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ANALYSIS: EVOLVING BUSINESS MODELS

Crunch time

A new report takes a look at existing mobile broadband business plans and warns of over-optimism about embedded 3G and WiMAX notebooks

THE NEW YEAR is a sobering time for most of us. After a gruelling round of parties and obligatory family visits, early January represents an opportunity to hunker down for a few days until a feeling of normality is restored.

It's also a time when we assess the full impact of the events of the previous year, and try to make sense of them in order to work out what might happen in the coming 12 months. That's certainly starting to happen in the mobile broadband market: last year's take-up of dongles and mobile broadband services came as a surprise to many. But now reality is kicking in, and analysts are flexing their sceptical muscles as they take a view of the months ahead.

Dean Bubley, founder of Disruptive Analysis, is one analyst to have taken the nascent market down a peg or two. In his latest report, *Mobile Broadband Computing*, published in December 2008, Bubley says that when it comes to notebooks and mobile Internet devices (MID) featuring built-in 3G or WiMAX modems, the "long-term prospects for the broader market are exceptional, with the global market growing to over 340 million active users by the end of 2014 [from 35 million at the end of 2008], using a mix of 3G, WiMAX and LTE networks."

But Bubley warns that some of the short-term optimism in the market is unjustified, pointing out that the downturn in the global economy will impact notebook sales; make customers and OEMs cautious; and place more focus on cashflow and margins. He says embedded-3G and embedded-WiMAX notebooks will grow slowly alongside separate dongle modems, which will continue to lead the market. Predictions of 50%+ attach rates in two-three years are over-optimistic, he believes.

The report predicts that by the end of 2011, about 30% of mobile broadband users will be exploiting notebooks with built-in 3G or WiMAX modules, while 58% will use external modems like USB dongles. It also predicts there will be 150 million users of notebooks and netbooks with embedded mobile broadband worldwide by 2014; sales of around 3 million MIDs in 2009, although by 2014 this should grow to 10 times that figure; and 45 million users of WiMAX-enabled mobile broadband computing devices by 2012, of which 11 million will also use 3G or LTE connections in various hybrid approaches.

Overall, Bubley says the major risk to mobile broadband take-up is that the impact of the recession and credit crunch on customers, vendors and operators will coincide with a "capacity crunch" as networks become congested by cheap mobile data traffic.

"Moreover, some of the mobile broadband business model assumptions have serious flaws," he says in the report. He believes there is a natural limit to the current trend for long-term, monthly subscriptions. He predicts that by 2011, only 40% of mobile broadband users will be on long-term monthly contracts: most will use prepaid, session-based, bundled or "free" models. Plus, he says some operators' marketing teams have become "over-zealous about competing with fixed broadband. In some markets, HSDPA is now cheaper than ADSL/cable. This is unsustainable, as the cost structures differ hugely", he adds. ■

Anne Morris

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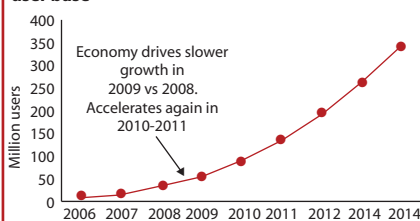
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GLOBAL MBB USERS

Worldwide mobile broadband computing active user base



Note: includes users with notebooks, netbooks, UMPCs, MIDs. Excludes smartphones
Source: Disruptive Analysis, December 2008

NETWORKS

WiMAX in a fix

Analyst says the business case for mobile WiMAX is dwindling, and sees fixed-mobile access as the key application for the technology

WiMAX will be used only for fixed-mobile applications in the long term, according to latest predictions from Nomura Securities global technology specialist Richard Windsor.

“Fixed-mobile WiMAX (802.16d) has seen the vast majority of deployments to date,” says Windsor. “In mobile, WiMAX is up against LTE, where the only advantage it has is its commercial maturity. I have long believed that real demand for 4G is unlikely to materialise much before 2014/2015, and by then WiMAX will have lost this edge.”

Windsor also notes that the commitment to LTE is much greater, meaning that the mobile technology will have substantial scale advantage over WiMAX when it comes to cost.

“This combined with handset availability is likely to mean that mobile WiMAX networks will quickly migrate to LTE once the LTE technology matures,” he says. “This leaves only the fixed-mobile access market available to WiMAX [both 802.16d and 802.16e], substantially reducing long-term expectations.”

Windsor says that by 2012 the total WiMAX market is forecast to be worth \$8 billion; removing mobile reduces that to \$4 billion. The market in 2008 was around \$1 billion, he adds.

Windsor says a lowering of forecasts could lead to further market consolidation. He notes that Nortel and Alcatel-Lucent have both essentially exited the WiMAX market.

Alcatel-Lucent said in December it would reduce expenditure on mobile WiMAX and focus on LTE, although CEO Ben Verwaayen said the company would retain fixed WiMAX as a last-mile access alternative to DSL.

Windsor says that Alvarion, the market leader in WiMAX RAN, “is adjusting its cost base and should be in good shape to make money even with no revenues from mobile”. ■

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ANALYSIS: TECHNOLOGY DEVELOPMENTS

The big freeze

The LTE standard has been frozen as part of 3GPP Release 8, but migrating to LTE-based networks will require a new approach from mobile operators

THE 3GPP SAID in mid December 2008 that it is now able to confirm the functional freezing of the LTE (long-term evolution) standard as part of Release 8.

Freezing a standard essentially means that no further functionalities can be added, so that equipment manufacturers and operators are able to press ahead with plans to roll out standardised LTE-based networks and terminals.

But of course it’s never that simple: LTE may be “ready to go”, and it may be able to support theoretical speeds of 173 megabits per second on the downlink and 58 Mbps on the uplink, but operators face the growing dilemma of aligning increasing capacity demands with returns on investment during a time of economic uncertainty.

“The LTE standard has been accelerated during 2008, but faces the full force of recession in terms of deployment, as capex budgets are pressured,” says Dean Bublely in the *Mobile Broadband Computing* report from Disruptive Wireless. “Except in US and Japan, mass-market adoption of LTE is only likely in 2012-2013. HSPA+ (sometimes called HSPA Evolved) is the likely beneficiary,” he adds.

Bublely describes what he calls the mobile broadband paradox: “Incrementing capacity by perhaps another 10x in the next six years will need investment in more spectrum, more cell sites, newer radio technology, better backhaul and dedicated “hotspot” solutions like femtocells and WiFi. Yet in the current climate, these investments face delay, meaning a ‘capacity crunch’ is possible in some cases.”

According to Ovum senior analyst Steven Hartley, it remains unclear how operators will monetise a faster network such as LTE. “Firstly, operators can’t charge for additional speed that they can’t guarantee. Secondly, they may want to charge a premium but history suggests that this will only be possible for additional value-added services or new devices at the outset. It will be eroded very quickly.”

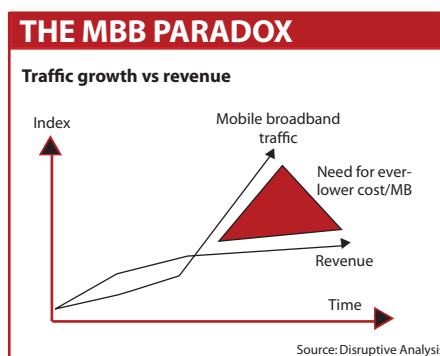
Hartley notes that vendor marketing messages emphasise increased capacity, more efficient management of data traffic and faster service provisioning through the deployment of LTE, meaning that opex should be reduced. But he believes that a key aspect is being overlooked: how the practicalities of migration to LTE will impact mobile operators. He says migration to LTE will need to be approached in the same way that fixed telcos have viewed next-generation network (NGN) deployments: long term and holistically.

It’s still far from clear how long it will take to migrate to LTE. “We still do not have blanket 3G coverage in Europe. Considering that LTE requires even greater cell density, LTE’s timeframe could be even longer,” he says. This means operators will have to support 2G and 3G networks while LTE achieves full coverage. “But it is not just the radio access network. Billing, provisioning and service assurance will still need to be supported for 2G and 3G networks during this transition phase, which is likely to last eight to 10 years,” he says. Then of course there is a critical need for more investment in backhaul to meet anticipated traffic. Hartley says fibre offers the best solution for LTE: “The result threatens to be even greater network complexity.”

Hartley says mobile network operators need to view the impact of LTE in the same way as NGNs in the incumbent space. “It is not simply a new layer in the radio access network, but a major overhaul of the business.” ■

Anne Morris

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SERVICES

Nokia enters dongle market

Finnish vendor surprises with 'un-Nokia' move; operators step up PAYG offers

Mobile equipment makers and operators continued to drive the mobile broadband momentum as we moved towards 2009. In December, Nokia made what one analyst described as a very "un-Nokia" move by finally launching its own dongle, the Nokia Internet Stick CS-10.

"It's just about access. It's not a very 'Nokia' area to pursue," said Analysys

Mason principal analyst Matt Hatton, referring to the vendor's focus on the user experience with its recent product and service offerings.

Meanwhile more operators have launched pay-as-you-go offers: O2 UK has launched a USB dongle priced at £29.99. As part of the Pay & Go package users can take 500 megabytes for £2 per

day, 1 gigabyte for £7.50 per week, or 3 gigabytes for £15 per month.

Later in December Vodafone UK also launched a pre-pay USB modem. The "TopUP and Go" (3.6 Mbps) modem costs £39 and includes £15 of credit for 1 gigabyte of data, which will not expire after 30 days. ■

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CONTRACTS

Alvarion wins deal

Israeli vendor wins US\$12 million deal from VMAX Telecom to provide WiMAX equipment in two counties in Northern Taiwan

Alvarion has won a deal worth more than US\$12 million to supply WiMAX equipment and services for the first phase of a project in Taiwan.

The deal was awarded by VMAX Telecom, which plans to deploy WiMAX equipment and services initially in the Northern Taiwan counties of Taoyuan and Hsinchu.

VMAX Telecom will offer voice, data, video and gaming services to its consumer and business users via its new mobile broadband network, using USB dongles, integrated access devices and embedded WiMAX laptops. "We are looking forward to being the first operator to commercially deploy mobile WiMAX in Northern Taiwan," said Teddy Huang, CEO of VMAX Telecom. "Subscriber growth is expected to reach 500,000 in five years."

VMAX Telecom was awarded a WiMAX licence by the National Communications Commission of Taiwan in July 2007. ■

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US SERVICES

US MBB 'to go mainstream' - report

Analyst report highlights subtle differences in how the term 'mobile broadband' is used in different markets

The term "mobile broadband" clearly means different things to different people, depending on where you are.

In Europe, mobile broadband has come to mean accessing the Internet using USB dongles with laptops; Dongles and HSPA dominate now, but new devices and technologies will emerge.

A recent report from Parks Associates indicates that in the US, the term "mobile broadband" is used less for laptop

service and more for access via handsets. The company says it believes mobile broadband in the US is transitioning into a mainstream service, and predicts an increase in US smartphone sales to almost 60 million units in 2013, "which will increase consumer reliance on mobile broadband connectivity". This will create demand for the same functionality in non-phone devices, it adds. ■

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DEVICES

HSPA devices exceed 1,000

Some 1,095 devices based on HSPA have now been launched, says the GSA

More than 1,000 devices based on high-speed packet access (HSPA) technology have now been launched on the market, according to latest figures from the Global mobile Suppliers Association.

Of the 1,095 devices, 451 are mobile phones; 16 ultra mobile PCs (UMPC); 218 notebooks; 154 USB modems; 143 PC data cards; 101 wireless routers; eight

personal media players; and four cameras. Some 153 devices now support HSUPA, most with uplink speeds of up to 2.1 Mbps. Around 51 can or could support 5.76 Mbps peak speeds.

Some 221 networks have now commercially launched HSPA mobile broadband services in almost 100 countries. ■

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