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access for all? *spectrum auctions in the local loop* *David Harrington*

The disastrous consequences of the UK's 3G spectrum auction has not been understood by the government or OfTel. Such a process imposes unnecessarily high barriers to entry for bidders and brings with it the inevitability that customers will pay higher prices. The government seems destined to repeat its mistakes with the forthcoming auction for broadband fixed wireless access (BFWA) at 28GHz in October. This article suggests an alternative approach based on a proper competitive market spectrum valuation containing no hint of an additional tax on monopoly rents and incorporating a comparative assessment of bidders (the so-called beauty contest). This formula is the best way of ensuring rapid service roll-out and thus fast development of the market in those areas not already served by DSL.

Amid the hype about e-Europe and the UK government's oft-stated intention to 'make this country the best place in which to conduct e-business', there is an underlying reality. Sooner or later every business, large or small, that sells to the man in the street will be trading online, reaching out electronically directly to the end customer. What is called today the ISP sector is about to mushroom as High Street brand names become independent service providers, taking advantage of BT's unbundled local loop and offering services that won't want to be constrained by the capacity of the delivery channel. More especially, these new ISPs will want to offer their goods and services to 60 million people in these islands, not just the 38 million who happen to live and work

within the cable franchise areas or within the effective reach of BT's DSL technology.

So how can that be achieved? What other technologies might offer high speed access to the global highway to those who live in rural Wiltshire? Satellite? Perhaps; although access is limited by available uplink bandwidth. Powerline Carrier? Not yet developed and still suffering from technical problems. Third generation (3G) mobile, or UMTS? Not designed as a fixed-link service delivery system and limited by channel availability. That leaves just one contender – broadband fixed wireless access (BFWA).

BFWA is the only technology which is available, affordable and which offers the prospect of reaching those parts other systems will find it hard to get to in the reasonably near future. As such, it is the only effective competitor to BT's DSL-enabled copper and to the fibre/cable networks in the urban centres. It

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is therefore of vital importance to every potential ISP – and thus to the government's ambitions for e-business in the UK. And yet that same government proposes to tax it by auctioning the radio spectrum to prospective BFWA operators, thus imposing a significant levy on top of the inevitable network build costs associated with entrance to this new field.

Auction considerations

If the information society is to be delivered it is clearly important that all citizens and businesses, regardless of location, have high-speed access to the global network. It is equally clear that this will be achieved only by adopting a benign regime for the allocation of spectrum which:

- Is orientated towards the interests of the consumer;
- Is fair to those who compete to buy or lease it;
- Encourages the development of competition regardless of geography and company size or wealth; and
- Ensures licence holders can deliver innovative services at affordable prices both in the short term and long term.

Clearly, an auction process based on the recent 3G model fails abjectly to meet the above criteria. That process delivered a high return to the Treasury but without any guarantees to the consumer of service roll-out or quality. The open-ended and very public nature of the auction kept bidders at the table, increased the stakes, and encouraged an unhealthy interest by the stock market in the first to walk away. The flames were fanned by the gross overvaluing of shares in the sector, adding to the amount of cash swilling around and favouring those applicants with large cheque books, effectively shutting out others who might have contributed to a more competitive mobile environment.

An alternative approach

The consumer interest in the coming BFWA scenario would be best served by a process which incorporates, to significant extent, a comparative assessment of bidders (the so-called beauty contest), an approach adopted by all those EU member states who are not so far blinded by the huge sum raised by the 3G auction in the UK. From an economic perspective, a pure beauty contest is inefficient because it fails to encourage an efficient use of the resource in the production process. An auction is an effective way to value the spectrum if the bidding market is

competitive, if the bidders are not locked in by previous investments or market positions, and the downstream service markets are competitive. And in an auction among competitors in the same market, they should all pay the bid of the lowest bidder – the marginal user – to qualify, as this is the marginal cost of this spectrum and all competitors should pay the same price. In the UK's 3G auction this was clearly not the case, as all the markets are highly imperfect and four of the bidders were locked in and had to win, but knew that excessive prices could be passed on to the services market because those markets will not be competitive. So the price included the spectrum value and an enormous tax on monopoly rents, which are just as inefficient as the beauty contest. By the end of the day, the sum realized was four or five times the most optimistic analyst's forecast. As a result, the typical winner has spent twice as much on his licence as they will on network build. Pre-auction business models have gone out of the window, new cost-spreading alliances will have to be forged, roll-out will be delayed and the customer will, as usual, pay.

In the BFWA case, the market is once again skewed, this time by the presence of the dominant, universal operator and their extant competitors in the cable franchises. The consumer would thus be best served by a process based on a proper competitive market spectrum valuation containing no hint of an additional tax on monopoly rents. After all, the purpose of the exercise is to achieve rapid service roll-out and thus fast development of the market in those areas not already served by cable or DSL. (Fundamentally, the auction doesn't have to be only a price auction, or even to include bidding based on any payment to the government at all. Potential operators could bid on specific investment and service roll-out programs, coverage areas, quality of service and consumer price levels. This is still an auction, but one directed toward the supposed objective of the exercise. The concept isn't new – it achieved successful roll-out of FWA services in Alaska 30 years ago – perhaps the ultimate rural area).

What now?

The British government has declared that there is to be an auction for 28 GHz licences, based on the 3G model, in October. Forty two licences are to be awarded of 15 years each and the 'expectation' price is £78 million, equivalent to the Radio Agency estimated administration cost. If the 3G experience is repeated, we shall see the actual sum bid exceed £4 billion. However, in June the European Parliament expressed considerable concern over the UK 3G auction and its effect on other member states, the

development of 3G in Europe and European competitiveness. The Commission was criticized for not speaking out against auctions. There has been mention of the dangers of a 'Faustian pact' between governments and UMTS operators, in that governments could find themselves in thrall to those who had so expensively bought licences and would thus feel inclined to shield them from subsequent regulatory supervision. This is not a situation which should be allowed to bleed over into the BFWA arena. Elsewhere, the Hong Kong government financial secretary has said that a straight auction might jeopardize the services offered. His point was that: 'If you try to cream off a lot of money in the auction process there's a transfer of investment money into the public sector very quickly and that might affect those companies putting real money into the system themselves'. He said an auction 'might not be in the public interest unless the government is literally in need of cash for a much bigger, more honourable public cause. Hong Kong isn't in that situation'. His argument has obvious applicability to allocation of BFWA spectrum.

In the UK a Broadband Wireless Task Force has been formed. Consisting of an alliance of the Broadband Wireless Association and user groups, it is lobbying ministers and regulatory authorities with the view that the proposed auction is not in the long term best interests of the UK and is inconsistent with government policy. It emphasizes that 'innovation does not always go hand in hand with deep pockets and says that a modified auction structure focusing on a variety of key components would permit the inclusion of innovation, speed of roll-out, the overall coherence and credibility of the project and the effect on competition to be included in the selection criteria'. Amen to that.

The auction for 3G spectrum earlier this year was wildly successful from the Treasury's narrow viewpoint, but has also been described as 'a disaster' both by potential bidders and by consumers. Bidders see an unnecessarily high barrier to entry and consumers, who have to live with the evidence that the customer always pays, are cynical about Patricia Hewitt's blithe assurances that 'competition will keep prices down'. They are similarly unconvinced by Oftel's novel argument that auction costs can be regarded as 'sunk costs' and therefore prices will be based on the marginal cost of operation. Both utterances seem to be what one would expect from people forced to defend the indefensible. Let us hope that a face-saving formula will be found before October, for the sake of e-commerce@its best!