CASE STUDY
Australasian Safari

IMPROVED COMMUNICATIONS TRANSFORM EMERGENCY RESPONSE TO MINUTES

TOUGH ENDURANCE MOTORSPORT IMPROVES COMPETITOR SAFETY AND ORGANISATIONAL EFFICIENCY

When you tackle Australia's version of 'Paris to Dakar' on a motorbike through outback Western Australia, how much gear you carry matters. So many riders were reluctant to increase this load when a new digital two-way radio was introduced.

That reluctance was overcome literally within days of deploying Motorola Solutions' MOTOTRBO digital two-way radios. In the early stages of the race, a motorcyclist had a serious accident and activated the duress button. Using embedded GPS positioning, he was located and a helicopter deployed within six minutes. Under the previous communications system, the rider may have lain unassisted for an extended period of time.

The motorcyclist has since recovered and is back racing in the Australasian Safari. He's now such a vocal supporter that he requested that race managers 'send anyone with issues with the radios to see him'.

Fortunately, any coercion has proven unnecessary as the riders now happily collect their radios in the morning and return them after the day's adventures!

CUSTOMER PROFILE
Australasian Safari

Industry Name
Logistics

Product Name
- DP3601 portable two-way radios
- DR3000 repeaters dedicated data & trunked voice talkgroups
- DM3601 mobile two-way radios

Solution Features
- Ruggedised and compact devices
- Digital communications
- GPS capabilities
- Mission-critical reliability

Key Benefits
- Increased competitor safety
- Faster emergency response
- Efficiency in event organisation
- Improved visibility of participants

THE CHALLENGE

It's the toughest endurance motorsport in the Asia-Pacific region. Australasian Safari is the ultimate off-road adventure through the remote, rugged and beautiful landscape of Western Australia, with competitors on motorbikes and quad bikes tackling more than 3000 kilometres over eight days.

Prior to adopting MOTOTRBO two-way radios, all riders supplied their own UFC radios. However, an audit revealed that the majority of these radios had significant issues, jeopardising the safety of the riders. For example, some radios had flat batteries, others didn't work at all, or riders just didn't know how to use them.

Another issue for rider safety was the assumption that if a rider came off a bike that the control centre could talk to the rider via the two-way radio and establish the severity of the situation. In actual fact, riders are usually winded by coming off the bike at high speed, and typically can't talk on their radios for at least several minutes.

Without GPS, the previous system entailed a manual radio system and a number of manned checkpoints. Riders were monitored when physically passing through each checkpoint. With competitor locations tracked by officials, the system was slow, cumbersome and relied heavily on manual data.

Hunt explains: "With staggered starts over four hours, the approximately 100 competitors are very spread out, so it's like managing a busy airport".

THE SOLUTION

Australasian Safari's communications experts have been working closely with the Motorola Solutions Rentals team for almost 10 years, developing a deep mutual understanding. With the decision made to supply radios to competitors when Hunt came on board with Australasian Safari, the Motorola Solutions Rentals team was able to advise on the best solution.

Australasian Safari now uses MOTOTRBO DP3601 portable radios, DR3000 repeaters, and DM3601 mobile radios, with over 200 radios used by competitors, officials and management.

"It's fantastic to be able to sit back and watch on the mapping screen, knowing everyone is OK. The network and radio system has taken out a lot of the risks – it has really revolutionised this event."
Justin Hunt, director, Australasian Safari

"Motorola Solutions' system has reduced response times to better than world standards for motorsports. It also provides peace of mind for the competitors as well, because they can see that we are good operators using modern technology."
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These radios were particularly selected for their embedded GPS receivers, which actually track the position of the radios. The use of such technology allows officials to know where all competitors are at any moment of the day, as well as keep in touch with event aircraft and officials, all of whom are spread over the 3000 kilometre course. Unlike other solutions, this GPS capability remains on even when the microphone is turned off.

In such a tough environment, these radios had to redefine the term 'rugged'. Riders can come off the bike in scrub at speeds of 150 kilometres per hour. The radios provide an essential link back to the control centre, so they must survive and function after such as incident.

As Joe Nevin, communications manager and clerk of course technology explains, dust is another major issue and "gets into everything, so the IPGS dust-proof quality of these radios is a major consideration".

The duress button functionality of the MOTOTRBO radios makes them ideal for this type of environment. Nevin adds: "There are lots of radios that use a button to set off an alarm, however the duress framework on these radios means that it tries harder to get a signal through."

Moreover, the radios had to be compact to gain user acceptance amongst competitors, who are very conscious of the weight they are carrying.

In terms of the network, the repeater provides a dedicated data channel, as well as a dedicated trunked voice channel with various talkgroups, giving the Safari organisers more scope to use channels for different groups.

THE BENEFITS

Increased safety
Thanks to the communications technology provided by Motorola Solutions, Safari organisers are able to offer a world-class emergency response providing direct access to officials and the medical team. Riders can be detected via GPS at any point, with faster response times in cases of incidents.

Hunt explains that the new system has dramatically increased competitor safety:

"Now we can tell where any competitor is at any time, and they're always contactable. The biggest thing here is the isolation, so response times are crucial."

"Motorola Solutions' system has reduced response times to better than world standards for motorsports. It also provides peace of mind for the competitors as well, because they can see that we are good operators using modern technology," says Hunt.

The capacity to remotely switch on a radio's microphone means that the command centre can monitor riders at any point. For example, when a bike stops this triggers an alert for the command centre to call the rider and check if they're OK. If there's no response, they can remotely turn the microphone on to hear any ambient noise. If they hear the bike revving they know the rider is fine, and just not responding. If there's no sound, command centre staff know something is wrong and an emergency response is initiated.

The duress button also allows winded or injured riders to call for assistance immediately, without the need to speak.

Improved efficiency and capacity

Using Motorola Solutions' network and trunking, just one person with two computers and two radios can manage the command post for the whole event. Using TRBONET software, the data is overlaid onto a mapping system so that the command post operator views all vehicles on a screen, and watches the event unfold. Much of the process is now automated and the system easily handles large amounts of data.

With improved data about the location of riders, organisers can track the event instead of simply waiting for riders to cross checkpoints. This not only helps plan the event, but leads to more efficient management of each stage as there is visibility of when all riders have completed that stage.

Another benefit is the ability to find lost riders, explains Nevin. "The race is also a navigational exercise. So if a competitor gets lost, they simply miss the checkpoint. Now we can pinpoint with great accuracy where they are."

"This is one of the most isolated motorsport events in the world, so it's fantastic to be able to sit back and watch on the mapping screen, knowing everyone is OK. The network and radio system has taken out a lot of the risks – it has really revolutionised this event," concludes Hunt.

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