

Connecting Islands for the First Time



Challenge

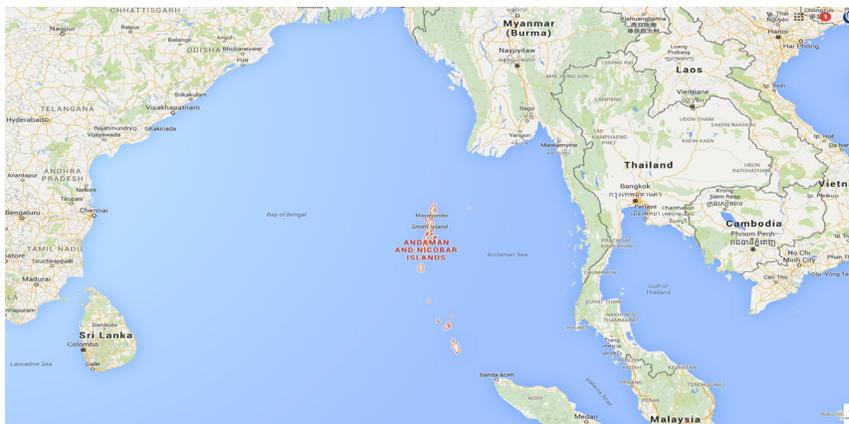
THE ANDAMAN AND NICOBAR ISLANDS ARE 500 SMALL ISLANDS IN THE BAY OF BENGAL.

With only 35 of the islands inhabited, the area is best known for its unique natural beauty with coral reefs and rainforest interiors, providing outstanding recreation activities. Separated from the closest land at Aceh in Indonesia 150 km (90 miles) to the south, the remote location provides a fantastic getaway.

As the region promotes tourism business growth, the islands have an increasing need to be connected for local businesses and to provide connectivity for tourists. AIM Enterprises, a local communications networking expert, was presented the challenge to provide coverage to the whole area of the Andaman and Nicobar Islands. They started with the task of connecting two of the most populated islands.

“The oversea distance between Port Blair and Neil Island is 40 km. The Cambium PTP 650 delivered 245 Mbps speed. This link has connected 10,000 people to the world.”

- M. PRABAHARAN, PROPRIETOR, AIM ENTERPRISES



Source: Google

“It is not feasible to run OFC or undersea cable the 40 km between Port Blair and Neil Island to the northeast,” says M. Prabakaran, Proprietor, AIM Enterprises. “The only mode of transport is by ship. We knew wireless was the answer, but we could not find equipment that would provide a reliable link.”

Bharat Sanchar Nigam Limited (BSNL) is the Indian state-owned telecommunications service provider, offering local and mobile services. Familiar with the challenges in providing connectivity to the islands, BSNL oversaw the challenging project, which was being managed locally by AIM Enterprises.

Solution

AFTER WORKING WITH OTHER SOLUTIONS, AIM ENTERPRISES

selected the PTP 650 wireless point-to-point backhaul from Cambium Networks. The free LINKPlanner software was employed to design the connection using the actual coordinates of the source and destination of the link and to model the throughput and performance.

Equipped with Dynamic Spectrum Optimization™ (DSO), the PTP 650 continuously monitors performance and selects the best channel available. With 256 QAM, and Fast Adaptive Modulation, the system is able to provide reliable connectivity in the most demanding conditions—even over water.

PTP 650 Wireless Backhaul Infrastructure Solution	
Frequency	4.9 to 6.05 GHz
Throughput	Up to 450 Mbps in a 45 MHz channel
Award-Winning Performance	Highest Capacity in 20 and 40 MHz channel Highest Spectral Efficiency in 20 and 40 MHz channel

Results

THE 40 KM LINK CAME UP RIGHT AWAY AND HAS STAYED UP SINCE.

Just as predicted with the LINKPlanner software, the link provided a reliable 245 Mbps of low latency connectivity for voice, data, and streaming video services using the 5 GHz unlicensed frequency bands.

“This is the first time in the history of India that a single radio link was established across the Andaman sea (Bay of Bengal),” says Prabakaran.



Neil Island link

“With the PTP 650, we have higher throughput and clear voice and data at a lower cost than any other solution. Only the Cambium PTP 650 was able to test successfully.”

The PTP 650 link was tested by engineers from both AIM Enterprises and BSNL as a pilot project. Once established, the link was turned over to BSNL and the local government. In addition to higher performance, the PTP 650 delivered connectivity at a substantially lower cost than alternative technology. The system has saved approximately \$37,500 USD per year.



PTP 650 with Antenna

About AIM Enterprises

Customers include:

- Government Agencies
- Local Businesses
- Residential Customers



Technician installing the link

Next Steps

BASED ON THE HIGH PERFORMANCE AND THE EASE OF

installation of the PTP 650, AIM Enterprises plans to expand the network across the islands to connect more locations. “We have already planned to connect another 20 islands with Cambium products,” says Prabaharan.

Why AIM Enterprises chose Cambium Networks

- **Reliable high-speed connectivity** that performs consistently on an over-water link
- **Outstanding technical support** to see the project through to completion
- **Capacity** to continue to perform when system is operating under heavy demand conditions
- **Low Latency** for sensitive voice, video, and data services