

City of Rio de Janeiro chooses Comtex and InfiNet Wireless for city-wide Wireless video surveillance and security network

Challenge

- To deliver a scalable and cost-effective solution for next-generation CCTV and surveillance systems across 26 targeted areas of the city within a 12 month timeframe;
- To deploy an IP surveillance wireless networking solution that will be able to integrate to existing CCTV technology;
- To provide a solution that will be capable of supporting additional networking and communications services for the 2016 Olympic Games.

Solution Technology

- InfiMAN 2x2 MIMO high capacity point-to-multipoint broadband wireless;
- InfiMAN standard capacity point-to-multipoint broadband wireless.

Introduction

With a population of over 13 million people, Rio de Janeiro is the second largest city in Brazil and third largest metropolitan area in South America. As part of a "growth acceleration programme", the Brazilian Government is making progressive investments in order to narrow the gap between the richer and poorer districts of the region, aimed at reducing violent crime and improving the overall security and personal safety of its citizens across the region.

For the immediate short-term, the State of Rio de Janeiro has made the decision to deploy a new wireless broadband network specifically to support existing CCTV and newly-expanding IP surveillance systems across 26 targeted areas of the city, with the target for an expected completion within 12 months for the entire project. The project has the aim of delivering high-resolution Surveillance and Imaging services to police and local government bodies, helping to boost the response times and operational efficiency of emergency and security services, whilst offering coverage into new areas which are often challenging to police on a public security basis.

Technical challenges

Deploying a conurbation-wide monitoring system in such a short period of time, and with limited budget resources, naturally provides a number of challenges to overcome in order to ensure the feasibility of any wireless network deployment.

Firstly, the geographical layout and terrain of the city provided a major test to the operation of any wide-area wireless network across the region. The outer terrain of the city is characterized by steep and irregular hills and mountains, which fundamentally restrict the deployment of any standard wireless infrastructure. To make matters worse frequent humidity changes, rapid temperature movements and long periods of tropical rainfall, further challenging the potential reliability of any deployed wireless infrastructure.



Benefits

- Deployable across geographically challenging terrain that normally inhibits regular wireless technology;
- Significantly reduced deployment time and upfront network;
- Provides the local government with the option to overlay communication and data services over the wireless network;
- Provides future-proofing upgrade capability for security and public services in preparation for the 2016 Olympic Games.

Secondly, the sharing of the resource base of the network between multiple local agencies also offered a significant challenge. Different departments would need to access and control the system from different control/monitoring points for different purposes, as well as having to integrate existing analogue CCTV systems into the new IP-based network. In addition, the need to rapidly deploy new camera points across the network would also be essential to cope with changing local conditions or events – for example, to temporarily monitor Rio Carnival routes for public safety.

Finally, the award of the Olympic Games to the city in 2016 would require extensive investment in the infrastructure to cope with the coverage and security of the games. The deployment of any wireless network today, therefore, would need to take into the longer-term needs for surveillance monitoring and safety requirements of the Olympic Games, whilst ideally providing an infrastructure that could accommodate supplementary communications services to the general public – services such as Wi-Fi and Internet Access, IP communications and even potentially commercial video transmission and distribution.

Solution

The City of Rio de Janeiro turned to Comtex, a specialist in the development and deployment of video surveillance solutions and electronic security, to build the next generation wireless CCTV/IP Surveillance network. During the last ten years, Comtex has become one of the leaders within the segment and has been responsible for a number of urban surveillance projects major Brazilian cities.

Following extensive trials with a number of different wireless networking solutions, Comtex decided on InfiNet Wireless's InfiMAN 2x2 MIMO high capacity, point-to-multipoint wireless technology to provide the wireless infrastructure that would serve the city's surveillance and safety network. InfiNet's technology enables lower cost, high-speed throughput applications over extended coverage areas of geographical challenge, and InfiNet's reputation for reliability and robustness across difficult terrains and through varying environmental and climatic conditions is well known across the industry.

In addition, the flexibility of the InfiNet technology – and in particular with its capability of offering bandwidth capacity upgrade through software enablement - will also offer the local government the option to overlay communication and data services at a later date as required, offering a viable expansion capability over the next 5 years up to the hosting of the Olympic games.

"InfiNet's InfiMAN 2x2 range of products and technology offers a high-capacity wireless network that is quick to deploy and incredibly economical to operate" explains Sergio Nercessian, Director of Comtex. "The excellent performance and bandwidth flexibility of the technology enables us to significantly reduce our deployment time and upfront network investment. Coupled with outstanding customer service and support, this made InfiNet the perfect and obvious wireless technology partner for Comtex".

About InfiNet Wireless

Established in 1993, InfiNet Wireless is one of the largest privately owned Fixed Broadband Wireless Access (FBWA) development and manufacturing companies in the world. With more than 17 years of intense customer based research and product development, InfiNet's range of wireless connectivity solutions are the preferred choice of global communication corporations and governments who require uncompromising connectivity. To date, InfiNet Wireless has forged a solid foundation in fixed wireless installations, and currently has thousands of deployments successfully deployed in over 50 countries. Its philosophy of providing the most flexible, reliable, cost-attractive and innovative solutions in the industry has helped it to reach the market leader position for Wireless solutions in Russia and Central & Northern Asia, and is the benchmark of carrier grade multiservice broadband wireless access systems.