LIVE WIMAX NETWORK TOUR
Mobile WiMAX Put to Test

greenpacket
always best connected

As a frequent broadband user, I am continuously trying to learn more about new technologies and finding the best services in the market that are reliable, with sufficient speed, that allows me to enjoy internet contents and applications.

Up until now, my understanding of WiMAX was limited to what I read in brochures and in the media. When a chance came up for me to experience it first hand, I jumped at it.

The Live WiMAX Network Tour (LWNT) was held on Monday, April 27, 2009, and is part of the pre-event showcase to kick off Green Packet's debut appearance at the WiMAX Forum Congress Asia 2009.

We arrived at Suntec Convention Centre Singapore for registration and boarded the tour bus. The tour was kicked off by Kelvin Lee, Senior General Manager of Green Packet, welcoming all of us onboard as we headed across the border to Malaysia.

Driving down to the border, we were able to see more of Singapore than just the hotel rooms and convention centre. The process through immigration was relatively smooth as participants cleared through customs quickly and was back on the bus for the much anticipated tour. The demo presenter from Green Packet explained that the LWNT cannot be carried out in Singapore as the country does not have a live WiMAX network. Hence, the tour had to be conducted in Johor Bahru (Malaysia) that has a live

Kelvin Lee, Senior General Manager of Green Packet, posing with WiMAX Forum and ITRI of Taiwan.

network which happens to be one of the flagship coverage areas of Green Packet's subsidiary company, Packet One (P1) Networks.

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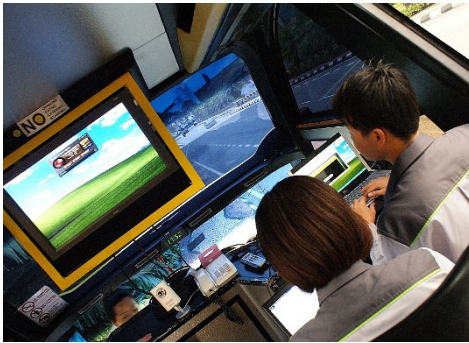
The Retro Fitted Bus

The bus was decked with a big screen TV (for participants to see clearly what was being showcased), live feed cameras, laptops, modems, dongles and even a regular home telephone.

Demo Test Element 1—Speed Test

The performance of the WiMAX network was consistently good while we were on the move, with throughput registered on the 'speedometer' typically between 5.0Mbps to 6.0Mpbs and occasionally up to 9.0Mbps.

Figure 1: P1 Speedometer

Demo Test Element 2—The Modems

After proving that the network speed works through the 'speedometer', our demo presenter introduced us to the modems that delivered the results.

The home D-series (Figure 2) and mobile U-series (Figure 3) are uniquely designed to be fashionable yet practical for daily usage. The presenter explained that these sleek geometrical-shaped USB modems house a strong reception antenna that gives a consistent throughput when users are on the move.

Figure 2: D-Series — Desktop modem

I recently found out that both these modems were awarded the WiMAX Distinction Awards by Technology Marketing Corporation (TMC) for its innovation in the WiMAX space.

Figure 3: U-Series— USB modem
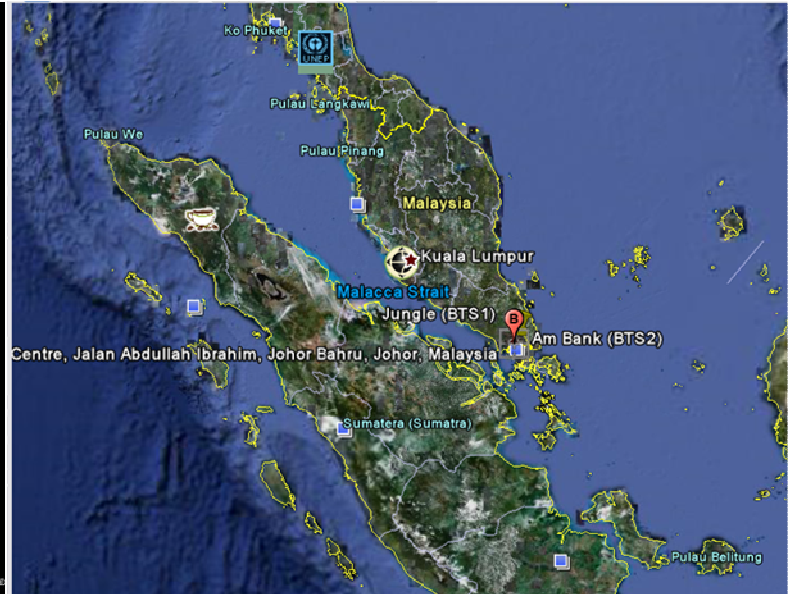
Demo Test Element 3—Google Earth

As we reached the town of Johor Bahru, Green Packet's presenter logged on to Google Earth and zoomed in from Malaysia to Johor Bahru and finally on to the streets, showing us our route for the demo. All this without lag or dropped signal.

According to the presenter, the route (in white) was specifically chosen to include a mixture of high and low density area to showcase different landscapes while maintaining excellent connectivity. I was surprised and impressed that there was no drop in the signal throughout the whole route.
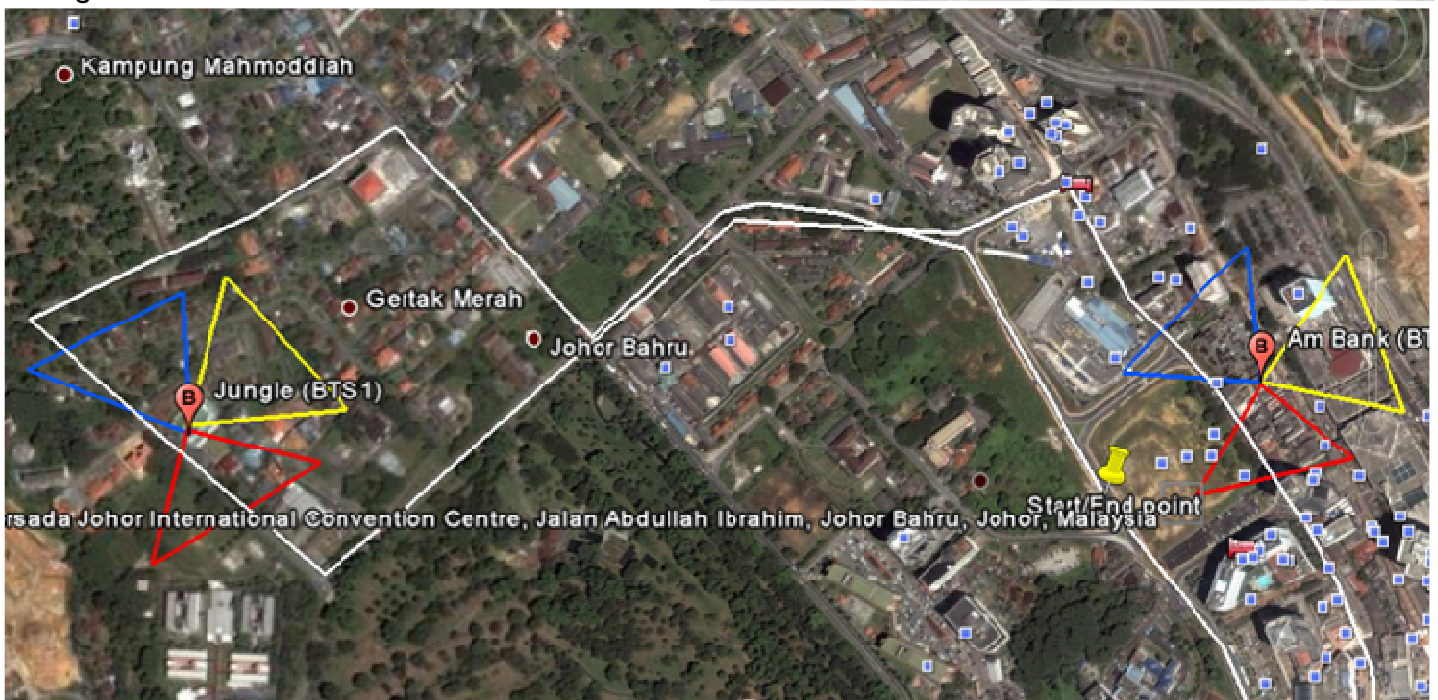
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Demo Test Element 4—Seamless Mobility & Uninterrupted Connection

After demonstrating the network's good throughput and consistent signal reception, the presenter then introduced us to Green Packet's own connection manager software known as Intouch Connection Management Platform (ICMP).

Figure 4: ICM indicating users is in a WiMAX network

He explained that the ICMP provides the ability to offer seamless mobility across different broadband networks. Initially, I wasn't sure what the term 'seamless mobility' meant but I later learned that this software allows users to move from one network to another without interruption or disconnect while online. An example of this would be a user moving from WiMAX to WiFi and vice versa without having to re-establish a new connection. The software's connection manager would also connect automatically to the best network available as users move through different areas.

Later, when I caught-up with Kelvin Lee, he explained, "Mobile broadband is no longer just a vision for the future. Being always connected is now a reality. With Green Packet's ICMP, users enjoy uninterrupted connections as the solution intelligently switches between WiMAX and WiFi network according to connectivity rules set by the user or the operator".

To demonstrate this, the presenter downloaded a Microsoft Program file using WiMAX at full strength (Figure 4). As we were nearing a WiFi hotspot area, the ICMP (Figure 5) switched automatically to a WiFi signal while continue to seamlessly download the Microsoft Program file. That was impressive!

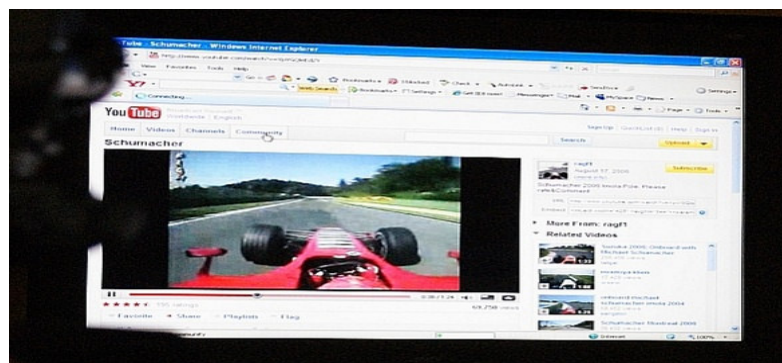

Figure 5: Seamless crossover to WiFi from WiMAX

Figure 6: Exceptional download and buffering speed—full buffering of a four minute video on you tube before 30% had even been played!!! The analogy of 'faster than F1' was quite apt...

Demo Test Element 5 — Video Streaming

Internet browsing was fast with no connection disruption. The presenter tested video applications (YouTube) which worked well; the buffering speed was amazing, with music videos fully buffered before the first 30% was even played.

Demo Test Element 6—VOIP

When you say VOIP (Voice Over Internet Protocol), people automatically think about Skype or TIP or MSN. How many really equate VOIP to an analog house phone?

The implications behind it are immense. Can you imagine, low-cost calls to both domestic and international calls? Hypothetically, the call charges from VOIP enabled phone to VOIP phone would be miniscule.

I believe that Green Packet had recognised the enormous potential of VOIP in the near future. Thus, the Company have designed phone jacks to be built into their indoor modems to enable users enjoy when it introduces its VOIP services later on.

Figure 7: A participant receiving a VOIP call on her mobile while on the move

To demonstrate clear VOIP calls even when on the move, the presenter made a VOIP call using an analog home telephone connected to Green Packet's VOIP modem to a mobile phone (Figure 7). The call went through effortlessly and conversations were clear and without any interruption. This was repeated again to demonstrate a call to Green Packet's customer service landline in Kuala Lumpur which also resulted in clear and uninterrupted conversation.
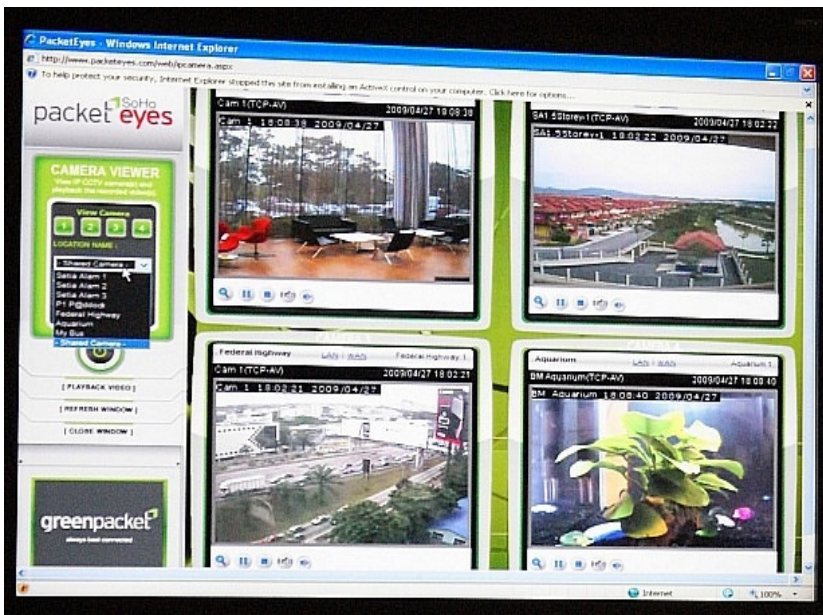
Demo Test Element 7—Packet Eyes

The next element on the demo programme showed the absolute diversity that Green Packet offers through WiMAX network.

Many providers offer CCTV over the internet but the major limitation is that it doesn't use live streaming, thus compromising the image quality. With Green Packet's Packet Eyes which is powered by WiMAX, the images are shown in real-time and real-sharp too!

Green Packet demonstrated Packet Eyes using four different scenarios to illustrate its real time functionality and crystal clear images.

(Top Left) View of Green Packet's meeting room area—vibrant colours.

(Top Right) Neighborhood watch camera—with enough resolution for you to even zoom in and capture car license plates.

(Bottom Left) Traffic-cam—featuring one of Kuala Lumpur's busiest roads, in real-time.

(Bottom Right) Camera set-up to view a very colourful guppy in a fish tank. Crystal clear image of the fish swimming around.

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8.00pm @ Danga Bay Cultural Village For Dinner

After a very successful day of product sampling, connection trialing and putting the seamless ICMP to the test, Green Packet hosted a dinner of cultural exuberance for participants to enjoy. For most of the them, this was their first time to Malaysia and were immersed in the colourful dance performances and cultural shows.

This was followed by a dinner of local fair while the heads of the host and co-organizing companies gave presentations on the services and offerings available. After the dinner, more heritage and culture came in the form of food sampling. The very acquired taste of the DURIAN Fruit (known as king of all fruits) was served-up.

We arrived back to Singapore around midnight and while many of us were exhausted from the day's trip, we were enlightened with the tour showcase on the latest advancements in WiMAX technology and Connection Manager Solutions as well as interesting insights from industry experts.