



NEWS IN BRIEF

SPECTRUM

UMTS 900 gets EU OK

Turning point reached as European Parliament accepts plan to amend GSM Directive to allow 3G services to use 900-MHz spectrum **PAGE 2**

FORECASTS

2bn MBB users by 2014

Analyst company warns that ARPUs will fall as user growth will exceed revenue growth, with revenue forecast at \$137bn by 2014 **PAGE 3**

DEVICES

Apples and Orange

Rumours suggest Orange UK could start selling Apple MacBooks as part of mobile broadband contracts this summer **PAGE 3**

HSPA

Austria gets HSPA+

mobilkom becomes first operator in Europe to commercially launch the advanced mobile broadband technology **PAGE 3**

WIMAX

Sprint tracks Clearwire

US operator follows hot on heels of Clearwire network rollout and details WiMAX rollout plans for 2009 and 2010 **PAGE 3**

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ANALYSIS: NETWORK EVOLUTION

Setting the pace

CDMA operators are in the vanguard of moves to roll out LTE in order to remain competitive with operators following the HSPA+ route

AROUND 10 MOBILE OPERATORS have committed to deploying LTE networks in 2010, and half of them hail from the CDMA camp as operators seek a new technology to remain competitive in future, particularly when it comes to mobile broadband.

After UMB was finally abandoned last year, CDMA operators now have no clear evolutionary path for their next-generation mobile broadband services. Many are now turning to the evolution of WCDMA networks, namely 3G LTE.

According to information on the Global mobile Suppliers Association (GSA) Web site, the five CDMA operators to have committed to an LTE launch in 2010 are Verizon Wireless and MetroPCS in the US, Japan's KDDI, and Telus and Bell Canada in Canada. However, WCDMA operators TeliaSonera and NTT DoCoMo are still expected to compete with Verizon to be first past the post.

The GSA says 26 operators have so far made firm commitments to LTE. It's also rumoured that Sprint, which has made a well-documented investment in mobile WiMAX, now run by Clearwire, is testing LTE. "Sprint is thinking about LTE," says Maria Elena Cappello, head of strategic marketing at Nokia Siemens Networks and a member of the GSA executive committee. "But that's all they have said so far."

Another operator that has committed to LTE in 2010 is US fixed operator CenturyTel, which is in the process of buying Sprint's former fixed-line unit Embarq. CenturyTel bought licences in the US 700-MHz auctions and has said it plans to use them to build an LTE network to extend its broadband coverage.

But some of the larger European operators look set to be later with their LTE rollouts, targeting 2011 or 2012. These operators are typically those that plan to exhaust the HSPA and HSPA+ route before moving to LTE. Alan Hadden, president of the GSA, says such operators will not be missing out when it comes to speed advantage as the performance of HSPA+ today is similar to that of LTE. To get the full LTE speed advantage, says Hadden, you would need extra spectrum.

Indeed, the current peak speed of HSPA+ is 42 megabits per second, but "it's in the toolbox" to take speeds to as high as 84 Mbps, says Hadden, by using a combination of MIMO antenna and multi-carrier technology.

LTE, however, will be the technology that will allow operators to reduce total cost of ownership, comments Colin Chandler, director of business development at Qualcomm Europe. This is because it is based on OFDM rather than CDMA, allowing a reduction in cost per bit. That will make operators more efficient and enable them to offer new services to keep and attract users in a tough competitive environment.

"Consumer behaviour is driving traffic now," says Cappello. "Operators can't control it. There's no way back." ■

Anne Morris

LTE OPERATOR COMMITMENTS

Operator	Anticipated LTE service launch
Verizon (US)	2010
MetroPCS (US)	2010
CenturyTel (US)	2010
TeliaSonera (Sweden)	2010
TeliaSonera (Norway)	2010
NTT DoCoMo (Japan)	2010
KDDI (Japan)	2010
Rogers Wireless (Canada)	2010
Telus (Canada)	2010
Bell Canada (Canada)	2010
Aircell (US)	2011
Cox (US)	2011
AT&T Mobility (US)	2011
Hutchison 3 (Ireland)	2011
T-Mobile (Germany)	2011
Orange (France)	2011
China Mobile (China)	2011
China Telecom (China)	2011-12
Telecom NZ (New Zealand)	2011-12
SK Telecom (South Korea)	Not known
KTF (South Korea)	Not known
Piitel (Philippines)	Not known
Telecom Italia (Italy)	Not known
SmarTone-Vodafone (Hong Kong)	Not known
Telstra (Australia)	Not known
Vodafone (Various)	Not known

Source: GSA

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SPECTRUM

UMTS 900 gets EU OK

Turning point reached as European Parliament accepts plan to amend the GSM Directive to allow 3G services to use 900-MHz spectrum

Buried among the EU roaming announcements this week, a key decision was also made on the amendment of the GSM Directive.

In a short statement, the European Parliament confirmed that agreement has finally been reached on the proposal to allow 3G services to be deployed in 900-megahertz spectrum, which up until now has been reserved for GSM services under the GSM Directive.

By the middle of next week, the whole process could be brought to a close.

"It's the decision we've been waiting for," said Mikael Halén, director, government and industry relations at Ericsson. "We view this as a ground-breaking decision that removes the final obstacle" to opening up the spectrum for use by new mobile broadband services. Halén added that the two committees COREPER and ITRE still have to vote on the issue, but he views this as merely a formality.

The European Commission first proposed a repeal of the Directive in 2007, but this was rejected by the European Parliament. At the Strasbourg meetings this week, Parliament said it "accepted the amendment of the GSM Directive to allow UMTS technology in the 900-MHz spectrum band but conditioned any future change of the conditions of use of this band to codecision under the radio spectrum policy programme to be established by the new Telecom package."

Essentially, the European Parliament wanted a bigger say in the issue and has made a co-decision procedure a condition of its agreement.

What the decision means is that countries previously reluctant to open up 900-MHz for 3G services are now more likely to do so: some countries have already taken this step. "We expect a lot of 900 decisions soon," said Halén. "It means that more people will have access to mobile broadband," as 900-MHz allows cheaper network rollout and is thus an option for rural coverage. ■ *Anne Morris*

ANALYSIS: ROAMING CHARGES

Shock tactics

The European Commission is now tackling wholesale mobile broadband roaming charges in order to cut down on 'bill shock' for users

ROAMING CHARGES HAVE LONG been a headache for consumers. As many mobile users do not fully understand why roaming charges have to be so high, they have long suspected that mobile operators are just making a fast buck while they still can.

The European Commission certainly believes that mobile operators have had it their own way for far too long. In 2007 the Commission tackled voice roaming calls, introducing the Eurotariff that sets limits on the prices mobile operators can charge for mobile calls made or received while travelling in another EU country.

This week, the European Union went a step further, not only extending the original voice regulation but also proposing new regulations for SMS and mobile broadband roaming.

The Commission's proposal is that the regulation should take effect from 1 July 2009, and the policy is now making its tortuous way through the European Parliament and Council of Ministers. If endorsed by both the Parliament and Council, the first-reading plenary vote should take place on 21-24 April.

For users, it's hoped that the measures will go some way towards preventing mobile data "bill shock", the term now commonly used to describe the inadvertent running up of massive bills. Just search "bill shock" on Google and you'll find many tales about unfortunate mobile users who haven't fully grasped the meaning of usage caps, or that surfing while abroad will cost considerably more. The users are often at fault, technically, but there have been increasing calls for safeguards to prevent this from happening to unwary users.

Vodafone UK, for example, charges a flat rate of £15 for up to 3 gigabytes per month. Pretty cheap, you think, but that all goes out of the window when you move beyond the UK's borders. If you take your laptop abroad, you'll find yourself paying £10 a day just for 50 megabytes within 24 hours. Beyond that you'll have to stump up £5 per megabyte.

Under the EU proposals, browsing and emailing on laptops and phones will be regulated at wholesale level, with caps set on how much the host operator charges a roaming customer's home operator. From 1 July 2009, the cap is set at €1.00 per megabyte excluding VAT. The rate will then fall to €0.80 per megabyte from 1 July 2010 and to €0.50 per megabyte from 1 July 2011.

The proposal further adds that roaming mobile users would be able to opt free of charge for a maximum financial limit from 1 March 2010, and €50 or the corresponding data volume has been suggested as one of these limits. Providers would have to warn their customers when 80% of the agreed limit has been reached, with another notification sent once the limit is reached.

Once the results of the EU plenary vote are known, it will be interesting to see how the caps on wholesale mobile broadband roaming translate into end-user prices. A cap of €1 a megabyte already sounds a lot better when you consider Vodafone's charges.

For voice and text roaming charges, the 2007 agreement that was due to expire in 2010 will now be extended to 2012 along with the mobile broadband roaming regulation, if the proposal goes through.

The caps on voice roaming are a maximum of €0.43 per minute for outgoing and a maximum of €0.19 per minute for incoming roaming calls from 1 July 2009, falling to €0.39/€0.15 from 1 July 2010 and €0.35/€0.11 a year after that. Per-second charging will also be applied from 1 July 2009, with an initial minimum period of 30 seconds.

A roamed text message (SMS) should cost a maximum of €0.11 (excluding VAT) from 1 July 2009. ■ *Anne Morris*

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FORECASTS

Mobile broadband to be worth \$137bn by 2014 - Ovum

Analyst company warns that ARPUs will fall as user growth will exceed revenue growth

Users accessing the Internet via mobile broadband-enabled laptops and handsets will generate revenues of \$137 billion globally in 2014, over 450% more than in 2008, according to latest research from Ovum.

But the research and consultancy company warns that user numbers will increase at a faster pace than revenue

growth, meaning declining average revenues per user (ARPUs). The company estimates there will be over 2 billion mobile broadband users by 2014, an increase of 1024% from 181 million in 2008. Thus on a global level revenues will grow at just 44% of the rate of users.

By 2014, Ovum expects there will be 258 million users worldwide accessing mo-

bile broadband services through laptops, either with datacards and USB modems or embedded modules. The number of users accessing mobile broadband via handsets is expected to increase from 158 million in 2008 to almost 1.8 billion in 2014. The most aggressive growth is expected to come from emerging markets. ■

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DEVICES

Apples and Orange

Rumours suggest Orange could start selling Apple MacBooks as part of mobile broadband contracts

Orange UK is expected to begin offering subsidised Apple MacBook laptops with two-year mobile broadband contracts from the summer, according to rumours in the UK trade press.

That means Apple lovers will also be able to get their hands on cheaper laptops through subsidised mobile deals, with high-speed mobile data services to boot. It would also be the first time Apple laptops have been offered this way in the UK. Mobile operators already offer PCs as part of mobile broadband bundles.

The Orange deal is expected to begin over the summer, and Orange is believed to have made a "volume commitment" for the laptops. Mobile broadband access will be enabled through the usual USB dongles.

It's highly unlikely that the MacBooks will come free as part of bundled deals: the cheapest MacBook in the UK starts at around £700, and MacBook Pros are a minimum of £1,300. But any cut in price would be a welcome filip for many. ■

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CONTACT INFORMATION

Wren House, 43 Hatton Garden, London EC1N 8EL
F +44 (0)20 7242 4303 ttmag@totaltele.com

Anne Morris Editor	anne.morris@totaltele.com +44 (0)20 7827 5944
Richard Silver International Sales Director	richard.silver@totaltele.com +44 (0)20 7092 1164
Rob Chambers Publisher	rob.chambers@totaltele.com +44 (0)20 7827 5971

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HSPA

Austrian first with HSPA+

mobilkom first in Europe with the advanced mobile broadband technology

Telekom Austria has become the first operator in Europe to launch a commercial HSPA+, or HSPA Evolved, network that enables potential speeds of up to 21 megabits per second.

The operator's mobile subsidiary, mobilkom austria, is offering the services just in Vienna initially, but plans to roll out further hotspots by Q2 2009.

Ericsson is the equipment provider for the network. The first device available is the Huawei HSPA+ modem E270+

for €49. Over the course of the year mobilkom said it will be possible to reach transmission speeds of up to 28.8 Mbps.

mobilkom also said it is planning to cover 90% of the Austrian population with the UMTS/HSDPA/HSUPA network this year, and to introduce the HSUPA 5.7 technology, in addition to HSPA+, in highly congested areas as of April 2009. This new technology provides upload speeds of up to 5.7 Mbps. ■

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WIMAX

Sprint keeps pace with Clearwire

US operator follows hot on heels of Clearwire network rollout

Sprint has announced its WiMAX service rollout plans for 2009, keeping pace with the rollout plans previously announced by its joint venture Clearwire, which is building the mobile broadband network.


Sprint said it already offers peak downlink speeds of up to 12 Mbps in Baltimore, and over the course of 2009 will extend the services to Atlanta,

Honolulu, Charlotte, Las Vegas, Chicago, Philadelphia, Dallas, Portland, Fort Worth, and Seattle.

In 2010, services are planned for Boston, Houston, New York, San Francisco and Washington DC. New devices this year will include datacards, modems and embedded laptops. ■

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