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How 6G networks will transform enterprises?

By Marcus Law



With unparalleled speeds and ultra-low latency, transformative 6G networks could change the way individuals and organisations work in the next few years

With the relatively recent development of 5G networks, 6G might seem to some like a distant ambition. Yet, already, the next generation networking is poised to unleash a new era of innovation, connectivity, and transformative possibilities.

With its potential to achieve unprecedented data speeds, incredibly low latency, enhanced reliability, and ubiquitous connectivity, 6G technology holds the key to unlocking a multitude of applications that were once considered unimaginable. From empowering the Internet of Things (IoT) ecosystem to facilitating the seamless integration of AI and immersive technologies, the advent of 6G networks is expected to reshape industries, economies, and society as a whole.

According to a report by the 5G Infrastructure Association, 6G will bring ‘a near-instant and unrestricted complete wireless connectivity’, with the technology set to radically reshape the way enterprises operate.

And, if predictions are correct, this transformational tech could be a reality in the beginning of the next decade.

“Future networks will be a fundamental component for the functioning of virtually all parts of life, society, and industries, fulfilling the communication needs of humans as well as intelligent machines,” says Ericsson. “As accelerating automation and digitalisation continue to simplify people’s lives, the emerging cyber-physical continuum will continuously improve efficiency and ensure the sustainable use of resources.

“The vision for 6G is built on the desire to create a seamless reality where the digital and physical worlds as we know them today have merged. This merged reality of the future will provide new ways of meeting and interacting with other people, new possibilities to work from anywhere and new ways to experience faraway places and cultures.”

6G is ready to deliver the hype

Although 5G networks have brought faster speeds and lower latency, 6G is poised to take these advancements to unprecedented levels.

“While we have seen early adoption of 5G for practical virtual reality (VR) and augmented reality (AR) applications, 5G has not been able to deliver on the early hype due to myriad factors like costs, chip shortages, and politics,” comments InterDigital’s Senior Director of Technology Strategy, Donald Butts. “As a result, we’ve seen lacklustre adoption across both consumer and industry sectors despite there being a lot of work done in developing services and bringing them to market.” With 5G unable to deliver truly immersive experiences, 5G has laid the groundwork for 6G to build on and enable these opportunities, Butts explains: “While 5G provides data transfer rates that are far superior to previous generations, it still falls short of the conditions required to support immersive experiences.

“Extended reality (XR) and full immersive experiences require data transfer rates of 200Mbps to 5Gbps – far beyond what is currently possible with 5G. 6G, however, certainly holds promise in this regard, because it will utilise higher frequency bands and is said to provide speeds up to 100-times faster than 5G. This will be crucial to providing immersive experiences ‘on the go’, which may aid in its widespread adoption.”

Going beyond communications

As Victor Holmin, Director of Portfolio and Consulting at World Wide Technology, describes, 6G will represent a move ‘beyond communications’.

“6G will go beyond communications by creating a distributed neural network with the ability to integrate physical, biological and cyber systems,” he explains.

“This will be done through establishing a bridge between cognitive computing, communications and sensing technologies. 6G will mark the beginning of a new era: the Internet of Behaviours and Intelligence of Everything.”

This new wave of edge computing and AI-driven applications, coupled with the sensor network and increase of connectivity speeds, will enable a wide variety of new intelligent industry use cases.

If these predictions become a reality, the deployment of 6G has the potential to dramatically increase capabilities, across the full spectrum of global industries, including transforming the way that teams collaborate.

“Instead of spending hours on 2D Zoom or Teams meetings, we will meet in 3D digital spaces, where our avatars will have ‘real’ eye contact,” predicts technology blogger and influencer Bernard Marr. “We will be able to meet in groups and even express body language in real-time.

“If we need to hold a one-on-one meeting, we could simply switch all the participants out and find a quiet virtual space to connect. And if you want to visit a factory or try out a product, you could simply ‘fly’ or ‘teleport’ to a digital twin and experience it from there.”

And, as Holmin adds, 6G will support the virtual world more than ever before.

“With 6G supporting virtual environments and haptic technology, the virtual world will be closer to the in-person experience than ever before. It could be possible to no longer need to spend time commuting into the office, as the office could virtually come to us in a matter of seconds through VR and AR applications. Virtual meetings would feel almost as real as in-person ones without us having to leave our home,” explains Holmin.

Enabling the future of remote work

The advent of 6G networks is set to have a profound impact on remote working, transforming the way individuals and organisations collaborate and operate.

With enhanced connectivity, immersive collaboration, access to advanced technologies, and global collaboration opportunities, remote workers will experience a new era of productivity, efficiency, and flexibility. The boundaries between physical and virtual workspaces will blur, enabling individuals and organisations to embrace the full potential of remote work and reshape the future of work itself.

“The added capacity of 6G has the potential to give workers the ability to control and interact with industrial machinery in real time from the safety of their home office,” Holmin comments. “Haptic sensory suits, fuelled by the ease of quickly moving data across the network, could allow workers to maintain full control from the safety of a desk through a controller and headset while still communicating with colleagues.”

In fact, the potential capabilities are so advanced that, if we could create devices with brain-machine interfaces, thoughts and sensations would be possible to share in real time, and the so-called ‘Internet of Behaviour’ would become a reality.

“With 6G, the network itself will no longer be a constraint but instead ensure that almost any use case can be easily deployed. With a network as flexible as 6G is set to be, service providers will

need to be flexible themselves, working collaboratively across the telecoms ecosystem and with customers to deliver solutions.”

Video of The Week

Explore some related information to above article at following link.

<https://www.youtube.com/watch?v=aG6amkaZHV4>

https://www.youtube.com/watch?v=jt7DH_j_Wfw

<https://www.youtube.com/watch?v=cr6LLcZ8XOE>

<https://www.youtube.com/watch?v=YIKa24JHm1w>

https://www.youtube.com/watch?v=nRLrlg6_JPY

News of The Week

WhatsApp bans more than 6.5 million accounts in India under new IT rules

Meta-owned, WhatsApp banned over 6.5 million accounts in India in the month of May 2023. The company took action to comply with the new IT Rules 2021

The Meta-owned instant messaging app, WhatsApp, has announced that it has taken action against over 6.5 million problematic accounts in India during the month of May, in adherence to the new IT Rules 2021.

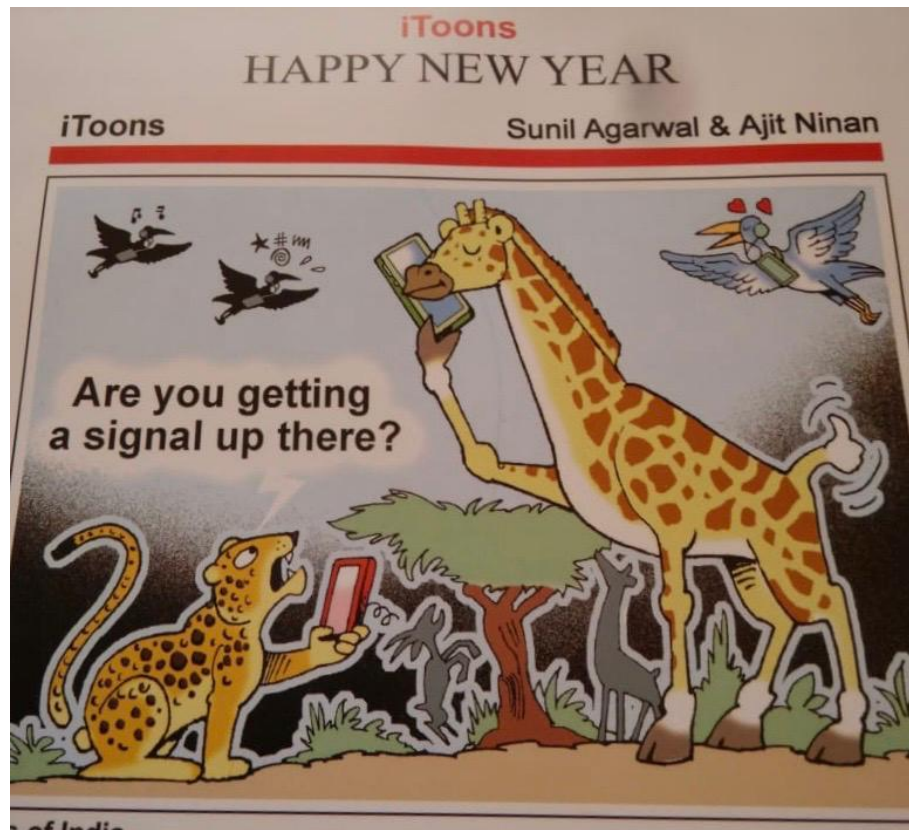
Out of these 6.5 million accounts, around 2.4 million accounts were proactively banned even before receiving user reports. WhatsApp, which is one of the most popular messaging applications and has more than 500 million users in India, banned 7.4 million accounts in the month of April.

During the month of May, WhatsApp received 3,912 grievances reports, which also includes an appeal for unbanning from Indian users. The app took remedial action on 297 reports. The company's user safety guidelines outline the complaints WhatsApp received and the corresponding action taken by it to combat the abuse of the platform. The government started a Grievance Appellate Committee (GAC), which aims to address appeals made by users against the social media platforms' decisions regarding content or other related issues.

The government aims to strengthen digital regulations and hold big tech companies accountable. The Ministry of Electronics and IT made amendments to protect the rights of Indian citizens in the digital realm. WhatsApp has also started rolling out QR code chat transfers for its users. This latest feature will allow users to transfer chats from one device to another. This technique is best used when the user switches from an old device to a new one, and his chats will transfer in no time. The catch here is the QR code will work only if both devices work on the same operating system.

Meta CEO Mark Zuckerberg shared a Facebook post about the update of the latest WhatsApp feature. He wrote, "If you want to move your WhatsApp chats to a new phone, you can now do it more privately without your chats ever leaving your devices."

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