



Motorola Solutions broadband Push-to-Talk solution WAVE PTX™ boosts efficiency, safety and security at Asahiyama Zoo in Japan

ASAHIYAMA ZOO

Asahiyama Zoo, a municipal zoo on the outskirts of Asahikawa, Hokkaidō, Japan, opened in 1967. It is the northernmost zoo in the country, with grounds stretching over 15 hectares (150,000m²) on the slopes of Asahiyama and is home to over 600 animals of 100 different species, including native wildlife such as Yezo sika deer, Yezo brown bears, as well as animals from further afield like polar bears. The zoo has received global acclaim for its innovative approach to creating natural environments for animals, known as 'behavioural exhibits', where visitors can observe the animals from different angles, to see how they would likely behave in the wild. Highlights include a glass tunnel through the penguin pool, for underwater viewing, winter-time penguin walks and small glass domes right in the middle of the polar bear and wolf enclosures; and new projects and improvements are always in the pipeline. The zoo has become very popular, especially amongst tourists from other Asian countries, and it welcomed over 1.3 million visitors last year. The zoo employs about 60 permanent members of staff, including caretakers, vets, administrative staff and grounds teams.

あさひやま
どうぶつえん

Customer

Asahiyama Zoo, Asahikawa

Partner

Y.K. Asahi Tsushinki

Industry

Leisure & Tourism

Solutions

WAVE PTX system comprising:

- WAVE PTX TLK 100 portable two-way radios with USB chargers
- WAVE PTX TLK 150 mobile two-way radios

Challenge

Asahiyama Zoo needed a Push-to-Talk (PTT) communications system that offered reliable coverage across the extensive zoo grounds, so radio users always had a strong signal. The zoo had tried various analogue and digital radio systems previously; however, due to the topography of the site, none of these were able to offer the stable, seamless PTT communications needed across the zoo for operational efficiency and to boost safety and security. These systems also had crosstalk issues.

As Mr Gen Bando explains: “We did not know what to do about the areas where we could not get a radio signal. Our zoo does not just cover a wide area – it also has many buildings with thick concrete walls on all sides, as well as staff-only areas that are deep underground. We had no signal in these areas, so no way of communicating, which could have dire consequences if someone was badly injured. Therefore, from both an efficiency and productivity point of view, as well as to keep our teams and the public safe, we needed a two-way radio system that would enable stable communications from anywhere in the zoo.”

The zoo’s long-term partner Y.K. Asahi Tsushinki, which has been providing support for Asahiyama Zoo’s communications infrastructure for many years, proposed a Motorola Solutions broadband WAVE PTX system, comprising TLK 100 two-way radios and TLK150 two-way radios to be used in the zoo’s vehicles, operating across the NTT DOCOMO network for 100% coverage. Indeed, because the zoo is such a popular tourist destination, mobile phone operators vie to improve signal coverage in the area, so it made sense to have a solution that could operate over both the zoo’s NTT DOCOMO Wi-Fi network available in public areas and over the mobile network.

Solution

Firstly, Y.K. Asahi Tsushinki approached NTT DOCOMO directly to build a more robust mobile network; and, working in close collaboration with Y.K. Asahi Tsushinki, NTT DOCOMO installed five further repeaters to ensure absolute mobile network coverage across all areas of the zoo, including in underground staff-only zones. Then, Asahiyama Zoo equipped its teams with 65 TLK 100 radios and 2 TLK 150 radios. These all currently operate over the mobile network, but could also be used over the Wi-Fi network as backup. Three channels are currently in use, with talk groups for caretakers, security and ground staff, as well as the option for call-to-all broadcasts in case of an incident or emergency.

Gen Bando explained the reason for selecting the TLK 100 radios: “Firstly, the radios are light, 170g, and have a small compact footprint, which is good as teams must navigate their way around a lot of equipment and potential obstacles. Secondly, we needed a water-resistant model, as it rains a lot here, plus we are often in and around water. Thirdly, the battery capacity allows the radios to be used for an entire day, maybe even two, without having to be recharged, irrespective of how heavily the device is used, which is great and in contrast to our previous digital two-way radios; and the USB charging is convenient and easy. Finally, users love how easy it is to change channels. We tend to work principally in two different groups – those who are customer facing and those who are involved in the operational side. Some staff members who belong to both groups carry two devices and we use different blue or green coloured rubber bands on the antennas, so you can quickly see which group someone belongs to.”



After our morning meeting, our teams move to their specific locations. Many work alone. And, since they are working with animals and need to stay in their zones, it is hard for all of them to communicate or organize any further meetings. This is where WAVE PTX comes in; allowing one person to share information instantaneously to a wide group is vital for day-to-day operational efficiency and productivity, as well as to ensure the safety and security of team members, visitors and the animals we care for.”

Mr Gen Bando, Head Zookeeper, Asahiyama Zoo



Benefit

User feedback has been exceptional, with staff particularly praising the audio quality, reliability of coverage and ease of use. The system is directly impacting the productivity and efficiency of team members, who are finding it easier to complete all their daily tasks by zoo closing time. This, in turn, has positively impacted their job satisfaction, as well as their safety. Gen Bando summarises: "I have worked at the zoo for over 15 years. Before, when we could not reach someone, we just assumed they were in an area with no coverage; now, we know everyone should always be connected so, if someone does not respond, we will check to see if they have had an accident. We also know any incidents get reported in real time. This is improving safety and security for our employees, visitors and the animals in our care."

Moving forward, the zoo is keen to investigate further features and functionality of the radios, especially how the system could be utilised in the event of possible wide-scale incidents, emergencies or natural disasters. One benefit the zoo has only just started enjoying, for example, is the fact WAVE PTX provides communications without boundaries, which enabled Gen Bando to stay directly in touch with his team using his TLK 100 radio whilst on a business trip several hundred kilometres away in Shiretoko.



Benefits

- Reliable, clear group communications in all areas of the extensive grounds, including in underground areas; users praise the audio quality
- Radios are lightweight, compact, robust and water resistant, with long battery lives, easy charging and fast channel scrolling, perfectly suited to the challenging, busy environment and long shifts
- The improved team coordination increases efficiency and security and enables faster incident response, so increasing safety for employees, members of the public and animals





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