



ISOCEL SA Wi-Fi HOTSPOT Case Study

Challenge:

In greater Cotonou, ISOCEL will manage at least a thousand hotspots allowing residents and tourists to enjoy high-speed Internet connection at a very affordable price.

Today, there is no hotspot network that is available in Benin and the numbers of Internet users are increasing but most of them are in fact could not afford to pay at a higher rate by using 3G/4G/LTE that is available in the market because it is expensive and it is volume based.

Building a Wi-Fi hotspot network in Benin is very challenging specially that the power is not very stable. But we see the great potential of having a Wi-Fi hotspot network after we have launched our project that we called "ISOSPOT". Thousands of spectators with Wi-Fi enabled tablets, smartphones, and laptops were forecast to be very interested and specially that the price is very affordable and most importantly, the service is unlimited.

But how do you build such infrastructure with the added complexity of the areas including the power of such venues to work? This is the challenge we are facing.

Solution:

To cope up with the growing number of users, we have to design a network that is capable of delivering the Internet to any form of devices that is to a smart phone, tablet or a laptop or any Wi-Fi enabled devices.

We have created a public local access network to cover one area in Cotonou with a several square kilometers. In this area, a hundred micro-stations or hotspots were installed in electric poles at about every 100 meters away. This gave us the ability to provide Internet access to every Beninese who have Wi-Fi enabled devices to connect anytime anywhere in the coverage area.

While we are not able to fully cover Cotonou, we will subsequently deploy in other areas of Cotonou where our main target will be venues, restaurants, hotels, hospitals and other recreational areas where people are used to gather for such events.



To assure top efficiency and the Quality of Service and Experience, we have a dedicated team we have assigned to plan, designed, develop and implement the Wi-Fi core network that is able to deliver true broadband service.

The public Wi-Fi hotspot service featured a fiber-to-the-pole backhaul circuit and some dual-band wireless access points, supporting speeds of up to 300Mbps. To cope with the potential number of spectators, high-density access points with specialist antennae came into play, thus minimizing any interference between the access points.

To manage this infrastructure, ISOCEL have adopted a wireless access point management system. This management system provided network-wide visibility thus allowing us to optimize the Wi-Fi hotspot infrastructure and to deal with potential problems before they became service issues.

The project is the first phase of an extensive investment for us to build new access networks and deliver broadband Internet to residential clients and to businesses.

Value:

ISOCEL wanted to bring fast, easy and secured Internet connection to every user and we highly value the performance of our Wi-Fi hotspot network as far as QoS and QoE is concern thus a dedicated team of ISOCEL's radio frequency engineering experts and Network Operations Center worked closely to monitor the Wi-Fi network's performance.

For us to further understand our Wi-Fi network's performance, we also have dedicated teams that are gathering information and or feedbacks from the end-users. We also have developed our online survey that allowed us to view real-time feedbacks from our end-users. Analysis of the feedback results is immediately conducted and is shared among concerned departments.

With greater scalability and enhanced capabilities, supporting new management information and greater levels of operational control, ISOCEL delivered the first HOTSPOT solution in Benin with broadband speeds on an unlimited package at a cheaper price.

Our mission is to provide excellent Internet access through a Wi-Fi hotspot network, anywhere, anytime and most important, at fraction of the cost.