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Great Ape Trust, makers of Gallagher PowerFence™ form business partnership

*New Zealand company faced unique challenges
in securing outdoor play yard for bonobos*

Des Moines, Iowa – December 19, 2007 – Great Ape Trust of Iowa has announced a new business partnership with the makers of Gallagher PowerFence™, one of the best security systems in the world.

Gallagher PowerFence™ is one of the most successful brands of Gallagher Security Management Systems, a division of privately-held New Zealand-based Gallagher Group Ltd., and the undisputed world leader in advanced perimeter fencing. But for all of Gallagher's considerable work in that area, its contract to secure the perimeter of outdoor play yards for the bonobos at Great Ape Trust of Iowa, a scientific research center in Des Moines, was unique in the company's 70-year history.

"The unique aspect of this installation was the combination of considering both primate behavior and human behavior," Gallagher spokesman Tom Friederichs said. "Gallagher is involved in both animal control and security fencing, and we were able to combine our expertise in those areas. We were able to put together a team that could understand the unique considerations and implement the solution required."

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The PowerFence™ exclusive design, which allows monitoring teams to detect security breaches as they occur, is used around the world to meet the rigorous security demands of a diverse customer base, ranging from utility sites, military installations and prisons to production livestock operations and zoos. Though some of Great Ape Trust's security goals are the same as those customers and the same PowerFence™ used to secure the bonobos' outdoor yards can be found at places with high-security needs, the bonobos were a unique breed of customer with special needs.

For one thing, the Gallagher team developed appreciation for two hallmarks of Great Ape Trust's scientific research: The apes are regarded as collaborators and colleagues, rather than as research subjects, and participation in the research is voluntary on their part. Respect for the apes' well-being is deeply steeped in the culture at Great Ape Trust, and it was the value that prompted The Trust to develop outdoor yards to give the bonobos the freedom to further explore their environment and more choices about where they spend their days. Security fencing around the outdoor yards eliminated the need to restrict them with a leash.

"The intelligence of the apes was very advanced compared to those in nature, so security thought processes, rather than animal control considerations, had to be applied," Friederichs said. "The apes are more likely to have the ability to think like an escapee or intruder in terms of breaching a perimeter fence."

A challenge for Gallagher was not only understanding the intelligence and cognitive abilities of the apes, who with more than 97 percent similar DNA are human beings' closest living relative, but also working with The Trust's research staff to communicate with them about the work going on in their environment.

"The apes were fully involved in the installation of the PowerFence™ system and were kept informed of the reasons behind it and progress made," Friederichs said. "Installation was videotaped and broadcast into the apes' enclosure for them to watch."

Though important, the challenge for Gallagher didn't rest as much in keeping the great apes confined as it did in keeping intruders out. Great Ape Trust has made investments of millions of dollars in its facilities, scientific research programs and comforts for the great apes themselves, and while protecting that investment is

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important, so, too, is reducing the likelihood that force would have to be used to control an ape who might wander away from an outdoor play yard.

For Great Ape Trust, Gallagher Security Management Systems constructed an 8-foot fence featuring tight wire spacing that is typical in security fencing, but uncommon for animal management. The PowerFence™ system consists of a grid of high tensile wires that pulses every 1.2 seconds, delivering a safe, non-lethal shock to persons – or in the case of Great Ape Trust, primates – who attempt to breach its perimeter. A standard electric fence uses a live/ground wire configuration, but with PowerFence™, all wires to the fence are live.

“We could not rely on ground conditions to enable the deterrent, as the apes could leap at the fence, avoiding ground contact,” Friederichs explained. “With a full live wire configuration, if apes jumped at the fence or tried to climb it, they would still get the deterrent shock. This is not usually a requirement for animal control fences.”

Animal control fences are normally single-zone systems, but the multiple-zone system at Great Ape Trust allows its public safety staff to pinpoint the exact location of an attempted breach and respond directly to that zone. The multi-zone system has maintenance benefits as well, making it easy for the buildings and grounds staff to determine where security breaches might have occurred as a result of fallen tree branches or other natural events.

The design also includes an interior fence separating two bonobo play yards. Bonobos are highly social individuals who often split into temporary groups that can change in size and composition.

The interior fence was considered one of the most vulnerable areas in terms of interaction between groups of bonobos; therefore, it was designed to provide a high-security buffer zone. A basket-weave design was installed to deter the apes from diving through the fence at each other, and to ensure a greater level of detection of any interference with the fence.

To create the basket-weave effect, intermediate posts were installed back to back. That design gave additional strength to the fence and made an alarm system possible. If a wire were broken away from an insulator, it would short to ground on the post immediately.

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In addition to the challenges presented by the bonobos' intelligence and cognitive abilities, the Gallagher team confronted issues related to the geological features of The Trust's 230-acre campus in southeast Des Moines. It includes a 30-acre lake, and while it's true that bonobos cannot swim and do not venture into bodies of water, it was still important to ensure a physical perimeter at all times of the year, especially in the summer months when the lake level is typically lower.

"This presented a particular challenge for an electric fence solution, as contact between water and live wires creates a short or grounds the fence, causing an alarm," Friederichs said. "The solution was to install a fence with both horizontal and vertical zones. This means the lower zones can be turned off to match the water level, while still creating a live upper barrier."

All other fences on the site are only horizontally zoned. When the fence line was submerged, the installation was delayed until the dry season to ensure the fence was anchored to the bottom of the lake.

Aesthetics presented another challenge. The objective was to blend the fence into the surroundings as much as possible. For example, green insulators were chosen and the PowerFence™ wall-top fence installed on the main building was designed to blend into the concrete wall so it was not obvious to the eye.

"There was also a clear directive that neither chain-link nor barbed wire was to be used due to concern for the apes being harmed if they became entangled," Friederichs said. "Unlike other security fences, which are normally used in conjunction with chain-link mesh or other fence infrastructure, the PowerFence™ system can be free-standing to improve aesthetics."

However, the aesthetic value of a single fence structure posed additional security risks. "This meant security on the free-standing fence had to be very high to deter the apes from trying to dive through or climb the wires," Friederichs said. "Therefore, the wire spacing was to a high-level security specification rather than the much wider spacing used for normal animal-control applications."

GREAT APE TRUST BACKGROUND

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Great Ape Trust of Iowa is a scientific research facility in southeast Des Moines dedicated to understanding the origins and future of culture, language, tools and intelligence. When completed, Great Ape Trust will be the largest great ape facility in North America and one of the first worldwide to include all four types of great ape – bonobos, chimpanzees, gorillas and orangutans – for noninvasive interdisciplinary studies of their cognitive and communicative capabilities.

Great Ape Trust is dedicated to providing sanctuary and an honorable life for great apes, studying the intelligence of great apes, advancing conservation of great apes and providing unique educational experiences about great apes. Great Ape Trust of Iowa is a 501(c) 3 not-for-profit organization and is certified by the Association of Zoos and Aquariums (AZA). To learn more about Great Ape Trust of Iowa, go to www.GreatApeTrust.org.

GALLAGHER SECURITY MANAGEMENT SYSTEMS BACKGROUND

Worldwide, Gallagher Security Management Systems (GSMS) has a reputation for supplying state-of-the-art, reliable solutions to address one of the most significant issues facing organizations large and small – security.

A division of the Gallagher Group Ltd., GSMS provides premium integrated security solutions to a wide range of customers globally. The company designs and manufactures Cardax electronic access control and intruder alarms systems, and PowerFence™ perimeter security systems. To learn more about Gallagher Security Management Systems and the PowerFence™ brand, go to www.gallaghersms.com.

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Insights Through Collaborations with Apes