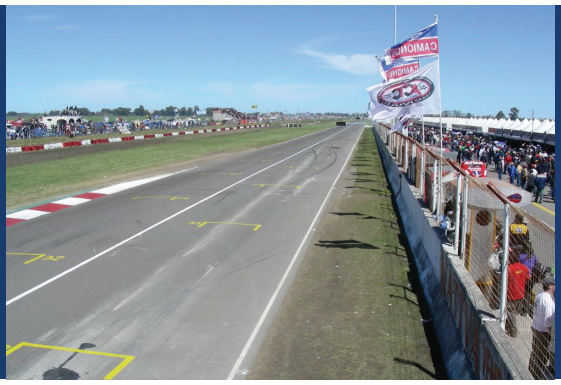
Cambium Networks™

Winning the Race for WiFi Connectivity



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- ALEJO MARTÍN, CEO/SYSTEMS ENGINEER, RFIT

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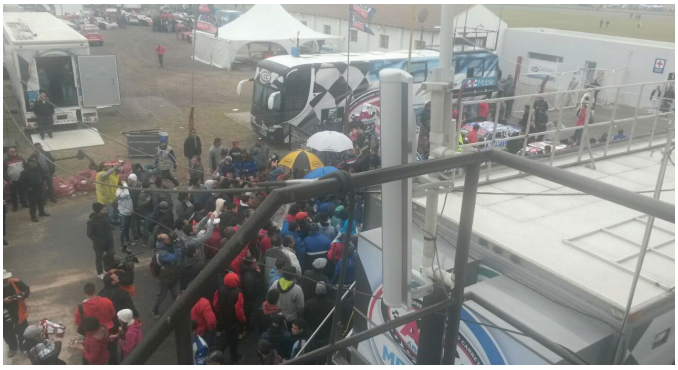
Challenge

RFIT
NETWORKING, SEGURIDAD Y TELECOMUNICACIONES

RFIT IS ONE OF THE MOST PROMINENT NETWORK SOLUTION PROVIDERS in Argentina. Its primary business focus is to provide Internet connectivity and further applications for specific events such as large corporate gatherings, exhibitions, festivals, and concerts. "With an explosion in the prevalence of WiFi-capable connection devices, it is important that our customers are provided the latest technologies equipped to handle the exponentially increasing traffic," says Alejo Martín, CEO/Systems Engineer, RFIT.

RFIT was approached by a popular touring racecar series in Argentina to construct a plan for WiFi connectivity at a speedway. For this project, reliable connectivity would need to be provided for the auto mechanics of each team and also be available in the press room, in the registration area, and for public access throughout the speedway. Applications that would run over the network included management systems, live video streaming, Internet, and intranet services.



Communications reliability was vital. Equipment was needed that could support areas with high concurrency, with many users simultaneously using the network. "The plan was to live-stream the race out of the press room," says Martín. "This required a very high throughput in a small physical space with access at both 2.4 GHz and 5 GHz." There was also a need for excellent connectivity at outdoor locations and allowing for roaming between multiple SSIDs and VLANs. Another key requirement was the ability to centrally manage the network.

The final challenge of the project was the need to install and provision the network in a very short period of time. "The equipment needed to be installed, configured, and tested 24 hours prior to the event. This required a solution that enables rapid deployment."

RFIT reached out to Cambium Networks for a viable WiFi connectivity solution.

Solution

WITH SUPPORT FROM CAMBIUM'S ENGINEERS, RFIT laid out a plan involving the combination of different Cambium hardware. Eight *e*PMP™ 1000 Access Points (AP), each connected with a 120-degree panel, were deployed for Internet and intranet data transport. Each access point connected eight ePMP Integrated Subscriber Modules (SM). Additionally, a total of ten *cn*Pilot™ E400 Access Points were deployed, with two of them placed in the press room. The entire network was managed by Cambium's state-of-the-art *cn*Maestro™ management solution.

Each of the Cambium products chosen for implementation support VLANs, multiple SSIDs, 2.4 GHz and 5 GHz access, outdoor access, and roaming. They are also prepared for the transport of voice, video, and data.

The network served about 400 users with varying modes of traffic.

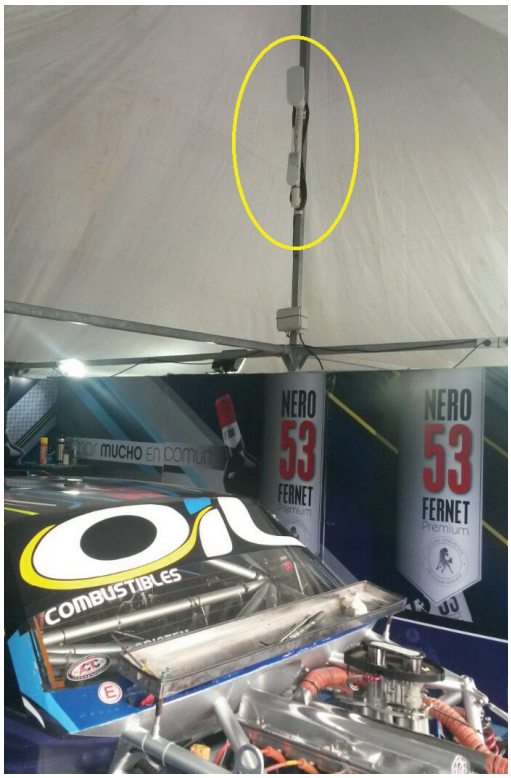
*cn*Pilot WiFi Network

*cn*PILOT E400 INDOOR ENTERPRISE WIFI ACCESS POINT
802.11ac dual band access point with MIMO
16 SSIDs supporting 256 concurrent users
Cloud-managed via *cn*Maestro, on-site controller option available

*e*PMP 1000 HOTSPOT 802.11N INFRASTRUCTURE SOLUTION	
Frequency	2.4 GHz, 5 GHz
Throughput	1120 Mbps in a 20 MHz channel
8 SSIDs supporting 128 concurrent users	

*e*PMP Distribution Access Network

*e*PMP 1000 ACCESS NETWORK	
Frequency	2.4 and 5 GHz
Throughput	100 Mbps in a 20 MHz channel



Results

INSTALLATION WAS STRAIGHTFORWARD AND THE NETWORK WAS DEPLOYED WELL within the available time window. Connectivity was immediately available at all locations throughout the speedway. Martín states, "The results were significantly better than expected. After the initial implementation, we saw a significant increase of total throughput on the network, mainly in areas of greater concurrency like the press room. Customers also noted high stability when roaming in outdoor areas. We saw a surprising amount of speed and stability on a network that was using considerable bandwidth."

Cambium's *cn*Maestro management system also did wonders for the network at the speedway. The *e*PMP and *cn*Pilot access points offer a roaming solution that communicates client specific information to other access points on the same domain. This greatly helped to minimize the delay time between connections when users roam. "The *cn*Maestro gives us end-to-end information from the point of distribution to the user. The scalability of the system will allow us to increase bandwidth to each end-user network, where before there was a bottleneck between the contracted bandwidth and the network distribution and access," explains Martín.

"Without a doubt, both the *e*PMP and *cn*Pilot platforms are cutting-edge connectivity solutions well worth the investment."

Next Steps

AFTER COMPLETING SUCH A SUCCESSFUL PROJECT, RFIT has received multiple requests for future business applications. "Moving forward, we will absolutely continue to employ Cambium products for wireless connectivity projects," says Martín. "For every satisfied customer, we subsequently gain new ones. And continued expansion and profitability are the ultimate goals."