Aerohive
NETWORKS

Toyota Racing Series Teams Up with Aerohive

Real Time Racing on and off the track

Challenges

- With a greater number of international teams, the need to get up to the minute information to their parents, sponsors and connections throughout NZ, Europe, North America and Asia had become paramount.
- The teams required the ability to transmit data in real time from the cars and track timing systems.
- With broadband now installed into each of the Toyota Racing Series tracks there was a need to add a dedicated wireless LAN to provide the data required by the teams, media and staff.
- The current 3G wireless router was very slow and limited the numbers of users that could be on it at one time.

Results

- An Aerohive Wi-Fi connection allowing up to the minute live reporting and information to team members, parents and sponsors throughout NZ and the World.
- Greater coverage inside and out, all meshed together for redundancy.
- The ability to give system priority, allowing TV and media high priority for editing stories only moments before prime time news.
- Access to social media keeping local and overseas team supporters up to date and in touch.

About Toyota Racing Series

Toyota New Zealand has run a motorsport program, Toyota Racing Series (TRS), for the past 9 years. The TRS is a single seat formula designed to provide drivers and engineers with experience in preparing and competing in a one design championship, and provides drivers the opportunity to display their capabilities in a relevant and recognised car. The championship season consists of fifteen races over five rounds at five different racing circuits throughout New Zealand.

Over recent years, in addition to our local drivers, many international drivers and teams compete in TRS during the Southern hemisphere summer. The last series saw the number of international drivers grow to 15.

> "We selected Aerohive Networks because we already have a great relationship with them - Toyota New Zealand successfully uses Aerohive at each Office throughout New Zealand."
>
> **—Steve Boyce**
> Manager, Logistics and Motorsport, Toyota Racing Series

The Challenge

With such a diverse group of drivers within a changing social environment, the need for speed was not only on the track but off as well.

The teams needed to be able to transmit data from the cars, and track timing systems in real time became paramount. Because many of the national race tracks are in rural environments, the internet connections were challenging. Therefore recently dedicated broadband connections were installed at each of the Toyota Racing Series tracks. This now meant there was a greater need to add a wireless LAN through which they could provide the data required by the teams, media and staff.

In addition to supplying live results and information from the race, it was important that the right people got the information in a timely manner. With many races finishing only an hour before the 6'oclock main news, Toyota Racing required the ability to prioritise media personnel — giving them high priority on the networking. The need to receive content promptly for editing was essential.

Another requirement was to have a larger number of people access the internet at one time. The 3G wireless router had been very slow and was very limited to the numbers of users allowed

access — with increased media, guests and sponsors this was a challenge that needed overcoming.

The Solution

With a relationship already established between Toyota and Aerohive, the foundation was set for a successful working relationship in implementing the right solution for the Toyota Racing Series.

Aerohive implemented Aerohive AP170 Outdoor Access Points along with the industrial grade Aerohive AP350 Access Points all connected through the Aerohive BR200 Router to ADSL Broad Band and Mobile 3G in some venues- giving great coverage inside and out. It also included the Aerohive HiveManager Online Network Management System for easy centralised management and administration from anywhere.

The network had special characteristics that allowed for increased numbers of simultaneous users and structured access to the system by priority. The unique ability to run live timing across Wi-Fi was the key success factor of the implementation. In some cases cabling was not possible so use of the Aerohive Mesh capability was key to the success of the solution.

The Results

With the Aerohive Wi-Fi network in place, the Toyota Racing Series reported an immediate difference in their ability to track their drivers on the track and supply this information to all interested parties. It was simple to set up various configurations in each location and manage either onsite or remotely with Aerohive's assistance.

Those who required high priority over the network received it, allowing timely delivery of news stories and social media updates. The great advantage to this feature was that the various users of the wireless network were unaware of this priority structure and were able to use it as required. Peak loading was during race qualification and the race itself, and the network accommodated this easily.

Boyce said "It was a bonus being able to supply sponsors and guests with wireless internet access and I know they were surprised and appreciative that we could do this."

He went on to say "Having the Aerohive wireless system has made a tremendous difference, on track live timing has always been a problem for us, this year it wasn't a problem at all."

Toyota Racing Series is now looking to future Wi-Fi applications that will transmit on board camera images from the cars to the locations of their parents, sponsors and teams.