

The City of Iguacu, Brazil Selects Proxim's Solutions to Deploy Citywide Surveillance Network

Introduction

Located on the "Triple Frontier" between the vast borders of Brazil, Argentina and Paraguay, the city of Foz do Iguacu, Brazil, had long been a pathway for illegal arms, smuggling and drug trafficking. As a part of the security initiative to curb illegal trafficking, the government of Iguacu decided to deploy a city-wide video surveillance solution to remotely monitor the vast areas, around the clock.

Challenge

The network comprised over 120 cameras, varying from speed domes to thermal and OCR cameras installed at more than 100 locations and 16 towers across an area of 618 km².

The project involved connecting these high bandwidth cameras into a single unified network for backhauling all the information in real-time to a central monitoring center. Additionally the new backhaul connection had to be highly cost effective and quickly deployable despite the numerous obstacles such as waterfalls and dense foliage. The severe non line of sight conditions caused by dense foliage and RF interference from the other radios was an obstacle in implementing any wireless solution.

Solution

After several levels of screening and stringent evaluations, the government of Foz do Iguacu chose the wireless solution proposed by Serv Imagem and Proxim Wireless. To support the surveillance cameras, Serv Imagem developed a network infrastructure that leveraged high power point-to-multipoint and point-to-point Tsunami radios installed a cross the city. The network constituted of main tower sites, equipped with Tsunami[®] QuickBridge[®] 8200 backhaul links and Tsunami[®] 8200 Series base station units that connected to various cameras via the subscriber units. The QuickBridge[®] 8200s on these towers aggregate and backhaul the video stream from the HD cameras to the central monitoring center.

Result:

Leveraging Proxim's proprietary intelligent routing protocol WORP[®] and Proxim's ClearConnect, the Tsunami radios are able to overcome typical non line of sight challenges and communicate reliably, even amidst dense foliage. With Proxim's automatic channel selection and extremely flexible channel planning features, ServImagem was able to survey and select interference-free channels, thereby ensuring high uptime and high capacity communications.

"We compared a lot of wireless solutions but none were as reliable as Proxim's. They perform well in spite of the extreme interference and severe nLoS conditions. I would strongly recommend Proxim." - Daniel Miranda, IT Analyst, Serv Imagem.

"The new network has increased the department's productivity as well as their visibility in the city. Officers have access to a wealth of information spanning from license plates to real-time feeds of illegal smuggling, drug and arms trafficking happening in the city."

– Police Department, City of Iguacu.



Highlights

- The solution had to work in NLOS and high RF interference conditions
- The Proxim network provides high uptime and high bandwidth links via PTP and PtMP deployments connecting the surveillance network to the central surveillance center
- Over 180 Proxim's Tsunami Multipoint and point-to-point radios to support over 120 bandwidth intensive, speed, thermal and OCR cameras spread across the city

About Proxim Wireless

Proxim Wireless is a pioneer and global leader in advanced Wi-Fi, point to point, and point to multipoint outdoor wireless systems that deliver high performance and high availability communications.

With over 30 years of wireless experience, Proxim is recognized for its unparalleled reliability, superior performance and drive for innovation.