation to sketch 5G blueprint [J]. Communications Industry News, 2014 (34).
- [7]. High Frequency Communication Research Report [R]. China Telecom Corporation. 2015.
- [8]. The basic requirements of the 5th generation mobile communication and the new multiple access. multiplexing technology [J]. Journal of Chongqing University of Posts and Telecommunications: Natural Science Edition, 2015, 27(04) : 435-440.
- [9]. F.E.G.Larsson, T. L.Marzetta. Scaling up MIMO: Opportunities and challenges with very large arrays. IEEE Signal Process. 2013.