Cambium Networks™

South Asian Games Connect with End-to-End Wireless Broadband

"All communications for the Games were designed and installed in 30 days. The system consistently provided high bandwidth and coverage. We now have a trusted platform which can be deployed to meet business opportunities"

- BISWAJIT HAZARIKA, MANAGING DIRECTOR, TRANS VIRTUAL PVT. LTD.

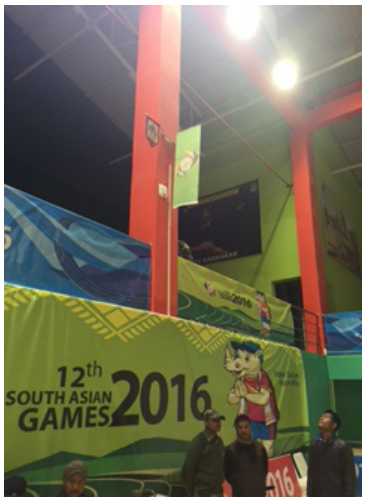
Challenge

THE SOUTH ASIAN GAMES BRING MORE THAN 4,500 premier athletes from eight nations to compete over a ten-day period. In this 12th meeting of the Games, venues were selected in the cities of Guwahati (Assam) and Shillong (Meghalaya), India. To connect the games, athletes, media, and attendees to the world, the organizers needed a robust solution that would be sure to work without incident.

"The organizers needed to have a wide area network (WAN), local area network (LAN), and WiFi access installed in 26 locations scattered across two cities," says Biswajit Hazarika, Managing Director, Trans Virtual Pvt. Ltd (TVPL). "We were called in to provide connectivity for stadiums, offices, and hotels. We were given 30 days to design, install, and bring the network to full functionality."

Solution

THERE WAS A PRIMARY BACKBONE OF CONNECTIVITY from Bharat Sanchar Nigam Limited (BSNL), the Indian state-owned telecommunications service provider. To ensure connectivity, TVPL, an experienced industrial communications provider, designed a redundant backbone to support a distribution and WLAN access network. They also wanted to provide a seamless end user experience and have centralized authentication and monitoring.



*cn*Pilot enterprise access point installed indoors

Based on previous experience in operating wireless broadband networks from Cambium Networks, TVPL contacted Cambium Networks to design and implement an all-wireless solution to provide broadband connectivity. A secondary backbone network would be composed of PTP 650 and PTP 450 wireless backhaul links. In the event of a failure of the BSNL link, the system would automatically shift to the wireless broadband secondary backbone link.

The distribution network would include PMP 450 Access Points (AP) at the venue locations. WiFi access would be provided to indoor locations by *cn*Pilot™ Enterprise Access Points, and to outdoor stadiums by *cn*Pilot Hotspot modules.

PTP 650 Unlicensed Backhaul Solution	
Frequency	4.9 to 6.05 GHz
Throughput	450 Mbps

PTP 450 Unlicensed Backhaul Solution	
Frequency	3.5, 3.65, and 4.9 to 5.9 GHz
Throughput	125 Mbps

PMP 450 Distribution Network Solution	
Frequency	900 MHz, 2.4, 3.5, 3.65, and 4.9 to 5.9 GHz
Throughput	125 Mbps

*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

*cn*Pilot™ ePMP 1000 Outdoor WiFi Hotspot
802.11ac single band access point with MIMO
8 SSIDs supporting 128 concurrent users
Cloud-managed via *cn*Maestro. on-site controller option available

"The installation was completed in record time by engaging our team and the support team from Cambium Networks," says Hazarika. "We designed the network so that both permanent and guest users would be able to easily access the network at any of the facilities with a single credential."

*cn*Pilot outdoor Hotspot provides WiFi coverage

Tower for wireless backhaul link

About Trans Virtual Pvt. Ltd.

transv.net

Established in 2002, Trans Virtual Pvt. Ltd. (TVPL) started as a Wireless ISP and has grown to be a leading IT consulting and IT services company, providing best-in-class technology solutions for its clients.

TVPL provides WiFi and LAN Solutions, Internet connectivity, IP surveillance and access control, and network design and integration services to industrial clients.

Customers include:

- Oil India Limited
- Indian Oil
- Indian Railways
- BSNL
- Indian Air Force
- All India Radio (NE)
- Numaligarh Refinery Limited

Opening ceremonies
Photo: The Indian Awaaz

Results

THE INDIAN AWAAZ NEWS REPORTED, "THE PRIME MINISTER
Narendra Modi today inaugurated the 12th South Asian Games, 2016, in a glittering ceremony at the Sarusajai Sports Complex in Guwahati before a rapturous crowd." Communications were solid throughout the ten days of the games.

The TVPL team was ready for heavy demands on the network. "There were typically thousands of active users on the network during the main sports events. At the conclusion of the Games, we collected feedback from the users, and all were satisfied with the availability and performance of the connectivity," says Hazarika. "Cambium Networks builds world-class products; and has an outstanding support team that is up to any challenge."

The installed equipment will remain to provide connectivity to the hotels and venues in Guwahati and Shillong. TVPL plans to continue to deploy Cambium solutions for backhaul, distribution, and WiFi access in future industrial and municipal applications.

Why TVPL Chose Cambium Networks:

- **High Reliability** to ensure that connections are solid when installed and over the long term.
- **Experienced Support** to consult with clients as networks are designed, installed, and made operational so that all parties and end users are satisfied.