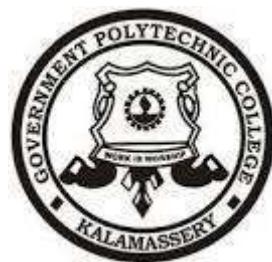


**GOVERNMENT POLYTECHNIC COLLEGE
KALAMASSERY**



DEPARTMENT OF COMPUTER ENGINEERING



2023-2024

Seminar report on

6G WIRELESS TECHNOLOGY: INNOVATING THE FUTURE

Submitted by

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Year:2023-2024

CERTIFICATE

It is certified that this seminar report on '**6G WIRELESS TECHNOLOGY:INNOVATING THE FUTURE**' was presented by **AYISHA A R**, Reg .no: **2101132176** towards the partial fulfilment of the award of Diploma in Computer Engineering under the department of Technical Education, Kerala during the academic year 2022-2023.

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ABSTRACT

The rapid evolution of wireless communication technologies has been instrumental in shaping the modern digital landscape. With each successive generation, from 1G to 5G, we witnessed remarkable advancements in speed, latency, and connectivity. Now, standing at the precipice of the 6G era, we are poised for a monumental leap forward. This seminar report delves into the paradigm-shifting potential of 6G wireless technology. It explores the foundational technologies, including terahertz frequency bands and intelligent reflecting surfaces, that underpin 6G communication. Additionally, the report examines the diverse spectrum of applications, from extended reality to remote healthcare, that are poised to benefit from 6G's transformative capabilities. Furthermore, it addresses critical challenges, such as security and infrastructure, that must be navigated to realize the full potential of 6G. With this report as a guide, readers will embark on a journey into the future, exploring the vast horizons of innovation, collaboration, and progress that 6G technology promises to unlock.

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1. INTRODUCTION

In the ever-evolving landscape of wireless communication, each generation has marked a significant leap forward, transforming the way we connect, communicate, and innovate. As we stand on the cusp of a new era, the emergence of 6G wireless technology promises to revolutionize the way we interact with the digital world. This seminar report delves into the forefront of this cutting-edge technology, exploring its potential applications, underlying principles, and the transformative impact it is poised to have on industries ranging from healthcare to autonomous systems.

6G is not merely an incremental upgrade; it represents a quantum leap in wireless capabilities. With projected speeds that dwarf the capabilities of its predecessor, 5G, and latency reduced to nearly imperceptible levels, 6G holds the promise of ushering in an era of instantaneous and ubiquitous connectivity. Beyond these foundational improvements, 6G envisions a world where immersive extended reality (XR), holographic communication, and tactile internet become commonplace, blurring the boundaries between the physical and digital realms.



This report aims to provide a comprehensive overview of 6G wireless technology, starting with an exploration of the fundamental technologies that underpin its development. We will delve into the intricacies of terahertz frequency bands, intelligent reflecting surfaces, and advanced antenna technologies that form the backbone of 6G communication. Moreover, we will examine the potential architectural shifts, including the integration of satellite constellations and terrestrial networks, that will enable seamless global coverage.

Furthermore, the report will scrutinize the diverse range of applications that stand to benefit from 6G's transformative capabilities. From unlocking the full potential of augmented and virtual reality in education and entertainment, to enabling remote surgery and healthcare delivery in unprecedented ways, 6G is poised to become an indispensable enabler of our increasingly interconnected world.



2. KEY ADVANCMENT OF 6G

2.1 Quantum Computing

The integration of quantum computing into the framework of 6G wireless technology marks a watershed moment in the evolution of digital communication. Quantum computing, leveraging the principles of quantum mechanics, promises to revolutionize data processing capabilities to an unprecedented extent. This symbiotic relationship between 6G and quantum computing opens up a realm of possibilities that were once confined to the realms of science fiction.

At the heart of this synergy lies the unparalleled computational power that quantum computing brings to the table. Unlike classical binary-based computing, where bits can only exist in one of two states (0 or 1), quantum bits or qubits can exist in a superposition of states, allowing for an exponential increase in computational possibilities. This quantum advantage enables 6G networks to process colossal volumes of data in real-time, surpassing the limits of classical computing.



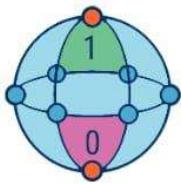
One of the most significant ramifications of this integration is the ability to harness big data and artificial intelligence (AI) with unparalleled efficiency. In today's data-driven world, the

timely processing of vast datasets is crucial for critical applications ranging from autonomous systems to healthcare. With quantum-enhanced computing, 6G networks can tackle complex computations and algorithms in real-time, opening the door to applications that demand split-second decision-making.

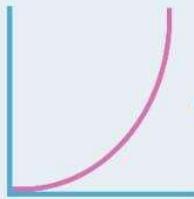
Quantum-enhanced computing promises to fortify the security of 6G networks. Quantum cryptography, a field that exploits the principles of quantum mechanics, offers unbreakable encryption methods. This means that sensitive information can be transmitted over 6G networks with an unprecedented level of security, safeguarding against potential threats from quantum computing-enabled adversaries.

Additionally, quantum computing in 6G facilitates advancements in areas like optimization problems, materials science, and drug discovery. These applications have far-reaching implications across industries, from revolutionizing supply chain logistics to accelerating the pace of scientific discovery.

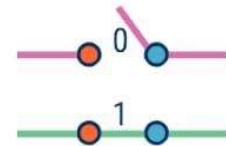
Quantum Computing Vs. Classical Computing



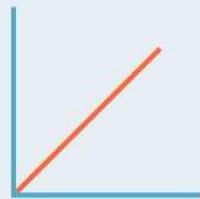
Calculates with qubits, which can represent 0 and 1 at the same time



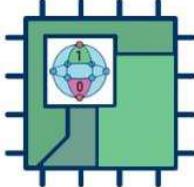
Power increases exponentially in proportion to the number of qubits



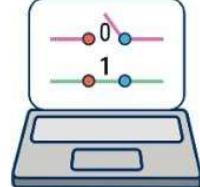
Calculates with transistors, which can represent either 0 or 1



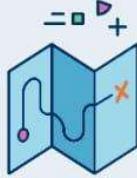
Power increases in a 1:1 relationship with the number of transistors



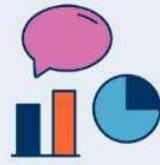
Quantum computers have high error rates and need to be kept ultracold



Classical computers have low error rates and can operate at room temp



Well suited for tasks like optimization problems, data analysis, and simulations



Most everyday processing is best handled by classical computers

2.2 Holographic Imaging

The integration of advanced holographic imaging technology within the framework of 6G wireless networks represents a quantum leap in the realm of visual communication. This convergence promises to redefine our understanding of immersive experiences, pushing the boundaries of virtual reality (VR) to unprecedented heights.

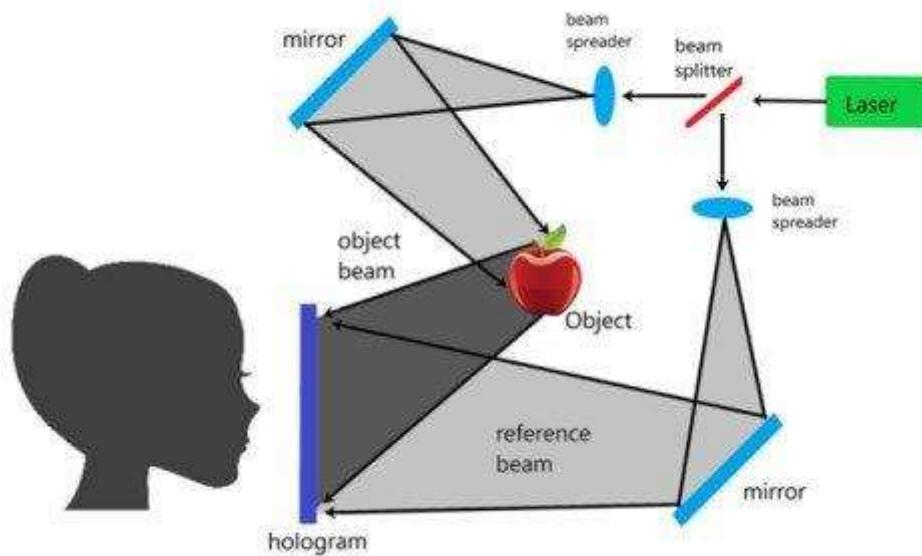


At its core, holographic imaging transcends the limitations of traditional 2D displays, offering a three-dimensional representation of objects or scenes. This breakthrough allows for a level of realism and depth that was previously confined to the realm of science fiction. As 6G networks unlock previously unimaginable speeds and data processing capabilities, holographic imaging becomes a tangible and transformative feature of our digital landscape.

One of the key implications of this integration lies in the realm of visual communication. Whether for teleconferencing, remote collaboration, or entertainment, the ability to project lifelike, three-dimensional images in real-time has the potential to revolutionize the way we interact and connect. Colleagues separated by continents can meet in a virtual space, with

holographic representations providing a sense of presence that transcends traditional video conferencing.

Holographic imaging enriches the world of entertainment and education. Imagine stepping into a holographic museum where historical figures and artifacts come to life, or exploring distant planets through immersive holographic displays. The potential for experiential learning and storytelling becomes boundless, offering educational experiences that engage and inspire.



In the realm of healthcare, holographic imaging has the potential to revolutionize medical training, surgical planning, and patient education. Surgeons can visualize complex anatomical structures in three dimensions, enhancing precision and reducing risks in the operating room. Medical practitioners can use holographic models to educate patients about their conditions, fostering a deeper understanding .

2.3 Smart Cities

The integration of 6G wireless technology promises to catalyze a monumental shift in urban development, paving the way for the realization of truly "smart cities". This groundbreaking convergence of advanced communication networks, IoT (Internet of Things) devices, and AI-driven systems holds the potential to revolutionize urban living on an unprecedented scale.

At the heart of this transformation lies the robust infrastructure provided by 6G networks. With data speeds and latency reduced to near-instantaneous levels, cities can establish a seamless and responsive digital backbone that underpins a multitude of interconnected services. This backbone facilitates real-time communication between a vast array of devices, sensors, and systems spread across the urban landscape.

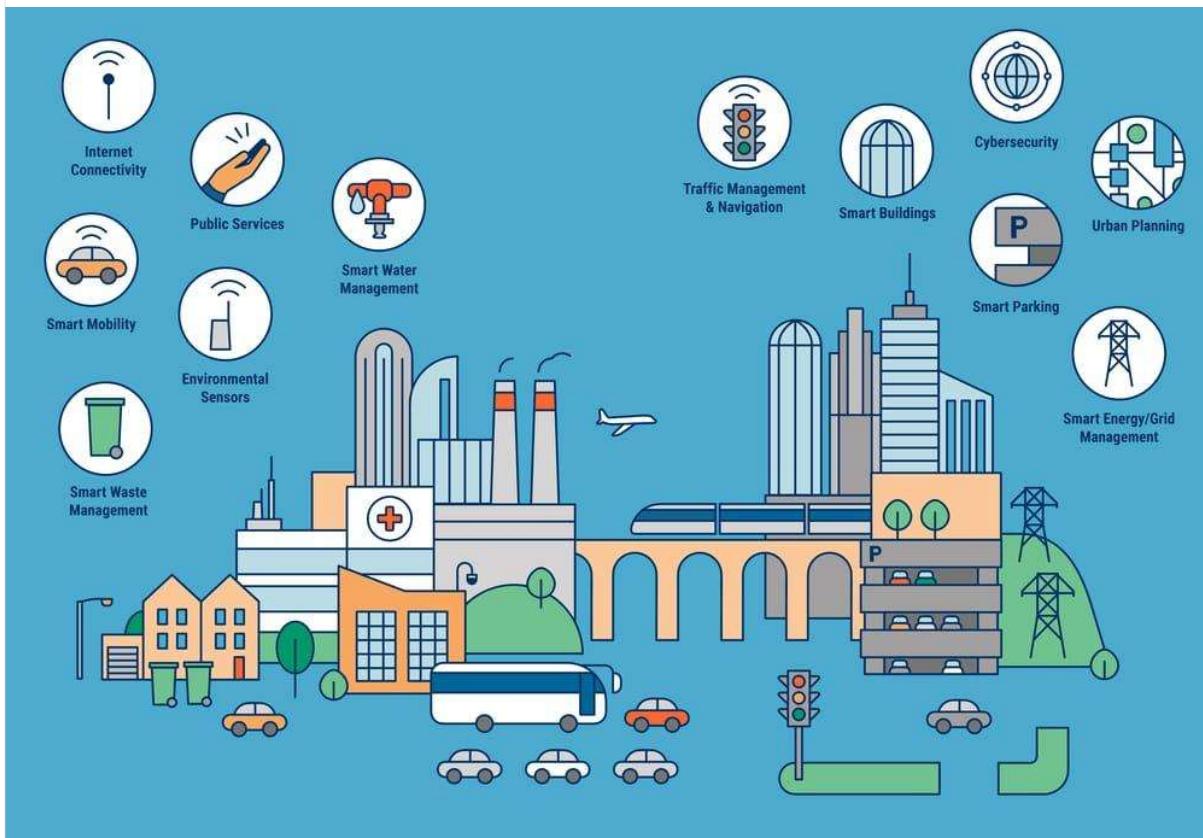
Traffic management stands as one of the most transformative applications of this infrastructure. With 6G's capability for instantaneous data processing, traffic signals can dynamically adapt to changing conditions, optimizing the flow of vehicles and minimizing congestion. Autonomous vehicles, empowered by 6G's low latency, can communicate with each other and with the city's infrastructure to navigate roads with unparalleled efficiency and safety.

Energy management is another crucial facet of smart cities empowered by 6G. Through a web of interconnected sensors and smart grids, cities can monitor and optimize energy consumption in real-time. This not only reduces waste and lowers costs but also promotes sustainable practices, ultimately contributing to a greener, more environmentally-conscious urban environment.

Public safety and emergency response also receive a substantial boost from 6G technology. Emergency services can leverage real-time data streaming to rapidly respond to incidents, while smart surveillance systems, equipped with AI-driven analytics, enhance threat detection and response capabilities. Additionally, citizens can access critical information and alert systems with unprecedented speed and reliability.

The healthcare sector experiences a paradigm shift with the advent of smart cities powered by 6G. Remote patient monitoring and telemedicine services thrive in an environment where

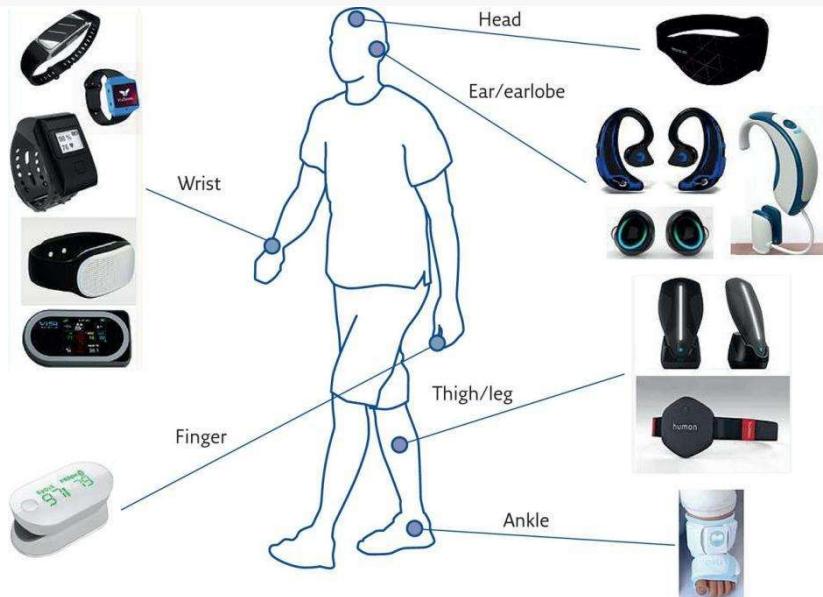
data is transmitted with near-zero latency, enabling healthcare professionals to provide timely and personalized care to residents, regardless of location.



The realization of smart cities through 6G is not without its challenges. The deployment of extensive IoT networks, data security, and privacy concerns, and the need for robust governance and regulatory frameworks are among the hurdles that must be navigated.

2.4 Wearable Tech

The convergence of 6G wireless technology and wearable devices represents a pivotal moment in the evolution of personal technology. The marriage of lightning-fast speeds and ultra-low latency enables the creation of smaller, more potent wearables, ushering in a new era of connected experiences that seamlessly integrate into our daily lives.



One of the foremost implications of this integration is the ability to develop wearables with unprecedented computing power. With 6G's capabilities, processing tasks that were once confined to bulky devices can now be efficiently managed within compact wearables. This not only leads to a reduction in size and weight but also unlocks a host of new functionalities.

Health and wellness applications stand to benefit immensely from this leap forward. Wearable devices, equipped with advanced sensors and real-time data processing capabilities, can provide individuals with immediate and accurate health metrics. From continuous monitoring of vital signs to the early detection of anomalies, wearables powered by 6G technology have the potential to revolutionize preventive healthcare and chronic disease management.

Furthermore, the integration of augmented reality (AR) and virtual reality (VR) experiences into wearable devices takes immersive computing to new heights. The ultra-low latency of 6G ensures that virtual environments respond instantaneously to users' movements, creating a

seamless and realistic experience. This has far-reaching implications in fields such as gaming, education, and professional training.

Beyond personal health and entertainment, wearables enhanced by 6G open up avenues for improved productivity and efficiency in various industries. From augmented reality headsets for remote technical assistance to smart glasses for professionals in various fields, these devices become indispensable tools for seamless, hands-free interaction with digital information.

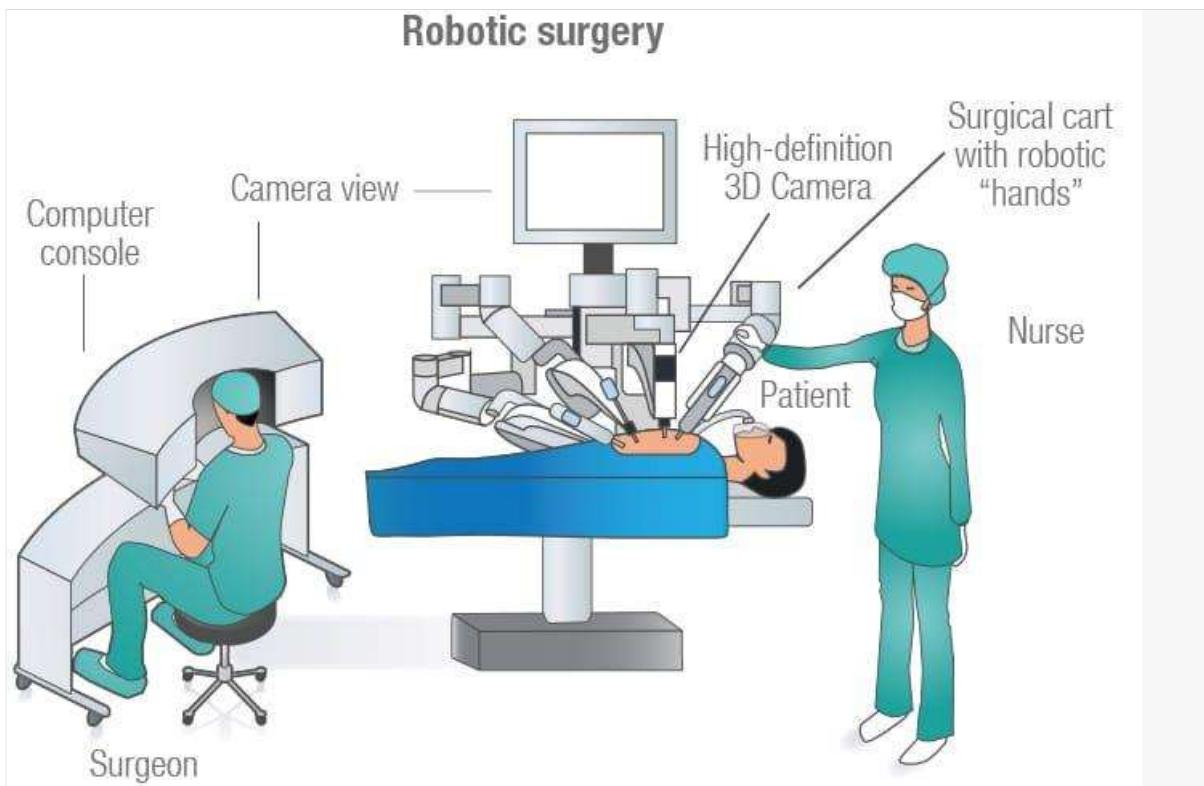
However, it's essential to address the challenges that come with this integration. Power efficiency and battery life, for instance, will be critical considerations in ensuring that wearable devices remain practical and convenient for everyday use. Additionally, issues of data security and privacy must be rigorously addressed to foster trust and compliance in the adoption of wearable technology.

3. POTENTIAL USE CASE FOR 6G

3.1 Remote Surgery

The integration of 6G wireless technology is poised to redefine the landscape of surgical practice, introducing a new dimension of possibilities through remote surgery. This groundbreaking convergence of high-speed, ultra-low latency connectivity and advanced robotic systems holds the potential to revolutionize the way complex medical procedures are performed, transcending geographical boundaries and expanding access to specialized care.

At the forefront of this technological leap forward lies the capability of 6G to provide uninterrupted, near-instantaneous communication. This ensures that surgeons can remotely control robotic instruments with precision and immediacy, creating a seamless extension of their expertise to patients situated in distant locations. This capability transcends the limitations of physical proximity, enabling patients in underserved or remote areas to benefit from the expertise of world-class surgeons.



The implications for global healthcare are profound. Patients with rare or complex conditions can receive specialized care from experts regardless of their location. This not only alleviates the need for extensive travel but also democratizes access to high-quality healthcare.

Additionally, in emergency situations where time is of the essence, remote surgery facilitated by 6G can expedite critical interventions, potentially saving lives.

Furthermore, the integration of augmented reality (AR) and virtual reality (VR) technologies into the surgical process enhances the surgeon's ability to navigate and visualize the operating field. With 6G's ultra-low latency, real-time feedback and imaging data can be transmitted seamlessly, allowing surgeons to operate with a level of precision and confidence that was once limited to traditional in-person procedures.

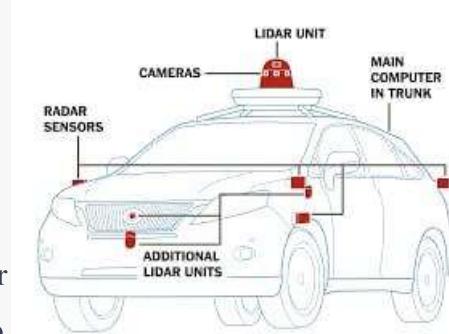
3.2 Autonomous Vehicles



The convergence of 6G wireless technology and autonomous vehicles heralds a transformative era in transportation, promising to reshape the way we envision and experience mobility. This groundbreaking integration unlocks a new level of connectivity, enabling real-time communication between vehicles, infrastructure, and other road users, thereby propelling us closer to the realization of fully autonomous driving.

At the core of this paradigm shift lies the unprecedented speed and responsiveness offered by 6G networks. With near-instantaneous data transmission and ultra-low latency, vehicles can communicate with each other and with the surrounding environment in real time. This empowers autonomous systems to make split-second decisions based on a comprehensive and up-to-date understanding of their surroundings.

This real-time communication extends beyond vehicle-to-vehicle (V2V) interactions to encompass vehicle-to-infrastructure (V2I) and vehicle-to-everything (V2X) communications. Smart traffic lights, road signs, and other infrastructure components can relay critical information to



vehicles, optimizing traffic flow and enhancing safety. Moreover, pedestrians and cyclists equipped with connected devices can transmit their positions and intentions to nearby vehicles, further enhancing the safety ecosystem.

The implications for urban planning, traffic management, and road safety are profound. With 6G, traffic patterns can be dynamically adjusted to minimize congestion and optimize energy usage. This not only reduces travel times but also contributes to a more sustainable and environmentally conscious transportation system. Additionally, the enhanced safety features facilitated by 6G connectivity have the potential to significantly reduce accidents and save lives.

Furthermore, the integration of augmented reality (AR) and virtual reality (VR) experiences into autonomous vehicles becomes a reality with 6G. Passengers can enjoy immersive entertainment or work on the go, while the vehicle's augmented reality displays provide real-time information about the environment, enhancing the overall travel experience.

3.3 Augmented Reality

The convergence of advanced holographic imaging and 6G wireless technology promises to revolutionize the landscape of augmented reality (AR), unleashing a new wave of immersive experiences that transcend the boundaries of conventional digital interaction. This transformative integration empowers AR with unprecedented capabilities, paving the way for innovative applications in education, entertainment, and marketing.

Central to this paradigm shift is the advancement in holographic imaging technology. By enabling the creation of lifelike, three-dimensional virtual objects and environments, AR experiences are elevated to a level of realism previously unattainable. The fusion of 6G's high-speed, low-latency connectivity with advanced holographic displays ensures that AR content responds instantaneously to user interactions, providing a seamless and immersive experience.



How does AR work



In the realm of education, this convergence opens up new frontiers for interactive learning. Students can engage with three-dimensional models of historical artifacts, explore complex biological structures, or embark on virtual field trips to historical sites, all from the confines of their classrooms. The tactile and visual engagement facilitated by AR creates an enriched learning environment that fosters deeper understanding and retention of complex concepts.

Entertainment experiences are catapulted to new heights with the integration of advanced holographic imaging and 6G connectivity. From interactive storytelling and gaming experiences that blur the lines between reality and fiction, to live events and concerts that incorporate virtual elements seamlessly into physical spaces, AR becomes a powerful tool for creating unforgettable and dynamic entertainment experiences.

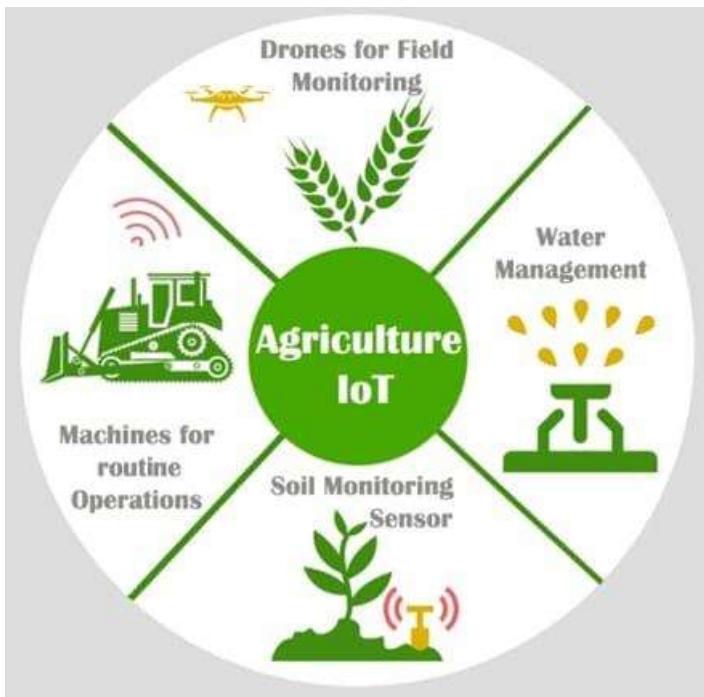
In the marketing landscape, this convergence redefines consumer engagement. Brands can leverage AR to create interactive and personalized experiences that captivate audiences. Virtual try-ons for fashion and cosmetics, interactive product demonstrations, and location-based AR experiences all become viable avenues for brands to connect with consumers in innovative and compelling ways.

3.4 Smart Agriculture

The integration of 6G wireless technology with agriculture ushers in a new era of precision farming, where data-driven decision-making and real-time monitoring become the cornerstones of agricultural practices. This convergence empowers farmers with unprecedented capabilities, enabling them to optimize crop yield and resource utilization in ways previously unimaginable.

At the core of this transformation lies the ability of 6G to provide instantaneous and seamless connectivity. This facilitates the real-time monitoring of crucial agricultural variables, including weather patterns, soil moisture levels, and crop health indicators. By harnessing the power of 6G, farmers can receive immediate updates and insights, allowing for agile and informed decision-making in response to dynamic environmental conditions.

One of the most transformative applications of 6G in agriculture is precision irrigation. By monitoring soil moisture levels in real time, farmers can precisely tailor irrigation schedules and amounts to ensure optimal plant hydration. This not only conserves water resources but also prevents over-irrigation, which can lead to soil erosion and nutrient leaching.



health through sensors and aerial imagery allows for early detection and response to pest or disease outbreaks.

The implications for sustainable agriculture are profound. By leveraging 6G technology, farmers can implement precise resource management practices that minimize waste and environmental impact. This includes optimizing fertilizer usage to reduce nutrient runoff, implementing cover cropping strategies, and adopting sustainable pest management techniques.

4. CHALLENGES IN IMPLEMENTING 6G TECHNOLOGY

4.1 Infrastructure

The seamless integration of 6G technology into our digital landscape presents a transformative leap forward in wireless communication. However, this ambitious undertaking is not without its challenges, and perhaps foremost among them is the substantial investment required in infrastructure. The deployment of 6G necessitates the establishment of an extensive network of towers, antennas, and supporting equipment, all of which demand significant financial and logistical commitments.

Additionally, the integration of advanced sensors and drones equipped with 6G connectivity enables the creation of detailed field maps and yield prediction models. This information empowers farmers to implement targeted planting and fertilization practices, ensuring that resources are allocated efficiently to maximize crop yields. Furthermore, the ability to remotely monitor crop

Building a 6G network requires an expansive network of base stations, each equipped with advanced antennas capable of harnessing the full potential of 6G frequencies. These antennas need to be strategically positioned to ensure comprehensive coverage, requiring meticulous planning and coordination. Furthermore, the integration of intelligent reflecting surfaces, a key component of 6G technology, adds an additional layer of complexity to the deployment process.

Upgrading existing infrastructure is another formidable challenge. Many of the towers and antennas currently in place are designed to support earlier generations of wireless technology. Adapting this infrastructure to meet the demanding requirements of 6G poses a significant engineering challenge. This process may entail not only physical modifications but also the integration of advanced technologies like terahertz transceivers and intelligent reflecting surfaces.

Moreover, the implementation of 6G is not limited to terrestrial networks alone. The seamless integration of satellite constellations into the 6G ecosystem introduces a new dimension of complexity. Coordinating the deployment and synchronization of satellites in low Earth orbit to work in harmony with terrestrial networks demands a high level of precision and engineering expertise.

The financial investment required for this massive infrastructure overhaul is substantial. Governments, telecommunication companies, and other stakeholders will need to commit significant resources to fund the research, development, and deployment of 6G networks. This includes not only the physical infrastructure but also the research and development of new technologies, as well as the establishment of robust cybersecurity measures to safeguard these cutting-edge networks.

4.2 Security

As we venture into the era of 6G wireless technology, the paramount concern that looms large is security. With the advent of faster speeds, more complex networks, and a proliferation of connected devices, the landscape for potential vulnerabilities expands exponentially. Researchers and industry experts will face the critical task of developing robust security protocols capable of safeguarding 6G networks against an evolving spectrum of threats.

The accelerated speeds of 6G networks demand a new level of sophistication in security measures. Traditional encryption methods may prove inadequate in this high-speed environment. Researchers must innovate and devise encryption techniques that can keep pace with the lightning-fast transmission of data inherent to 6G. Moreover, ensuring end-to-end encryption for all communications will be paramount to protect sensitive information from interception or unauthorized access.

The sheer complexity of 6G networks introduces a multitude of potential attack vectors. As intelligent reflecting surfaces, satellite constellations, and an extensive array of IoT devices become integral components, each presents a potential entry point for cyber threats. Researchers must develop advanced intrusion detection and prevention systems that can rapidly identify and neutralize potential threats, ensuring the integrity of the network.

The proliferation of IoT devices, from smart homes to connected vehicles, introduces a diverse range of vulnerabilities. These devices, if not adequately secured, can serve as entry points for cyber-attacks, potentially compromising the entire network. Establishing stringent security standards for IoT devices, along with regular security audits and firmware updates, will be critical in mitigating this risk.

Furthermore, with the integration of 6G into critical infrastructure, including healthcare, transportation, and energy systems, the stakes are higher than ever. A breach in any of these systems could have far-reaching consequences. Robust identity and access management, along with stringent authentication protocols, will be essential in safeguarding critical infrastructure from potential cyber threats.

Additionally, the dynamic and evolving nature of cyber threats requires a proactive and adaptive approach to security. Continuous monitoring, threat intelligence, and rapid response capabilities will be crucial in identifying and mitigating emerging security risks.

4.3 Regulatory Framework

As 6G technology emerges on the horizon, the role of government regulations and policies becomes paramount in guiding its development, deployment, and integration into society. Striking the delicate balance between fostering innovation and safeguarding critical aspects such as privacy, security, and competition will be a pivotal challenge in realizing the full potential of 6G.

First and foremost, regulators will need to grapple with the dynamic nature of 6G technologies. Unlike previous generations, 6G's potential applications span a vast spectrum, from remote surgery to autonomous vehicles, smart cities, and beyond. Crafting policies that can adapt to the rapidly evolving technological landscape while maintaining the highest standards of safety and ethical considerations will be a critical undertaking.

Privacy protection emerges as a central concern in the age of 6G. With the proliferation of connected devices and the exponential increase in data transmission speeds, ensuring the privacy of individuals' personal information is paramount. Regulators will need to establish clear guidelines for data collection, storage, and usage, while also implementing robust consent mechanisms to empower individuals to control their own data.

Security, both in terms of cybersecurity and physical safety, will require a comprehensive regulatory framework. This encompasses everything from establishing standards for secure communication protocols to safeguarding critical infrastructure against potential cyber threats. Regulators will need to collaborate closely with industry stakeholders to set and enforce stringent security standards.

Competition and market dynamics will also come under scrutiny. Regulators must ensure a level playing field, preventing monopolistic practices that could stifle innovation or limit consumer choice. At the same time, they must incentivize investment and research in 6G technology by creating an environment that encourages healthy competition and rewards technological advancements.

Spectrum allocation and management will be a critical consideration. Regulators will need to carefully plan and allocate the frequency bands required for 6G networks to function optimally. Striking a balance between ensuring sufficient spectrum availability for innovation and avoiding interference with existing services will be a complex and delicate task.

5. COMPARISON WITH 5G TECHNOLOGY

5.1 Speed

6G is poised to be a monumental leap forward in terms of speed. Anticipated to be up to 100 times faster than its predecessor, 5G, this quantum leap in data transmission rates will unlock a realm of possibilities previously inconceivable. The enhanced speeds of 6G will not only revolutionize how we communicate but will also serve as the bedrock for a multitude of transformative applications and use cases.

5.2 Latency

One of the most significant advancements in 6G compared to 5G is the dramatic reduction in latency. By minimizing the delay in data transmission, 6G will enable the creation of real-time applications that demand split-second responsiveness. Industries ranging from gaming to virtual reality, autonomous systems, and remote medical procedures will be empowered by this remarkable reduction in latency.

5.3 Connectivity

6G's greater connectivity is a game-changer. It will allow for a significantly higher number of devices to operate on the same network simultaneously without compromising speed or data transmission rates. This surge in connectivity is pivotal in enabling the Internet of Things (IoT) to reach its full potential. Smart cities, autonomous vehicles, and an array of connected devices will thrive in this environment, transforming how we interact with our surroundings.

6. CONCLUSION

The advent of 6G wireless technology represents a watershed moment in the evolution of digital connectivity. Its unprecedented speed, ultra-low latency, and enhanced connectivity are poised to revolutionize the way we live, work, and interact with the world around us. The potential for innovation and transformation is boundless, promising a future that was once the realm of imagination.

While there are challenges to be navigated, from infrastructure deployment to security considerations, the rewards that await are monumental. From remote surgery and smart agriculture to augmented reality experiences and autonomous vehicles, the applications of 6G technology are poised to reshape industries and enhance our daily lives in ways previously unimaginable.

As 6G technology continues to develop, we can expect to witness a rapid acceleration of innovation and creativity. New technologies and industries will emerge, creating opportunities for economic growth, technological advancement, and societal progress. The integration of 6G into critical sectors like healthcare, transportation, and education holds the promise of improving the quality of life for people around the world.

In this dynamic landscape, government regulations and policies will play a critical role in ensuring the responsible deployment and utilization of 6G technology. Striking the right balance between fostering innovation and protecting privacy, security, and competition will be a crucial endeavor in realizing the full potential of this next-generation network.

The journey towards 6G technology is a journey towards a more connected, intelligent, and innovative future. The potential rewards are enormous, and as we navigate the challenges ahead, the transformational impact of 6G on our world is poised to be nothing short of extraordinary. With a proactive and collaborative approach, we are on the cusp of a new era in connectivity that will shape the course of technological progress for generations to come.

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- <https://www.ericsson.com/en/6g>

VISION

To be in the frontier of Computer Engineering by producing technically competent and ethically motivated professionals committed to build a vibrant nation.

MISSION

1. To provide quality education to meet the needs of profession and the society.
2. To ensure intellectual growth and skill acquisition.
3. To uplift innovative entrepreneurship skills, leadership qualities and civic responsibilities.

PEO's

- I. Excel in professional career and/ or higher education by acquiring knowledge in the field of Computer Engineering.
- II. Develop professional skills that prepare the learners for immediate employment and for life-long learning in advanced areas of computer science and related fields.
- III. Develop responsible Computer Engineers with professionalism, ethical attitude, communication skills and aptitude for team work.

