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Dual Distributed Networks Provided Integrated Solution in Wembley Park, London

Industry
Fault Managed Power
Intelligent Buildings

Solution
Dual Distributed
Networks (DDN)

Introduction

A pioneering venture emerged in the bustling landscape of Wembley Park, London, where modernity meets urbanity. Dual Distributed Networks (DDN) materialized as a groundbreaking integration of energy and data within a single unified solution. Spearheaded by Velocity1 in collaboration with Quintain developers and with the technical prowess of KelTech IoT and VoltServer, this endeavor aimed to revolutionize intelligent building technology.

Project Overview

The Facility

Wembley Park, spanning 85 acres, was the canvas for this ambitious project. Its vast landscape encompassed a million square meters of diverse residential, commercial, and retail units, marking it as a beacon of modern urban development. Europe's largest smart build-to-rent (BtR) complex features over 7,000 BtR apartments.

The Challenge

The challenge in Wembley Park's development was how to seamlessly integrate an array of smart devices into the fabric of the infrastructure, particularly within the constraints of lampposts. The original design, reliant on traditional power delivery methods, posed aesthetic and logistical hurdles, demanding a more elegant and efficient solution.

The Solution

KelTech IoT's DDN solution revolutionized the industry by eliminating bulky enclosures. With DDN, lampposts no longer require permanent power, as endpoints are powered by a compact underground system. This streamlined the design aesthetically and enhanced reliability and fault resolution capabilities through a centralized UPS and monitoring system.

The deployment of small cell networks in high-density urban environments is expensive and time-consuming. In addition to deploying a passive fiber communications infrastructure, a parallel power solution is also required. This powering of a small cell network requires an additional specialized set of electrical design, implementation, test, and commission resources, increasing overall time and deployment costs.

With DDN, lampposts are powered by a compact underground system, eliminating the need for permanent power. This improves aesthetics, reliability, and fault resolution through a centralized UPS and monitoring system.

VoltServer worked closely with KelTech IoT to tackle this challenge by combining the fundamentals of a communication network, i.e., data and power, in an 'all-digital' solution. This significantly reduced the dedicated resources needed to power a small-cell network. DDN results in a smaller, quicker, more cost-effective, and safer implementation.

With DDN, lampposts are powered by a compact underground system, eliminating the need for permanent power. This improves aesthetics, reliability, and fault resolution through a centralized UPS and monitoring system.

IMPLEMENTATION DETAILS

Distance Considerations

The use of DDN changed how space was utilized. By integrating the network underground, distance was no longer a problem. This made it easy to set up across Wembley Park's large landscape.

Installation and Training

The deployment of DDN was not just a technical achievement but also a testament to meticulous planning and skilled execution. Installation teams were equipped with the necessary training to navigate the complexities of integrating energy and data infrastructure, ensuring a seamless transition to this revolutionary system.

Results and Future Expansion

The results spoke volumes: an improvement in efficiency, cost savings, and safety. DDN surpassed traditional communication networks and paved the way for future expansion and scalability. With its success at Wembley Park, the potential for DDN to reshape urban landscapes globally became possible.

Conclusion

Wembley Park stands as a testament to innovation and collaboration in intelligent infrastructure development. The convergence of energy and data within the confines of a lamppost epitomizes the transformative power of technology. DDN shows us how we can have more efficient, sustainable, and connected cities in the future.

To learn more or schedule a demo, visit **voltserver.com** or call **888-622-8658**

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