



Overview

West Kowloon Drainage Improvement Project is a large-scale construction project of a water tunnel with a 2.8km in length and 3m in diameter, connecting Kowloon Byewash Reservoir and Lower Shing Mun Reservoir in Hong Kong. The purpose of the tunnel is for a better flood protection and reduction of stormwater discharge.

In any construction sites, Worker Safety is by far the most important. Therefore, many new digital systems/applications are in place to enhance the worker safety including smart helmet, communication handheld devices, health and environment check station and many more. Many of these applications require an uninterrupted wireless connectivity to function smoothly. However, one can imagine the challenges of having a wireless connectivity available everywhere in a complex and dynamic under-construction tunnel.

Due to the foreseeable challenges, Altai Super WiFi™ is selected for its long-range coverage performance of reaching up to 1.7km LOS and 500m NLOS. A single digit of access points including Altai's flagship base station A8-Ein, A2 and CX200 are deployed in the tunnel to provide a full seamless coverage for the entire tunnel area as well as the inside of the boring machine. No additional cabling is required throughout the 2.8km length of the tunnel.

Customer Name:

Hong Kong Government's Drainage Services Department
Bouygues Travaux Publics

Deployment Location:

Sha Tin, Hong Kong

Application:

Private broadband wireless connectivity for construction operations

Products used:

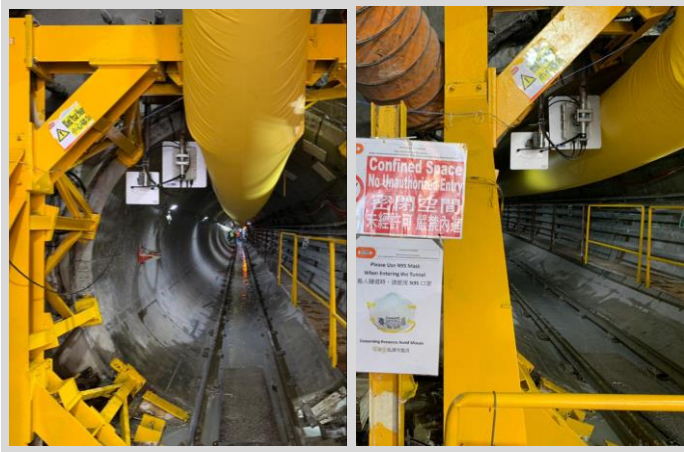
A8-Ein, A2, CX200

Benefit / Result:

The customer is amazed by the fact that only a single digit of devices is needed to achieve complete coverage throughout the entire tunnel area. Altai's solution not only reduces the expenses and labour associated with cabling, but also ensures resilient network coverage for the entire tunnel.

The Challenge

- Complex cabling is not allowed.
- The network must support a large number of wireless applications.
- Harsh and everchanging environment



The Solution

Equipped with Altai's patented smart antenna, the solution only required a single digit of devices. Altai's flagship A8-Ein has been deployed to provide the network access (with built-in 5.8Ghz radio) while A2 and CX200 to support the coverage, and an additional CX200 has been used to enhance the roaming and wireless signal inside the boring machine.

With only a small number of APs/base stations required, the wireless network provided by Altai is stable and robust enough to support multiple demanding applications, not to mention many handheld devices and safety helmets.

In addition, the small number of devices required has overcome the issue of limited sites for installation and reduced the total cost of ownership.



About Altai

Altai Technologies is a global leader in providing industrial-grade Wi-Fi solutions with a strong presence in over 100 countries. With our brand, Altai Super WiFi™, we specialize in designing, developing, and marketing cutting-edge Wi-Fi products and technologies specifically tailored for industrial applications.

Altai Super WiFi™ offers fully seamless, secured, and resilient wireless solutions that empower businesses to enhance productivity and operational efficiency throughout the industrial digitalization and automation journey. For over a decade, we have earned the trust of hundreds of industrial customers worldwide. Our cutting-edge wireless technologies are deployed in container ports, airports, warehouses, smart manufacturing facilities, mining, oil and gas sites, power plants, and more.

Discover the comprehensive range of Altai Super WiFi™ solutions which are meticulously designed to meet the rigorous demands of industries with mission-critical needs, please visit our official website at www.altaittechnologies.com.

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