

Future of 5G Wireless System

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Abstract: *This research article offers a comprehensive study of 5G wireless networks' future, covering a range of topics from their conception to their anticipated course. The article starts with an introduction and focuses on how 5G technology can revolutionize connection and enable cutting-edge apps and services. The evolution of mobile communication networks from 1G to 5G is then traced, with an emphasis on the societal influences and technological developments that have shaped the current state of the telecom industry. This article examines the present state of 5G networks, highlighting their key features, improvements over earlier generations, and global rollout status. In addition, the article explores the technological developments that are propelling 5G's development, such as network slicing, the use of millimetre wave spectrum, and the deployment of standalone modes, and examines how these can affect network performance. The Internet of Things (IoT), smart cities, remote surgery, and emerging applications like augmented and virtual reality (VR) and AR are some of the applications that are made possible by 5G. Other applications that are explored include security concerns, infrastructure development costs, and regulatory obstacles. The paper concludes with insights into the exciting possibilities and considerations surrounding the future of 5G technology. Finally, the article gives several projections and forecasts regarding the future of 5G, discussing probable dates for wider adoption and the next steps in 5G development.*

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