



Asia's Biggest Cycling Race Wins Fans with MOTOTRBO™ Digital Radio



Top racing teams vie for Le Tour de Langkawi championship every year. While cyclists were pushing their endurance limits with great stamina, the Motorola's digital radio pushed coverage beyond geographical boundaries for superb race communications. MOTOTRBO™ demonstrated the competitive edge of digital radio technology, overcoming all challenges as a true winner.

Event Overview: Le Tour Langkawi 2010

The 15th Edition of Asia's premier cycling event - Le Tour de Langkawi 2010 took place from 1st to 7th of March 2010. Over 20 teams competed in the gruelling race of 1013.9 kilometres, crossing through the states of Kelantan, Terengganu, Pahang, Johor, Melaka, Negeri Sembilan, Genting Highland, Selangor and the Federal Territories of Putrajaya and Kuala Lumpur.



Organized by the Ministry of Youth and Sports, together with the Malaysian National Cycling Federation (MNCF) and the Prime Minister as Patron of the event, the race was introduced in 1996 and was graded again as a Hors Class (2.HC) race by the International Cycling Union (UCI) - equivalent to the prestigious status of several major races in Europe.

Challenge: Geographical Constraints, Noise Interferences and Limited Coverage

The new route for 2010 race posed the toughest challenge for even the most seasoned cyclists. As a test of endurance, the riders had to pedal against the winds of the South China Sea and cover longest distance in the event under the tropic's hot sun.



Equally challenging was the mammoth task of setting up a reliable communications network over hilly terrains. In the past races, the organiser rented helicopters to provide roaming, aerial coverage. Officials monitored the race from the sky, providing live reports as the racing teams crossed each stage of the race. They used analog radios to communicate and coordinate with marshals that were stationed on-site and those trailing the race teams in the convoy vehicles.

While the aerial coverage was helpful in extending analog radio coverage, the cost was extremely high. Moreover, analog radio signal strength would weaken over wide distances. The resulting distortions create static noise and buzzing that becomes noticeably audible as the radio marshals try to increase the volume or go further distance from the aerial coverage. Audio clarity would often degrade, hampering communications and coordination during the race.



About MyGPS Technologies Sdn Bhd

Established in 2006 in Malaysia, MyGPS is a provider of advanced GPS Tracking Solution and Security monitoring system. This Motorola Premier Gold Partner offers services for fleet management and 24 x7 Control Centre for emergency communications. Visit company website: www.mygps.my

Compounding the problem further was the ambient noise generated at the event site. *"We have thousands of race supporters and curious spectators at every stage of the race,"* said Abdul Rahim Bin Azizi, Chief Marshal, *"but the cheering crowd and traffic noise can make radio conversations difficult to follow. In a real-life situation, we cannot just walk away from the noise and compromise the event security."*

Solution: MOTOTRBO Delivers Superb Audio Clarity and Wider Coverage for Clear Communications

Like any sporting event, the Le Tour de Langkawi 2010 always inspires higher performance and results. *"Every year, we have the opportunity to raise our standard of event organisation to a professional world-class level. For the 2010 race, we decided to invest in the latest technologies that can help us boost our communication capabilities during the race,"* said Zulkifli Bin Kalil, Finance and Operations, Ministry of Youth & Sports.

For many years, MyGPS Technologies Sdn Bhd has been the event's technology partner responsible to meet the rigour communication demands of each race. With extensive experience and expertise in Motorola radios, this Motorola Premier Gold Partner knew that the shift into digital radio was necessary in overcoming problems of limited coverage and ambient noise.

The Race Team Support Crew, Race Officials, Marshals, Judges, Technical Crew and the Security Personnel were provided with MOTOTRBO radios to replace their analog radios. In all, MyGPS deployed 83 units of XiR P8200 Non-Display portable radio, 47 units of XiR P8268 GPS Display portable radio, 40 units of XiR M8268 Display mobile radio, 20 units of IMPRES™ Remote Speaker Microphone and 20 units of IMPRES™ spare batteries that were made available on standby.

High Quality of Voice Clarity

Immediately, these new users discovered the true digital difference: MOTOTRBO's digital noise cancellation feature enabled them to experience superb audio clarity.

"As compared to the analog radios they have used before, my team of security marshals gave positive feedback for the superior audio clarity which they experienced using MOTOTRBO radios," said Abdul Rahim Bin Azizi, Chief Marshal. His marshals also enjoyed clearer communications as they rode on their motorbikes. Thanks to the IMPRES™ Remote Speaker Microphone which enhanced the optimal audio quality and performance of the digital radio.



Alex Soo, Executive Director of MyGPS Technologies Sdn Bhd, explained *"Our top priority is to deliver customer satisfaction. Surprisingly, when we weighed the costs of replacing the race's analog radio system with Motorola's latest digital radio solution - MOTOTRBO, not only are we saving money for the race organizer but we are delivering greater effectiveness such as clearer audio clarity, extended coverage and many other user benefits."*

Shifting Communication Coverage from the Sky to the Hills

A key feature of MOTOTRBO digital technology is the extended coverage. By installing one unit of XiR R8200 MOTOTRBO repeater in each of the three mobile vehicles, MyGPS successfully replicated the same radio coverage previously supported by the roaming aerial coverage of helicopters. The high cost of helicopter rental, pilot fees and jet fuel were thus eliminated.



Strong and Consistent Digital Signal

Next, MyGPS also installed the XiR R8200 MOTOTRBO repeater in strategic hill sites, providing up to 25 kilometres' radius of digital radio coverage along the race journey. The powerful digital signal strength delivered uncompromised race communications at virtually no loss in voice and data quality.

IP Connectivity for Text Messaging and GPS Location Tracking

MOTOTRBO also supports text messaging and GPS location tracking capability. The IP Site Connect application was deployed to link together multiple repeaters and provide a radio roaming service. Leveraging the Internet, a reliable wide-area communications network was created across the hilly terrains and open roads, enabling race officials to broadcast live voice announcements and provide text messaging with real-time information. The integrated GPS feature also provided location tracking of the racing teams at each finishing point, enabling race officials to monitor convoy movements and provide timely live updates.

Double Capacity and Privacy Calls

Compared to analog solutions, MOTOTRBO offers twice the calling capacity on the same spectrum - thanks to Time-Division Multiple-Access (TDMA) technology. A single MOTOTRBO repeater is required to handle two simultaneous calls, thus saving on equipment cost and reduce the complexity of the combining equipment for multi-channel configurations.

Also there is no need to obtain new frequency licenses for the increase in the repeater capacity, and compared to alternative technologies that may operate on different bandwidths, there is no comparative increase in the risk of interference from adjacent channels. A total of six individual digital channel slots and Private Calls, which were made available with IP Site Connect roaming, were supported by just three digital repeaters, unlike the analog system which would otherwise require six repeaters.

Longer battery life

The race teams were using their MOTOTRBO radios far longer than they expected. After two days, they found that the digital radio did not need a battery recharge. Because TDMA-based digital system divides the channel into two independent time slots, with each individual transmission active only for short burst, lesser battery power is consumed. This unique digital feature provides 40 percent longer talk time between recharges as compared to analog radios.

Exceptional User Experiences

The race team support crew trailed the riders in their vehicles to render assistance during the race. Equipped with MOTOTRBO mobile and portable radios in the vehicles, they singled out MOTOTRBO audio clarity, strong coverage and user-friendliness yet ruggedness as exceptional plus points! After the race, the South Asia and Middle East teams including the UAE Cycling Federation (www.uaecf.ae) enquired with MyGPS about purchasing MOTOTRBO radios for their own use when they get back home. MOTOTRBO has won fans for its performance!



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