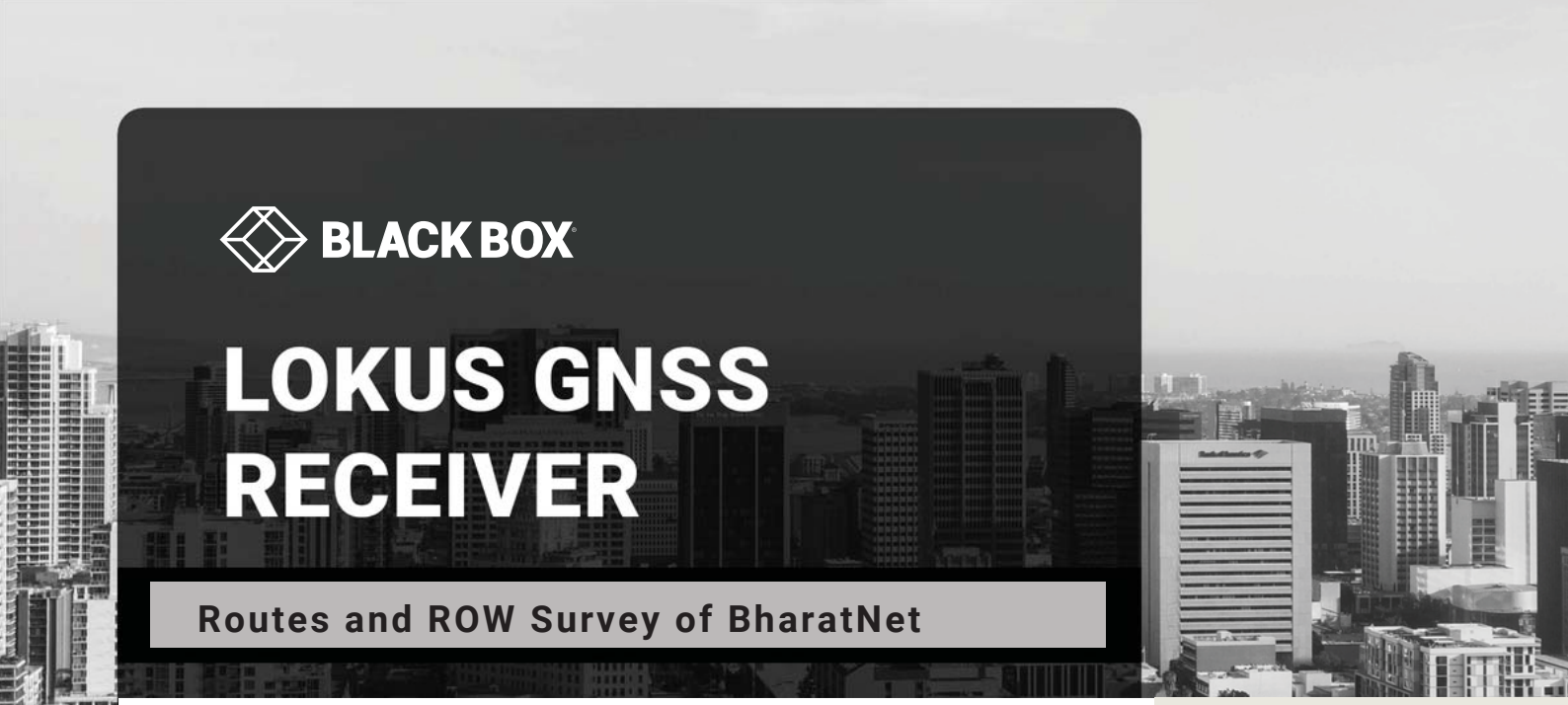


BLACK BOX

LOKUS GNSS RECEIVER

Routes and ROW Survey of BharatNet

Sub-meter Accuracy in Real-time

CHALLENGE

The client an OFC cable networks company was looking at a cost effective and less time consuming solution for collecting accurate geo-coordinates.

The client needs one SBAS enabled precision GNSS receivers for every 50 Km, which was not commercially viable while using either DGPS or costly imported receivers. The client is required to use a Mobile based Data collection Application with easy data collection form customization.

SOLUTION

a. Black Box LOKUS (Model Sxtreo T55) Satellite Base Augmentation System (SBAS) GNSS receiver to get position correctional data with submeter accuracy (i.e. 60 to 80 cm). This was 10 times lesser in cost of leading brand of Bluetooth® GNSS receiver.
b. Proprietary Mobile Application for collection of deployed Network Asset with Geospatial information for Digitized As Build drawing. Same is open for data collection form customization as well as no restriction on user license with feature of user management
c. The entire process time of each observation was reduced to 15 minutes from 1 hr and it resulted in 4x speed of field observation.

T55 SBAS Integrated with proprietary mobile application via Bluetooth connectivity. Create a form to collect information of underground OSP, Network Elements and related attributes to create Digital As Build.

BENEFITS

1. Lokus GNSS receivers using Indian SBAS corrections achieved the desired accuracy in 5-10 mins
2. The equipment was 10x lesser in cost to DGPS or other imported solutions
3. The observation time was reduced to 10 mins from 1 hour and achieved a 10x boosting of productivity

EQUIPMENT

1. **SBAS:** T55 Positioning Systems - Black Box
2. **Mobile Application:** Proprietary Software

STEPS FOLLOWED

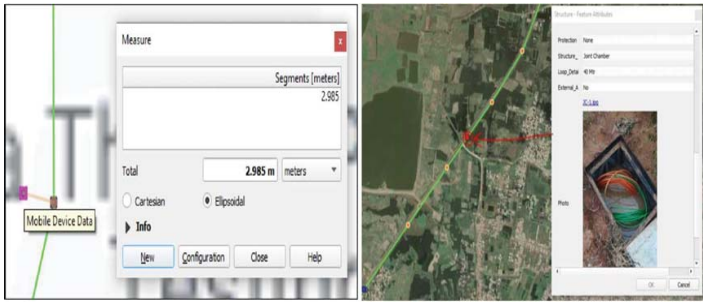
1. Points data collected for 6.5 km pre constructed route without LOKUS GNSS receiver integration with mobile application
2. Geocoordinate Accuracy noted without SBAS was 3-4 meter
3. LOKUS integrated with mobile application and again same points data collected for 6.5 KM route
4. Record the improved coordinate accuracy of 60 to 80 cm by field team.

"We concluded in our previous POC LOKUS provides the Sub-Meter accuracy of Geo-coordinates. Now we have taken one step ahead towards the adoption of this process by making it easier in terms of operations and cost." **- Technology Head,** Largest Integrator of Digital Networks in India.

CLIENT:
Largest OFC Cable Networks Company in India

REGION:
India

SOLUTION:
LOKUS Bluetooth GNSS receiver



POC Results: As Build information data capture at server and ready to view on Geographical Map (without SBAS)

As Build information data capture at server and ready to view on Geographical Map

RESULTS:

Parameters	LOKUS GNSS Receiver from Black Box
Unit Composition	Requires Rover only
Accuracy	+60 to 80 cm
Weight	Full system weighs less than 1/2 Kg
System Composition	Open system compatible with any device (All OS), Bluetooth connectivity is used to communicate with any available mobile survey app.
Data Extraction	CSV, Shape, KML
Base Establishment	No establishment time as there is no Base required
Manpower	Single semi-skilled person can execute the job
Commercial	10 times lower price than competition evaluated, having identical features, and functionality

Lokus was chosen as the equipment of choice for high precision GNSS data.

About Black Box

With more than 40 years of experience connecting people and devices, Black Box is dedicated to helping customers embrace the IoT future by ensuring business continuity and accelerating digital transformation. As a trusted infrastructure solutions provider and solutions integration partner, Black Box designs, deploys, manages, and maintains a full range of technologies that support connected buildings, the digital workplace and customer experience. With deep expertise in 5G, edge networking, data centers, and cybersecurity, the Black Box team delivers secure, consistent, and latency-free connectivity to enterprises of all size and scope.

Black Box operates in 150 countries with 200 offices worldwide. To learn more, visit the Black Box website at **www.blackbox.com**.