



JIMS VIRTUAL WORLD

A WEEKLY NEWSLETTER BY THE MCA DEPARTMENT

July 10, 2010

WiMAX (Worldwide Interoperability for Microwave



WiMAX is a technology that provides high speed wireless internet (In form of data, voice and video) over long distances. It is similar to Wi-Fi but evolved a step ahead by offering ultra fast speed with greater distances and for greater number of users. Like Wi-Fi, instead of servicing in a house or small area, it works like a cell phone company does. No matter how far you are from your place it automatically connects to the internet. The biggest advantage of WiMAX is that its coverage extends to those areas where it is not geographically possible or very costly to lay down cables and set up network towers. It provides wireless broadband access up to a radius of 50 km (30 miles) for fixed receivers and 5-15km (3-10) miles for mobile receivers.

WiMAX Components: WiMAX system consist of two parts:

WiMAX Tower : It is similar to cell phone tower and provides coverage to a very large area as 3000 sq miles. It is required to establish microwave connection with users. It can connect with another WiMAX tower through fixed dish antenna and internet through high speed cable.

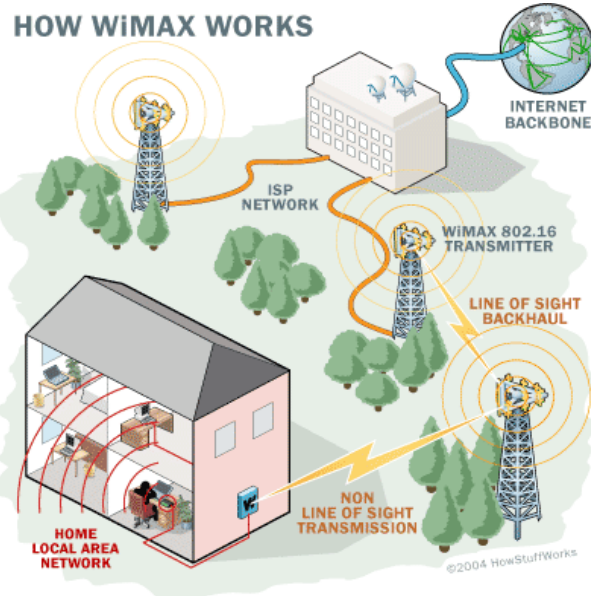
WiMAX Receiver The receiver is available in couple of forms like: it could be a card that can be plugged in through USB port or it could be in build into the laptop the same way Wireless internet access works though cards.

How can a user connect to internet using WiMAX :

Setting up WiMAX is also simple just start your machine and it automatically connects to internet like Wi-Fi, no need of configuring. To access internet through WiMAX it is not important to have internet source nearby but you should have WiMAX tower near to you (that is hundred's of miles away) and an internet sources thousand of miles away from tower. The signal can still reach to you by connection towers. Users machine inbuilt or plug in card will connect to WiMAX tower (non-line-of-sight transmission) and WiMAX tower will connect to ISP through in between WiMAX towers(line-of-sight transmission) and finally internet backbone. 4G makes WiMAX operate at even faster and reliable speed. WiMAX offers two types of wireless service:

Line-of-sight: Where a fixed dish antenna at rooftop connects with another WiMAX tower. Line of sight connection are stronger, stable and offer higher frequencies with ranges reaching as higher as 66 Ghz. A higher frequency offers less interference and lots of bandwidth.

Non-line-of-Sight: Its more like Wi-Fi where small antenna or card of laptop or computer connects to WiMAX tower. In this mode WiMAX offers a lower frequency range of 2Ghz - 11 Ghz but still they can not be easily disrupted by physical obstructions.



(Contributed by :Ms Archana B. Saxena)

SEND YOUR FEEDBACK TO THE EDITOR AT deepshikha.aggarwal@jimsindia.org