

**The Zoo of the Future**  
**Supported by KENWOOD NXDN digital technology**





# Case Study NEXEDGE® NXDN

## The Zoo of the Future

Leipzig Zoo's website opens with a reference to a unique concept in species-appropriate husbandry and conservation, education and exciting discovery tours. "We are on our way to becoming the Zoo of the Future. Our zoo is home to some 850 animal species and subspecies and is one of the most famous and most modern zoos in the world."



## Researchers and zoo keepers communicate seamlessly on the same KENWOOD radio system

The zoo is home to the Wolfgang Koehler Primate Research Centre's (WKPRC) Pongoland; a project of the Max Planck Institute for Evolutionary Anthropology operated in collaboration with Leipzig Zoo. The project is focused on the behaviour and cognition of the four species of great ape - Chimpanzees, Gorillas, Orangutans and Bonobos.



The digital two-way radio technology used here is just as future-oriented as the zoo. "We were looking to create a high-performance, expandable and flexible radio network with good data security", explained Martin Gericke, the specialist responsible for digital technology at the Max Planck Institute. He and his colleagues use 25 digital NXDN devices for the team based at the zoo.



## Reliable and secure communication is essential to the day-to-day operations at the zoo

Whenever zoo keepers move animals from one enclosure to another, it is communicated to other team members by radio. Clear information is essential to maintain safety and the announcement can be as simple as "Five animals are in the sleeping area, am I clear to open gate one? The keeper in the receiving area would then respond "All doors are closed you are clear to open the gate now". The processes and instructions are pre-defined so that safety procedures are consistently followed. Given the nature of a zoo, the team is always prepared for unforeseeable events. This places a critical requirement for instant, seamless communication to in the event of an emergency. Well run zoos always take precautions against animals escaping from enclosures or similar incidents; if everyone can be reached with the simple push of a button, effective response measures can be effected quickly.



## Zookeepers and Scientists working together seamlessly



The renowned Max Planck Institute for evolutionary anthropology (MPI EVA) researches the history of mankind using comparative analyses of genes, cultures, cognitive abilities, and social systems of past and present human populations as well as groups of primates closely related to humans.

The department of evolutionary genetics researches the evolution of the human genome and the genetic history of humans, apes and other organisms. The researchers communicate using KENWOOD radio devices. "The KENWOOD system we operate is digital, encrypted and scaleable while the radio devices are able to meet the multiple requirements of a tough day-to-day work environment" continued M.Gericke on the deciding factors in the purchase.

"The radio devices must be robust, resistant to water penetration, easy to operate and with a battery life to cover an entire working day. Volume output of the hand-portable radios is also important as there is a lot of background noise in the monkey house. Of course, it also helps if the radio devices can be centrally programmable and easily maintainable", M. Gericke comments.

During day-to-day operations, zoo employees transmit over their own frequency. However, as they use the same devices as the researchers for compatibility, they can transmit to one another. If required, the radios can be set to the same frequency so that everyone can communicate with each other - essential in coordinating responses in the event of an incident.





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## Radio network optimised with a repeater solution

”On the recommendation of Funktechnik Dathe, the KENWOOD regional partner, we have moved from simplex frequencies, over which the devices communicated directly with each other, to a repeater based system that meets our exact requirements and guarantees coverage of the entire zoo. Since the zoo is in a marshland area, it had to be built on deep foundations with thick reinforced concrete walls. Normal radio equipment cannot penetrate this. The new KENWOOD system employing NXDN digital technology delivers a great solution, and with an economically justifiable cost and support from Funktechnik Dathe, the specialist company that has been advising the zoo for more than ten years, are very satisfied with the result”, M. Gericke concluded.



Martin Gericke (left) from the Max Planck Institute for evolutionary anthropology, keeper Martina Lohse and KENWOOD dealer Frank Dathe (right), Funktechnik Dathe, look forward to seamless communication with the KENWOOD NEXEDGE NXDN digital radio system.



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