

BGAN helps locate medical vehicles for remote cycle race

Due to problems with the capacity of cellular systems, Omnipage now uses BGAN from Stratos to provide remote comms and vehicle tracking for sporting events in South Africa

The Cape Argus Cycle Tour is the world's largest individually timed cycling event. Each year, it draws more than 35,000 competitors to South Africa's Cape Peninsula for a 109km race. Omnipage specialises in supplying radio communications to monitor the location of medical and logistical support vehicles at major sporting events and has worked with the Cape Argus Cycle Tour organisers for the past five years.

"For the Cape Argus Cycle Tour, we support approximately 100 medical vehicles," says Omnipage managing director Roy van Schoor. "These include ambulances, helicopters and response vehicles with doctors or paramedics. With the sheer number of cyclists involved, there will certainly be serious accidents – such as bone fractures and concussions. In emergencies, we need to dispatch the nearest medical team as quickly as possible. To do that, we need real-time vehicle tracking."

Today, Inmarsat's Broadband Global Area Network (BGAN) service from Stratos helps solve one of Omnipage's critical communication challenges. Originally, the company tracked medical vehicles via radio. Each team had to call in its position to the mobile command centre which manually updated a digital mapping system.



Omnipage supplies radio communications to support medical vehicles at sports events. This includes around 100 ambulances, helicopters and other response vehicles for the annual Cape Argus Cycle Tour

"That was a time-consuming and laborious process, fraught with human errors. People actually would forget to call in," says van Schoor.

As a result, Omnipage recently began equipping vehicles with SportsTrack GPS units. These transmit each vehicle's ID, position, speed, and time in a small data packet through the GSM network to an online tracking server. Also using GSM, Omnipage's command centre can access the server over the internet, updating the map automatically. But there were problems.

GSM collapses

Van Schoor explains that the command vehicle is normally stationed at the finish line or end of each day's leg, often in a small town with insufficient cellular capacity. He says: "When contestants cross the finish line, they start making calls and the GSM system becomes swamped. Because voice traffic takes priority over data, vehicle tracking lagged as much as 40 minutes behind their actual location – which is unacceptable in a medical emergency."

In one instance, the GSM system actually reached total saturation and collapsed. That's when Omnipage realised it needed a superior communications platform. In October 2007, Omnipage turned to Stratos for the solution.

Omnipage now has a cost-effective tracking solution incorporating BGAN with conventional GSM. The GPS units still use cellular to feed tracking data from the vehicles to the server. "In our mobile command centre, we now use BGAN to download tracking data from the internet – totally independent of the cellular systems. Tracking with BGAN is much more reliable and consistent than GSM," says van Schoor.

As Omnipage's digital mapping system accesses data via BGAN from Stratos, it displays each vehicle's ID, position, and the time of its last fixed location on a route map of the sporting event. The company says that by noting the time of the last fix, it can determine the reliability of the data.

Van Schoor says that not only is data access through BGAN faster and more reliable, it's also very easy to use. "We put the terminal on the roof of the van, plug in the cables, and aim it at the satellite. In less than three minutes, we're in business. BGAN has become a fantastic asset."

Stratos Dashboard (the foundation of *The Stratos Advantage* value-added services platform) helps Omnipage monitor the entire system. Additionally, the platform also includes cost control, firewall management, full traffic information, pre-paid facilities, high security options, easy VPN access and messaging services.

"BGAN costs a bit more than GSM. But most large sporting events justify it. Event organisers who are unwilling to compromise the safety of their competitors appreciate the results we deliver with BGAN from Stratos. In the end, making events safer for everyone is what it's all about," concludes van Schoor. ■



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