

CASE STUDY

Remeo, Mobilitie, and VoltServer Provide Digital Electricity Solution for Large Metro Rail Transit System



Industry
Fault Managed Power
Transportation



Solution
Digital Electricity™ (DE)
Channels

Introduction

In collaboration with Remeo Wire & Cable, Mobilitie, and VoltServer, a cutting-edge Digital Electricity solution was implemented for a large municipal transportation agency. This innovative solution aimed to revolutionize power distribution within the metro rail transit system, ensuring reliability, safety, and efficiency in delivering power to critical infrastructure components.

Project Overview

The Facility

The metropolitan rail transit system encompassed an extensive network of tunnels, stations, and rail tracks, servicing urban commuters. However, the aging infrastructure posed significant challenges in terms of power distribution, particularly for modern communication systems such as DAS radios. The system required a robust and future-proof solution capable of powering these vital communication devices throughout the sprawling tunnel network.

The Challenge

Traditional power distribution methods were insufficient for the rail system's demands. The installation of DAS radios necessitated the transmission of thousands of watts of power over vast distances, presenting significant technical and safety challenges. Moreover, stringent regulatory requirements, including NFPA 130 certification for tunnel environments, added complexity to the project.

The Solution

VoltServer's patented Digital Electricity™ system emerged as the ideal solution. Leveraging VoltServer's groundbreaking technology, the solution offered unparalleled power transmission capabilities over long distances while maintaining the safety and reliability required for mission-critical applications. Additionally, Mobilitie's expertise in infrastructure deployment and management made them the natural choice as the third-party operator to oversee the installation and operation of the Digital Electricity infrastructure.



“Mobilitie required a solution that met the needs of a transit deployment. Remeo worked with Mobilitie and consulted with VoltServer to ensure their solutions met the requirements for DE. We're happy to have them as an approved supplier for DE solutions.”

Ken Hydzik, EVP of Sales,
North America

IMPLEMENTATION DETAILS

Distance Considerations

VoltServer's Digital Electricity technology offered the capability to transmit power up to 2km, surpassing the limitations of traditional AC distribution methods and ensuring reliable power delivery throughout the extensive rail system. This extended reach ensured that power could be reliably delivered to even the most remote corners of the rail system, guaranteeing seamless operation and communication connectivity.



Installation and Training

The implementation of the Digital Electricity solution resulted in safer, more efficient power distribution, meeting the immediate needs of the rail system while laying the foundation for future expansion and technological advancements. The fault management capabilities inherent in the system provided an additional layer of protection, ensuring rapid identification and resolution of potential issues. Furthermore, the solution's scalability laid the foundation for future expansion and integration of advanced technologies, positioning the rail system for continued growth and innovation.

Results and Future Expansion

The implementation of the Digital Electricity solution resulted in safer, more efficient power distribution, meeting the immediate needs of the rail system while laying the foundation for future expansion and technological advancements. The system's fault management capabilities provided enhanced safety and control, ensuring reliable power transmission.

Conclusion

Through collaboration between Reme Wire & Cable, Mobilitie, and VoltServer, the metro rail transit system successfully addressed its power distribution challenges with an innovative Digital Electricity solution. The project met the rigorous safety and performance requirements and demonstrated the potential for transformative advancements in urban transit infrastructure.

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