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**The broad picture****Internet guru Nadine Berezak-Lazarus surveys broadband infrastructure in Hungary – or the lack thereof**

By Robert Smyth

Broadband internet specialist Nadine Berezak-Lazarus has been sizing up the local internet scene, and is concerned by what she sees.

The managing director of Düsseldorf-based BMP Telecommunications Consultants says there are too few dial-up users to encourage a large-scale jump to the more powerful and influential broadband – unlike in countries where broadband usage is commonplace. Moreover, she observes that a dearth of genuine competition has brought about higher than normal prices.

Even so, Berezak-Lazarus says, not all is doom and gloom. Real changes could be ushered in via an unbundling of the local loop – i.e. alternative telecoms offering broadband at self-determined prices over existing (or incumbent) lines. This, she notes, is a development that has drastically reduced prices and greatly increased download speeds in her native France.

From 1995 to 1999, Berezak-Lazarus advised on Deutsche Telekom's DSL strategy. She has also advised France Télécom, Siemens and others, and is behind the European Commission's Green Paper on mobile communications for 2010.

Berezak-Lazarus spoke with reporter Robert Smyth during a recent visit to Budapest. An edited transcription of their conversation follows.

**Q:** How do you assess Hungary's overall internet status, compared to other countries in the region and in the EU?

**A:** According to available figures, 8% of Hungarian households are using broadband. This puts Hungary clearly at the lower end, yet above Ireland and Greece.

Average broadband penetration in Europe is estimated at about 20%. While it's encouraging that nearly half of Hungarian online users are accessing the internet through broadband, it also reveals low overall use of the internet in Hungary [an estimated 17% of households].

So, as opposed to other markets, Hungary is moving toward broadband rapidly, at an early stage of its market development. And yet the low base of dial-up customers might pose a threat to the future development of broadband.

In other countries, a larger dial-up base preceded the wave of broadband adoption: Free Telecom in France, which started as an ISP offering free dial-up internet access, is a successful example of this. From 2002 on, they have pushed broadband through unbundling [and wholesale], and now have more than one million broadband customers.

Among other factors, low PC penetration and high tariffs versus purchasing power have limited Hungarian internet take-up in the past.

Q: What effect do prices have on broadband access in Hungary?

A: Price is highly important. Experience with other markets shows that it's very difficult to entice mass-market adoption of broadband services at rates above €30 per month. Depending on the standard of living, an acceptable price here might be around one-third less than that.

Q: Are we talking about unlimited download capability?

A: A mix of volume models exist – from true flat rates to limits of 1–5 gigabytes – in order to target different market segments. Let's be frank: one gigabyte is plenty, unless you're constantly downloading music or videos – and if you're doing that, then you're not in what I would call the mass market.

Nevertheless, a lot of residential clients are apparently “risk-averse” enough to subscribe to a flat rate, even though they – knowingly or unknowingly – would be economically better suited to subscribe to a different model. So it cannot be denied that the “safety” of a fixed price has a certain appeal to consumers.

Q: Certain ISPs and/or operators argue that they can't go any cheaper, due both to technology costs and low levels of usage creating a lack of economies of scale. Are they just making lame excuses?

A: We can't deny the importance of economies of scale. In broadband – and, more specifically, in ADSL – operators have to invest in equipment upfront. Whether you have one client or 10,000, the initial investment is more or less the same.

On the other hand, the cost of ADSL equipment has dropped dramatically. In 1997, an ADSL line cost \$2,000. Two years ago, it was around €60–€80, and now it's less than €30.

Nevertheless, challengers buying wholesale access from an incumbent, instead of unbundling the exchanges with their own hardware, are subject to the danger of squeezing prices between the incumbent's wholesale and retail rates. If too close together, there is little business for the ISP.

In the end, it's quite normal for any dominant operator to try and keep high margins for as long as possible – but this keeps prices unattractively high. In more mature markets, we're seeing strong price competition in order to lure as large a user base as possible – which may in the future migrate to additional services.

Q: What are the chances here for successful unbundling, i.e. of alternative operators taking control of incumbent infrastructure for a fee and competing with them?

A: It's not just an issue of line rental. There are many other operational costs and issues. It takes a push from the alternatives and political willingness to make unbundling a reality.

It usually takes two to three years between unbundling becoming legally and economically possible, and being adopted seriously. It normally works in big cities, as the potential subscriber base makes an upfront investment worthwhile. Alternatives need a backbone network to connect with the incumbent's central office. Nobody's going to unbundle in rural

areas, as alternatives are unlikely to roll out their backbone networks there.

It will happen in Budapest, but the question is if it will happen elsewhere. This depends on the framework conditions connected to unbundling. Most alternatives target business customers in Hungary, and don't currently intend to carry out unbundling for the mass market.

Q: While UPC Hungary Kft is already well-established, do you expect other, smaller cable operators to provide a real alternative to fixed line?

A: I think they could. They have a good position, and today the costs of cable equipment are quite reduced. The problem is that there are many small operators, and when you're very small, resources cost a lot. Smaller cable operators might cooperate with larger ones and share infrastructure, or merge with larger operations.

Cable will be a competitive platform, but not everywhere. It's not the most dynamic platform, and is generally only targeted at residential users. It doesn't really reach out to the SME segment – let alone to larger businesses.

Q: Players here are increasing the speed of broadband connections, claiming that speeds will be on a par with Western Europe. Is this correct?

A: They are indeed getting closer to West European offers. But right now in France we have offers of €30 per month for as much as 25 megabits per second for ADSL 2, which is up to 25 times faster than most locally upgraded speeds. This was because challengers – Free Telecom, in particular – put pressure on the incumbent over the last couple of years.

Generally speaking, broadband is at its fastest in urban areas closest to telephone exchanges, as range is a limiting factor.

Q: What can be done to convince operators, local municipalities and the central government to help bridge the "digital divide" and get broadband to everyone in the country?

A: Broadband is part of a region's economic attractiveness, and many politicians have not yet turned their attention to it. Why? Because it is new, they don't use it themselves, and so on.

There's a lot of talk about Hungary being a center of excellence in various fields. But, for example, Hungary is not going to be a strong player in biotechnology without really good broadband infrastructure. Nobody is going to come here without it. It's a factor impacting competitiveness, along with other forms of infrastructure, and I've seen firms in France and Ireland withdrawing from certain regions where they had been well established because they couldn't get proper broadband connectivity.

First of all, awareness has to be raised in the press and by politicians. It's a complex matter, as the technology itself is moving very quickly, and the financial and regulatory mechanisms are complicated. This is a top-to-bottom process, which is missing here so far.

Q: Is much funding available from the EU for broadband development?

A: The EU is very much pushing its Information Society Technologies [IST] program, which holds about one-third of the sixth framework program's budget. It's up to the governments

of each country to apply for this funding from structural or cohesion funds. They have to present a strategy to the EU in order to be awarded broadband allocations.

Public investment should be mutual, and not support single providers only. It makes more sense to invest in very high-capacity mutual broadband platforms that can be used by a number of providers. This can lead to real competition on the service level, as it has in Sweden, for example.

Q: What can alternative forms of broadband, such as WLAN (WiFi) hotspots and WiMAX, offer Hungary?

A: Hotspots have so far received a lot of attention from the service provider side, but have generated very little usage from the customer side – partly because they are not so easy to use, partly because they are expensive, and partly because even the key focus group [of traveling businesspeople] has not caught on to nomadic networking as much as was hoped.

Technically speaking, WiFi hotspots are not a local loop technology [usable by a broad subscriber base]. They are sometimes envisaged as an opportunity to blanket downtown areas with continuous nomadic coverage. This might in ways be complementary to WiMAX, though WiMAX is much more widely targeted at delivering wireless local loop access.

WiMAX has been cited as the next step in WiFi evolution, but it is not. WiMAX is an evolution of the wireless local loop, but it is very expensive. And its transmitting radius – 50 kilometers was expected initially – is more like 5 kilometers.

Q: One thing available in Hungary, which is also available in certain parts of Europe, is 3G UMTS mobile technology. What influence can this have on broadband usage?

A: Frankly, 3G is not a broadband technology, and there would have to be antennas everywhere for everyone to use it.

HSDPA technology is set to increase the data rate by three to tenfold, but this remains in the pilot stage. But even if there are problems associated with deploying a dense antenna network, it can only have a positive effect on overall broadband development.