SIMATS ENGINEERING
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TECH STAR SUMMIT 2024
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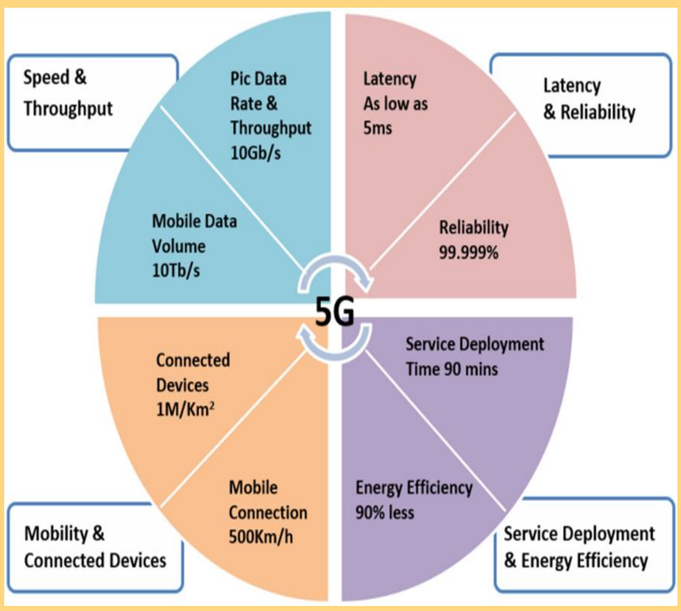
Enhancing Quality Of Intelligent 5G-Enabled IoT Environments Comparative Analysis With 4G Networks

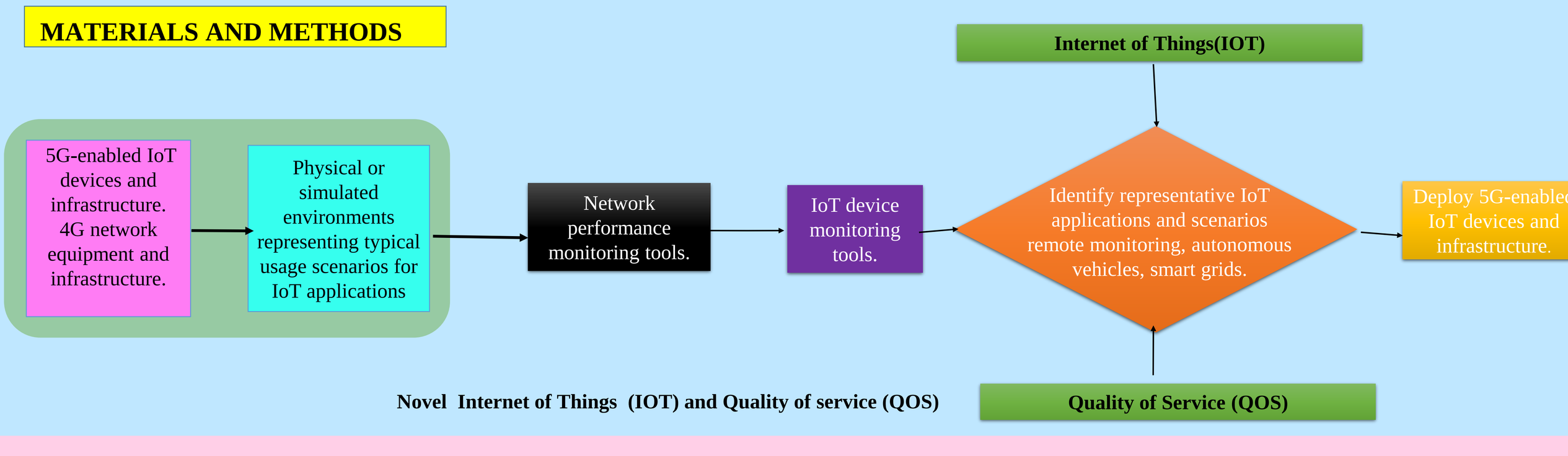
INTRODUCTION

- Aim of study is to enhance the quality of woring in IoT environments and the Internet of things has introduced multiple technologies, real-time analytics, machine type communication.
- Mobile communication networks of today and the future will need to develop in a variety of ways to meet the challenges of the new era. Furthermore, it is anticipated that a completely mobile and connected society will exhibit remarkable growth in connection, traffic volume, and a far wider range of usage situations.
- Order to provide new infrastructure and design with intrinsic capabilities needed by the future IoT, several critical 5G enabling technologies have been created. The current state of research on key technologies and service models for the upcoming generation of mobile networks and.
- Generally speaking, the Internet of Things offers a plethora of application opportunities, and its full potential can only be attained by guaranteeing.
- The project is an innovative attempt to use new approaches and technology to improve intelligent 5G-enabled IoT environments.
  attempts to solve new opportunities and difficulties in network performance, energy efficiency, security, and user
- Recent developments in wireless communication and the Internet of Things. The study investigates creative solutions suited to the particulars of 5G networks using exacting empirical measurements, simulations, and theoretical analysis. Using a forward-looking
- Perspective, the research aims to influence how intelligent IoT ecosystems develop in the future.



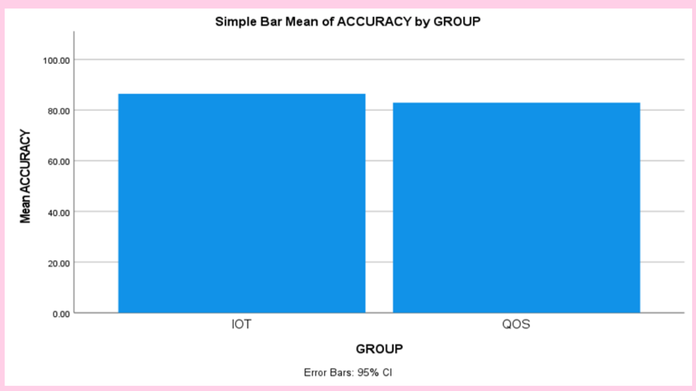
4G Networks Networks 5G-Enable

MATERIALS AND METHODS



Novel Internet of Things (IOT) and Quality of service (QOS)

RESULTS



SPPS Comparison of IOT vs QOS

Names	Group	N	Mean	Std. Deviation	Std. Error Mean
Accuracy	IOT	20	86.4500	4.00625	.89582
	QOS	20	82.9500	3.69174	.82550

SPPS Comparison of IOT vs QOS

Sample	Accuracy of IOT Algorithm	Accuracy of QOS Algorithm
1	84.5%	89.2%
2	86.3%	92.7%
3	81.9%	88.5%
4	85.6%	90.1%
Mean	**86.4500**	**82.9500**

Accuracy of IOT and QOS algorithm

- The graph illustrates the comparison of IOT andQOS Algorithm.
- The results of the Independent Sample T test showed a significance value of 0.052 ($p<0.05$), underscoring the statistical significance of the performance difference between Novel Internet of Things (IOT) and Quality of service (QOS).

DISCUSSION AND CONCLUSION

- Performance Improvements is to highlight the significant performance improvements observed in 5G-enabled IoT environments compared to 4G networks. Discuss how higher data transfer speeds, lower latency, and increased reliability contribute to a superior user experience and enable new applications and services Scalability and Capacity: Explore how the scalability
- Capacity of 5G networks outperform 4G networks, allowing for a larger number of connected devices and supporting higher data volumes. Discuss the implications of this scalability for future IoT deployments and network expansion Energy Efficiency: Discuss the energy efficiency benefits of 5G-enabled IoT environments compared to 4G networks, emphasizing the potential for reduced power consumption and extended battery life in IoT devices. Highlight how (In conclusion, the comparative analysis between intelligent 5G-enabled IoT.
- Environments and traditional 4G networks underscores the transformative potential of 5G technology in enhancing network quality and enabling advanced IoT applications. the study's findings reveal significant advancements in performance metrics, quality of service, energy efficiency, scalability, and security with 5G networks. These results e
- Importance of transitioning to 5G-enabled IoT environments to unlock new opportunities for innovation, efficiency, and connectivity across various industries and (applications Ju Xing Zhong, J. X., Qingshang, X., Haifeng, M., & Jagging, C. (2019, October). The Research on Identity Authentication Scheme of Internet.

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