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World Mobile Launches Blockchain Telecom Drones in Indonesia

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World Mobile has unveiled a decentralized telecommunications initiative that uses hydrogen-powered drones to deliver wireless connectivity, aiming to bridge gaps in underserved regions worldwide. Partnering with Indonesian telecom company Protelindo, the blockchain-enabled 5G network will beam coverage directly to users from the stratosphere.

Each drone, with a 56-meter wingspan and weighing four tons, will operate at around 60,000 feet, covering up to 15,000 square kilometers through 450 adjustable beams. According to

World Mobile Group Chief Business Officer Charles Barnett, the system offers latency as low as 6 milliseconds and data costs up to 18 times lower than satellite-based networks.

The company's aerial approach targets the $98.3 billion sky-based communications market, which includes satellites and high-altitude platforms. The broader satellite communications sector is forecast to reach $159 billion by 2030, according to Grand View Research.

This new platform builds on World Mobile's existing ground-based decentralized physical infrastructure network (DePin), which combines traditional telecom systems with independent providers to extend service in dead zones.

Engineering and Regulatory Hurdles

Each hydrogen-powered drone is designed to stay airborne for nine days before returning to a refueling station. To achieve this, they must remain lightweight while durable enough to endure variable atmospheric conditions. At stratospheric altitudes, drones avoid most turbulence but face challenges such as cosmic radiation and intense heat on sun-facing surfaces.

Compliance with civil aviation regulations remains another obstacle. Permits from authorities like the U.S. Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA) are essential, alongside adherence to strict construction and operational standards for unmanned aerial vehicles.

Competitive Landscape

World Mobile faces competition from both decentralized and satellite-based telecom providers. Helium Mobile, for example, operates a distributed network of wireless nodes and collaborates with major carriers like AT&T to cover areas without service.

In the satellite segment, SpaceX's Starlink delivers internet access to remote locations without cellular infrastructure. While Barnett acknowledges the competition, he notes that World Mobile's drone-based model is more suited to regions with higher densities of mobile users, whereas Starlink focuses on isolated areas.

By merging blockchain technology with airborne telecom infrastructure, World Mobile aims to create a cost-effective, scalable, and decentralized communications network capable of reaching areas left behind by conventional providers.