

CASE STUDY

HOW SIMPLISTIC PRIVATE 5G HELPS TRANSFORM ENTERTAINMENT AT ITS FOREFRONT



Simplistic private 5G-A networks are transforming the entertainment industry. This piece highlights innovative applications in free-roam VR and wireless video production. Real-world examples demonstrate how 5G-A technology enhances audience experiences and creative freedom, showcasing its transformative potential at the forefront of entertainment.



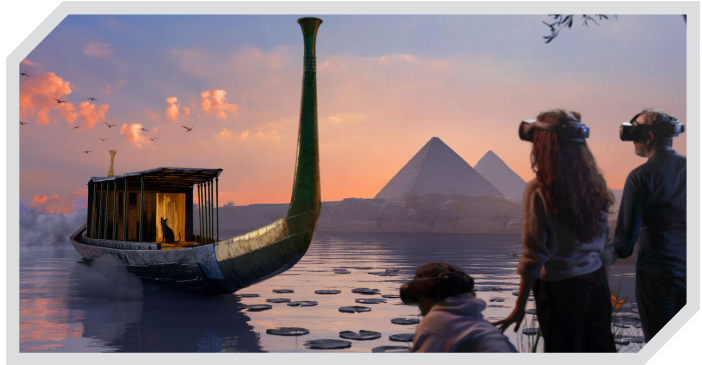
How Simplistic Private 5G Helps Transform Entertainment at Its Forefront

While more and more vertical industries are getting transformed by 5G and other innovative technologies, brand new use cases of 5G have been created with opportunities not imaginable even recently. Free-roam virtual reality (VR) entertainment and broadcasting are among the industries that witness such exciting developments.

Free-roam virtual reality (VR) entertainment is gaining great popularity recently. By offering fully immersive virtual reality experiences, it allows visitors to move freely and effortlessly in a large space, often of hundreds of square meters, while exploring virtual worlds literally in front of their very eyes. A prime example is the popularity of "The horizon of Khufu," which attracted over 60,000 visitors within the first four months since its debut in Shanghai, showing great business potential for a growing new industry.



However, the new industry's promises have not been without challenges. One of the main obstacles is the reliance on local rendering of VR content, which is normally done in either one of two ways. The first is backpack-based local rendering, where users must carry a heavy backpack weighing up to 5 kilograms, with a computer inside doing the heavy lifting while also generating a lot of heat, leading to sometimes uncomfortable experience particularly for long-duration play. The second way is local rendering at the VR headsets, which, while lightweight, is unfortunately limited by the device's computing capabilities, often forcing reduced video quality, resulting in a weaker sense of immersion.



The horizon of Khufu

To address these issues, ZTE has introduced the simplistic private 5G solution, leveraging the high bandwidth and low latency of millimeter waves for real-time cloud rendering, achieving both ultra-high video quality and a much more enjoyable experience.

The results have shown that the technology is powerful enough to support up to dozens of users in a space of up to 1,000 square meters, making the free-roam VR providers able to scale their businesses up very easily like never before. As 5G Advanced becomes more widely adopted, it is expected to help more immersive experiences in fields such as gaming, education, and training, signaling a new wave of innovation in the virtual reality industry.



SoReal Free-roam VR

Virtual reality entertainment, however, is not the only industry that sees the potential. TV broadcasting is another industry where some latest developments showcase the value of the technology. Simplistic Private 5G basically makes cameramen go wireless when they shoot videos, so they can move more freely, without worrying too much about their own safety and possible risks imposing on others when there is a long cable behind them all the time. Additionally,

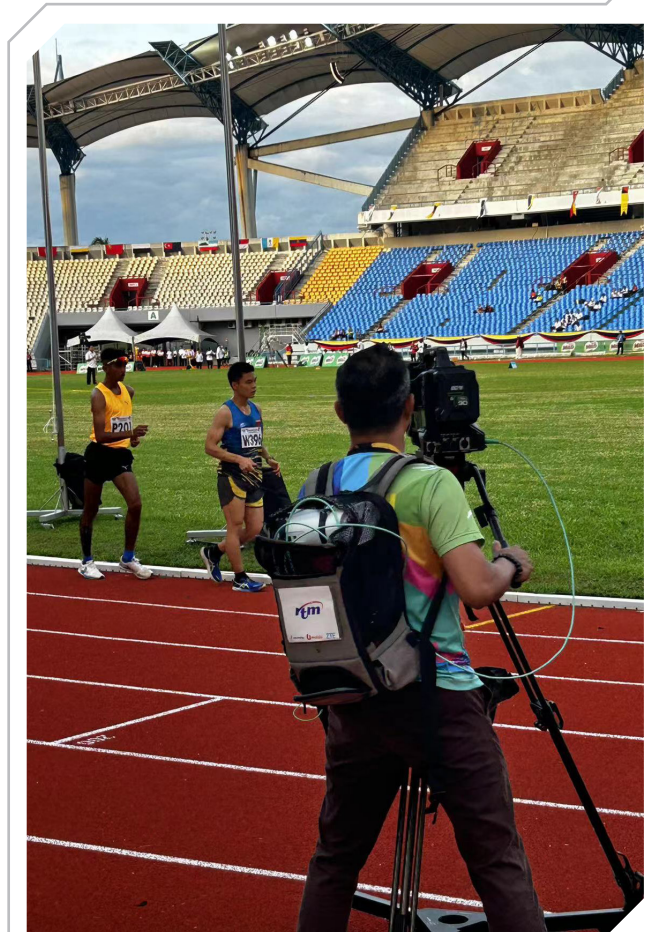


2024 Chinese New Year's Gala

this technology meets the practical needs of frequent venue changes and efficient network deployment. In the long term, 5G Advanced is driving the digital and wireless transformation of new media. During the live broadcast of the 2024 Chinese New Year's Gala, the technology ensured a fully wireless broadcast, delivering over five hours of high-quality live content to audiences across the country. Besides indoor broadcasting, outdoor broadcasting is also a key scenario. At the Sukma Games, a national multi-sport games, in Malaysia in August, 5G powered wireless cameras setup allowed for flexible movements, ensuring smooth, stable and high-definition live broadcasting of Radio Televisyen Malaysia (RTM).

Whether in VR entertainment or media production and broadcasting, ZTE's 5G Simplistic Private Network offers a comprehensive simplification from radio frequency equipment, baseband processing units, to edge computing. Either with high-performance millimeter-wave macro base stations or compact millimeter-wave small base stations, it leverages both baseband processing and NodeEngine in the same form factor of a 5G baseband unit, and also importantly, without need of connecting to any core network except a super lightweight proxy in its stead inside the baseband unit to complete necessary job, which makes the solution entirely self-sustainable and easily enables local data processing, minimizing latency, simplifying deployment, and optimizing costs, benefiting both operators and industry users.

Value creation of 5G not only depends on the development and evolution of 5G technology itself but also requires greater integration between 5G and other information technologies, as well as alignment with the digital and informational needs of various industries, hopefully bringing more and greater possibilities for both people's lives and the prosperity of industries.



Malaysia SUKMA 2024