Enterprise

NETWORKING BANKS VIA WIMAX TECHNOLOGY

This project has a main purpose and goal, which is to connect the main bank office with other bank offices and buildings to achieve secure bank data transfer between all offices. This is very necessary for the bank.

In most countries, the systems used for data transfer between companies or banks are based on fiber optic networks such as PSTN and GSM. But in Iraq , the situation is different because Iraq does not have the infrastructure for this network and even if it existed, it would have likely been damaged because of the successive wars that Iraq has known . So, Fidaa Group Co. needed to find an alternative idea to manage the installed network of this bank in order to have a reliable network . Fidaa Group Co. had chosen WiMAX technology from Proxim Wireless for many reasons, which will be discussed later.

This project is a premier project in the Middle East and the world using the WiMAX technology in banks network, and we hope it will help to open a new vision of WiMAX technology applications.

Why WiMAX?

Before Fidaa Group started to find a proper solution for the bank network, there were regular solutions like satellite VSAT connection, SCPC-SCPC, connection with public IP and dynamic SCPC-SCPC VSAT and even the shared satellite systems like DVB-S – RCS, but all of these systems shared four main problems:

1-The high costs – Satellite connections bandwidth used to reach about $3,000.00 for each 1 mbps, whereas it costs nearly $0 after initial up-front equipment costs with WiMAX.

2-The high latency – All satellite systems have minimum data packet latency about 550-750 milliseconds latency, even in ideal situations, which caused problems for real time systems and software. Many real-time applications are sensitive and require less 550 milliseconds of latency to operate synchronously. Many networking companies utilize a very complex technology to overcome these problems , but with WiMAX , this problem had already been solved because the maximum latency is about 10-25 milliseconds – which is considered very fast and suitable for real-time systems that require low latency .

3-The deployment and maintenance – Maintenance, weather affection and time to solve any network problems is very difficult especially when you have a third party network operator like PSTN, GSM, and Satellite Operators. You will not have the ability to solve the network problems compared to your private network if you don't have a WiMAX network.

General Information

- The devices used were the Tsunami MP.11 with a frequency range of 5.8GHz from Proxim Wireless.
- The location of the Bank of Mosul is in North Iraq, about 400 kilometers from Baghdad city, inMosul City.
- The Installer, network designer and operator is Fidaa Group Company.

The people who worked on this project are :

- Nishchal Batra, Regional Director in Asia & Middle East, Proxim Wireless Corporation. She was very positive in supporting WiMAX for this new application.
- Bank of Mosul (engineers and management staff).
- Fidaa Group Company (Iraq) engineers and technical staff for their great efforts under non-secure circumstances in Mosul City.
- Mr. Muhamed Vahid, Manager of Fidaa Group Company (Iraq), who was the network designer, programmer, supervisor and project manager.

The project budget :

The project budget including installation costs with towers. networks accessories for the main building of the bank and three building branches of the bank at Mosul City is about $35,000.00. The local engineers and Iraqi workers were used as much as possible, and the tower (self-supported 20-30 meters) was manufactured in Iraq to reduce the costs.

Distance :

The average distance between the Main building of the bank and the buildings of bank branch offices is about 4-7 kilometers. The first link is non-line-of-sight (NLOS) for 4 kilometers. The second and the third links are near-line-of-sight.

fit

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