

CASE STUDY

Simbhaoli Sugar Mills Ltd



Abstract

A case study shows how a line of sight broadband Wireless Network system successfully serves a Company. Maksat's MMS Base Station is deployed in Simbhaoli Sugar Mills Ltd, Distt Ghaziabad, Uttar Pradesh. MMS BTS is providing connectivity with the help of Maksat CPE at 6 Sub locations in the range of 5-17 Kms area. These sites include manufacturing plant at Simbhaoli with its cane collection centers.

Our Client

The Simbhaoli Sugar Mills Limited (SSML), manufactures sugar, its allied products. The company has plans to utilize surplus milling capacity at its existing plant at Simbhaoli in Ghaziabad district of Uttar Pradesh by adding 2,000 tcd capacity.

SSML is also working with TIFAC for implementing the project "*Purification of sugarcane juice by Membrane Separation Technique*" in collaboration with TERI (Tata Energy Research Institute), New Delhi. The project is an entirely indigenous effort and involved grass root development of membrane separation technique for Sparklingly clear high purity juice to produce premium quality sugar with Less chemical consumption.

The company is expanding its Chilwaria Unit (Eastern UP) capacity from 3,800 TCD to 6,000 TCD and announced setting up of a new sugar plant in Brijnathpur village in Ghaziabad district (UP). The company is currently engaged in the production of sugar and industrial alcohol, with sugar plants in the cane-rich area of Uttar Pradesh and punjab.

Challenge

Non-IT Manufacturing companies face many challenges, especially when it relates to technology. The importance of providing workers and officers with current technology while addressing such issues is an ongoing struggle for Non-IT Manufacturing companies around the world.

SSML was looking for a solution with latest technology to connect their Cane Collection centers with the manufacturing plant. The whole cane collection area which comes under the SSML is divided into different zones based on certain pre-defined parameter's i.e. wayment, payment, indent and variety wise cane area etc. De-centralization of cane collection operations was basic idea behind this connectivity plan. High data rate connectivity was required to run the applications on *Centralized Server for cane management system*.

Solution

Maksat MMS Base Station and MMS CPE's with OFDM Technology

The administration recognized several advantages to a wireless network, main among them fast deployment, easy to maintain. Cost and infrastructure were also factors.

"We wanted to connect all zonal locations at low cost, and mostly in areas where it might be difficult to provide wired solution," Manager (SSML) said. At most of the collection center's, installing wired connectivity would have been expensive, time-consuming and or even not possible. Wireless technology was not only easier and more cost-effective to install, but also more convenient. So, SSML selected MMS wireless technology of Maksat Technologies to implement the connectivity project.

The administration was also impressed with the ease of installation and connectivity solution. "Implementation was fast and easy," said SSML officials, "And we were surprised by how strong and complete the coverage was in the areas. Where it is difficult even to access the sites by road. When we measured signal strength and data through put at the different locations, we discovered that we had very good connectivity like local LAN, even at the distance of 17 Kms. We can easily increase or shift (if required) the collection center's, with in the coverage area of Base Station without any issue's i.e. in wired solutions."

Maksat BTS is a pre Wi-max Technology with the features like XR of -97 dBm (best in the industry), Watchdog timer, Bandwidth management tool and inbuilt router with operational temperature of -40° C to $+80^{\circ}$ C.

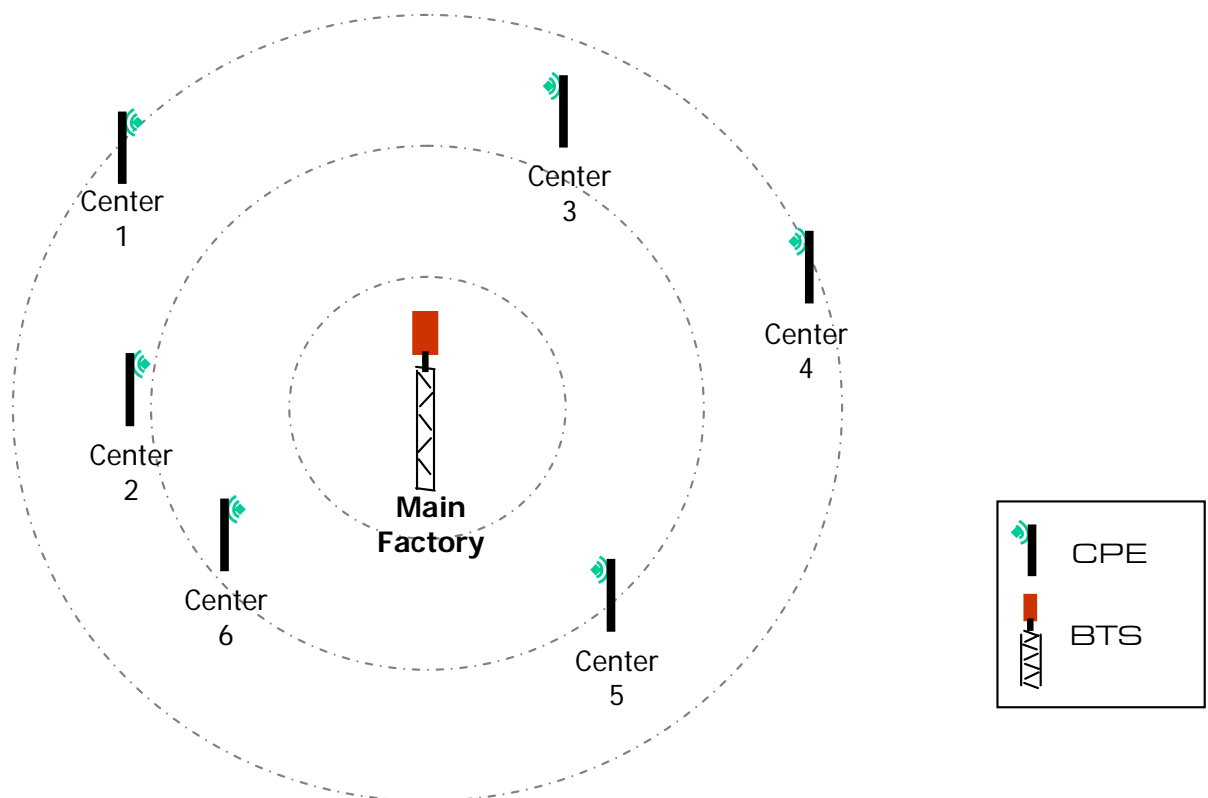
The project was implemented in just 2 weeks. Definitely It had taken much less time, if mast building (Tower) had not taken 6-7 days. The full network is up and running successfully from last 1 months and looked after by just 1-2 engineers. So, the maintenance cost of the running network is very low.

There is no license required from the government for frequency band because network is running on 2.4Ghz (free ISM band). So, there is no need to pay any License fee to government agencies.

MMS wireless network also provides the SSML with a safer level of security not typically found in other wireless products. MMS's 128-bit encryption up to 3 keys, deliver the highest security available in the industry.

This network will not only help SSML to provide all information regarding farmer's at their door step, but also avoid the mess at manufacturing plant's collection center and increase productivity. It will also help farmer's to get their *perchi's* from zonal office, avoid waiting in the long queue's at factory gate and payment related information. It will help the top management to take fast decisions with the help of zonal wise data available at their finger click away. Which will improve the productivity of employees in calm and headache free environment and finally increase the profits.

For more detail of network see the diagram below :



SSML is running ERP application, Cane management system for purchase, payment, indent and other information related to farmers. MMS Broadband Base station is installed at manufacturing unit to connect zonal locations or cane collection centers. Voice and data applications are running on these centers.

The Benefits

Centralization of operations with Wireless connectivity made it possible to take fast decisions and access the day to day records of production and stock available at different plants.

Voice services helped to access the remote sites where PSTN service is poor or even not available. All cane collection center's locations including office at factory are available through local EPBX system, at no extra cost.

Farmer interaction is switched to the zonal collection center's. Because all information is available at respective centers i.e. cane purchase, *Perchi*, payment and cane stock (Variety wise). This all provide easy access to farmer's and save valuable time (earlier used to spent in queue) with transportation.

De-centralization increased the productivity of employee's at factory end, by avoiding (daily) mess at factory for cane collection. A lot of time and cost of man power is also saved, earlier which was used to handle the rush at factory gates. All these things had improved the performance of the employee's and finally increased the total production of SSML.

SSML management is happy with the results of connectivity project and now planning wireless connectivity project for other manufacturing plants.