Massive investment, deferred rollouts and uncertain revenue streams. What have telecoms analysts been saying about the current state of health of 3G? Julian Bright reports

ON REPORT

Back in August 2002, at the height of the summer news drought that the UK media likes to call the 'silly season', a report from the London-based independent research company Datamonitor suggested that some would-be 3G operators should abort operations and hand back their licences. Otherwise, warned the analysts, they risked sinking more money into business plans that simply did not add up.

At the time, Datamonitor's mobile telecoms analyst Nick Greenway spoke in defence of his company's stance, saying that it had been annoyed by some of the messages coming from operators and vendors, complaining that the marketing of 3G had 'got ahead of itself' and was over-hyped. 'Of course, the message does not apply to all operators, but two to three could be at risk,' added Greenway, somewhat moderating the tone of the original announcement.

Whether or not Datamonitor was playing devil's advocate, as UMTS Forum chairman Dr Bernd Eylert suggested at the time, a handful of operators have indeed suspended or indefinitely delayed their 3G rollout plans. But though some degree of fallout might naturally have been anticipated with the introduction of any new technology, the majority of mobile carriers are pressing ahead, albeit to somewhat delayed timescales.

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Not all analysts have quite such a negative perspective on 3G however. For a clear, concise and relatively up to the minute overview of the current situation with 3G rollout in Europe, look no further than a new report prepared for the Swedish National Post and Telecom Agency by Sweden-based analysts Northstream.

Acknowledging that 3G is delayed right across Europe, the report says first launches are now expected mid-2003, with multi-national operator groups such as Vodafone tending to co-ordinate delays, and postpone rollout across all of their markets. However, some operators (such as Hutchison UK's newly-branded '3') are planning earlier so-called 'soft launches' that won't initially address a mass market, but will look to address the pent-up demand in the enterprise sector for mobile office functionality.

Hutchison elaborated on its plans in a recent press interview, when a spokesperson explained that marketing of its 3G services over the first year will be 'more by stealth', building next year to a phased commercial rollout of the service. The company has nevertheless set itself a target of signing up a combined three million subscribers in Britain and Italy by the end of 2003.

Relaxing regulation

Despite their revised plans, operators are having difficulty financing their 3G rollout commitments due to reduced credit ratings and lower than anticipated profits, says Northstream. Regulators are sympathetic to a degree, relaxing requirements for service launch dates in some cases, and allowing cost-saving solutions such as network sharing, even to the detriment of market competition. One such deal was struck in September between mmO$_2$ and T-Mobile for network sharing operations in Germany and the UK. But as Northstream explains, regulators appear prepared to give only a certain amount of ground to alleviate operators' problems.

An EU study in July also recognised that rollout obligations might need to be changed, and in a handful of countries, notably those such as Belgium where early rollout was proposed, commercial opening has been put back by as much as a year. Generally however, Northstream reports that here too the EU is reluctant to sanction other changes such as extensions of licence duration or changes in fees. However, regulators can exercise some flexibility when it comes to definitions such as 'service launch' says the report.

As regards the speed and scope of national coverage, throughout Europe there is a wide difference in requirements for the percentage of the population to be covered and the timing of the milestones. The highest requirements for population coverage are apparently in Norway and Sweden. These countries also have requirements for population coverage that are to be met earlier than other markets. This means these operators have committed to a greater rollout pace. By contrast, in some major markets such as the UK, Germany and Italy, coverage requirements are relatively modest, and coverage is instead driven by market demand, explains the report.

Technology showstoppers

On the technology side, the report challenges the suggestion by some carriers that handset availability alone is to blame for 3G delays. 'Operators are more likely to cite handset delays than network delays, in order to maintain their relationship with their equipment vendor,' Northstream suggests. 'Actual reasons for delay rest on a balance between handset availability and network functionality.'

However, handset availability is an issue, and analysts have adjusted their forecasts for future volume shipments in line with lowered industry expectations. Northstream reports that between early 2001 and September 2002, figures from Morgan Stanley Dean

Witter for the number of 3G handsets expected to be shipped annually by 2005 were more than halved, from an anticipated 100 million units to around 40 million.

Here again, the most tangible indicator of operators' current expectations in terms of handset requirements comes from Hutchison Whampoa. The company already appears sufficiently confident about take up of services to begin sourcing handsets in larger volumes. In October the company doubled its order for dual mode 3G handsets from NEC to two million, on top of an order worth over US$700 million for Motorola's A820 dual-mode devices.

There are however, many factors influencing the accessibility of operators to initial supplies of handsets, says Northstream. These include market size, and operator group size (a multinational operator can exercise its purchasing power on a multinational basis), and the strength of established vendor/operator relationships.

But beware – a product announcement doesn't amount to a handset being obtainable in the market, warns the report. Nokia, for example, launched a dual mode 3G phone in September, but this is currently being used by operators for testing purposes – a process that can take three to four months before a handset become commercially available.

On the network side, Northstream has identified four 'potential showstoppers' that could still jeopardise a meaningful 3G launch. These are:

- Stability of 3G networks. 'In order to launch commercial services on a 3G network without hurting the operator brand, the operator will not accept systematically dropped calls due to lack of stability,' says the report, and goes on to question whether 3G networks already provide stable enough functionally to allow commercial use;
- Interoperability between terminals and infrastructure. This is an issue, it believes, because different handsets have implemented different options within the standard, and also made different implementations of critical mandatory functionality;
- Interoperability between network nodes in case of multiple vendors. Little information has been disclosed about the status of multi-vendor interoperability, but Northstream argues this problem should be less severe than interoperability with handsets;
- Handover and cell reselection between 2G and 3G. Described as 'critical for a meaningful 3G launch' Northstream reports that in Hong Kong, Hutchison 3G has delayed its W-CDMA launch citing dropped calls between 2G and 3G networks. It also says that JP Morgan has interpreted Sonera's recent statement about lack of 'maturity of the network technology' as related to handover between 2G and 3G networks.

As one of Europe's pioneering 3G operators, Sonera's decision to postpone its 3G launch until 2003 is of some concern. Sonera has also cited problems with handset availability and network interoperability as the two other main reasons for the delay and the Finnish operator is claiming that the overall technology is currently not mature enough even to start a commercial pilot.

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Falling short

Yet technology issues aside, why are there fewer 3G operators in Europe than expected? The licence holders that have either suspended operations or simply decided not to invest in 3G include Telefonica subsidiaries in Austria, Germany (where 3G operator Group 3 is jointly owned by Telefonica and Sonera), and Italy (Ipse). But only one licensee – Broadband Norway – has so far gone the whole way and handed back its licence. In other countries, including France, Belgium, Greece, Luxembourg and Ireland there were simply not enough takers for all the 3G licences on offer.

Nevertheless, most operators are committed to proceeding with their 3G plans, and have set alternative launch dates. Interestingly, Sonera has announced that it will still provide 3G services but based on a 2.5G network. 'This way of communicating the difference between services and the underlying network is widely used in North America, and is an attempt to

ease the focus on technology in favour of services,' concludes the Northstream report.

Yet whereas 3G promises a broad variety of services, the choice thus far appears to be lower than expected. Services such as m-commerce, banking, location-based services, and mobile payment have not evolved as anticipated. 'To introduce new services in some cases requires more advanced business models, which has proven to be hard to get in place. Revenue sharing models and payment models are being explored for GPRS services and will pave the way for more advanced models,' says Northstream.

With many smaller service and application developers having trouble finding venture capital funding in the current market, mobile operators have also increasingly turned their efforts to the development of services in-house.

All of which may be disappointing for the expected increased average revenue per user (ARPU) foreseen in 3G business cases, but this is partly offset by the fact that voice revenues are not declining as fast as expected. 'There has been an increase in minutes of use over earlier expectations, which compensates the price decline per minute. The revenues from non-voice services have so far been overestimated,' concludes the report. Nevertheless, analysts' forecast ARPU levels have declined by around 25 per cent from 2000 to 2002 as a result of reduced expectations on revenues from non-voice services.

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Understanding the user

Meanwhile, in a study of a very different kind the UMTS Forum has asked academics at the University of Surrey's Digital World Research Centre in the UK, to look into the social aspects of 3G. The researchers looked at private and public behaviour, and at services including location-based services, and mobile imaging. They claim their work is substantively more insightful than that conducted by mobile operators themselves.

'There is a big market (for 3G) if it's approached properly,' concludes the DWRC's Professor Richard Harper. 'Users are doing things that you can leverage and build on and design for and make a lot of money out of, if only you bother to look and take it seriously.'

Harper says the industry is concentrating too much on what people might be doing than what they are doing, and argues for far greater personalisation of services, and sensitivity to the ways in which people use their phones.

Harper argues that in the way they implement services, operators need to be more sensitive about the 'terms of engagement' between the two parties. 'If you look at how people are using text now, what you find is that they quite often use text as what we call an opening gambit,' Harper explains. So they'll send a text to someone to initiate communication, but not necessarily a full-blown conversation, unless the other party desires it.

In other words, argues Harper, they use some of the properties of the communications medium to 'grade' the level of communication. According to that view, how people are using communications is not to say 'we always want video connectivity' he explains. What they're actually saying is 'we're sensitive enough to realise that sometimes people want to have a good chat, sometimes they just want a little virtual post-it note.'

According to Harper, one of the problems is that providers seem to think that given a choice, users would always send an image; they'd always want to see more. He points out that on NTT DoCoMo's phones in Japan, there's a key that allows people to choose to have video or not when they have the conversation, and that a lot of people are in fact electing to have the conversation without video. 'There's lots of evidence to say that if you have a video phone call and you start off that call with fully duplex connectivity the recipient might be very, very unhappy because they might not be willing to be seen. But the sender who wants to have a video phone call is obviously willing to give vision, so you want to design the service and the form factor so that the recipient can make a decision as to what level they want to communicate at.

'All we're saying is that if you look at how people use communications technology you find that they are much more sensitive and grade the sort of communications they want, and choose different levels for different reasons at different times. So MMS would then be one of a repertoire of communications people want, but will not replace texting because what texting does is something different,' suggests Harper. 'If you approach it that way that's quite consequential on the kind of revenue models you might have, and also quite consequential on how you might want to market it.'

The same logic holds true for location-based services, he argues: 'Users are willing to negotiate at the commencement of a phone call for example, and we think they'd be willing to negotiate things like location-based services on an ad hoc basis in a similar fashion.'

Dr Bernd Eylert says the UMTS Forum is using the study on social behaviour to give additional input to its members. 'By year end, I hope to have more prescriptive recommendations for operators and other members in the Forum,' he told *3G Solutions for Operators*. The full findings of the study will be published early next year.

For operators looking at 3G solutions, then clearly network handover and stability delivered from a vendor that understands spread spectrum technology is paramount. Similarly, finding imaginative ways around handset shortages and understanding the use end-users will make of data can secure optimum ARPU as voice revenues from traditional handsets continue to decline. ■

www.datamonitor.com

www.northstream.se

www.umts-forum.org