

UNDERSTANDING 6G MOBILE INFORMATION NETWORKS

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Abstract: The thesis focuses on an overview of sixth-generation mobile communication networks (6G), set against the backdrop of the explosion of multimedia services and the Internet of Things (IoT). The document systematizes the development roadmap from 1G to 5G networks before delving into the analysis of 6G networks, aiming to achieve Terabit per second (Tbps) transmission speeds and near-zero latency. The research methodology primarily relies on exploring core technologies such as massive MIMO CF, network slicing, and Terahertz (THz) communication. The research results outline an integrated space-air-ground-sea network model, while emphasizing the role of artificial intelligence (AI) in optimizing and autonomously operating the Intelligent Endogenous Network (IEN). The thesis affirms that 6G will be a global connectivity revolution, driving comprehensive digital society by 2030.

Keywords: 6G mobile network, Space-Air-Ground-Sea integrated network, Artificial Intelligence (AI), Terahertz (THz) band

References

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