

**Ofcom Written Submission for Congressional Sub-Committee on
Telecoms and the Internet Hearing
“Digital Future of the US Part IV; Broadband: Lessons from Abroad”**

Good morning Chairman Markey, Ranking Member Upton, and Honourable Members of the Committee.

My name is Ed Richards, and I am the Chief Executive Officer of the Office of Communications, the regulatory authority for the telecommunications & media sectors in the United Kingdom. It is an honour to appear before your committee today.

I know that this committee has been considering the future trajectory of communications regulation here in the United States. As you can imagine, there is great interest in our institution in that debate. There is a long history of cross-pollination of ideas in this area between our two countries, and we liaise closely and regularly with our colleagues at the FCC. I would say that the more we look around the world and study different markets in detail, the more certain we are that there is no single policy prescription for all countries. But it can be, we believe, very instructive to compare notes on what has worked and what has not worked in our respective countries. I hope that our insights on UK experience can be of some value to the work of your committee.

Before we get into the substance, I would like to say some words of introduction about Ofcom. We are a relatively new institution which commenced operations at the end of 2003. We were formed as a response to the phenomenon of convergence – the increasingly close relationship between the formerly discrete areas of broadcasting and telecommunications. We are a sector regulator for telecoms, television broadcasting and radio, the UK’s spectrum management body, and we also apply UK competition law in the sectors that fall within our remit. We have a headcount of around 800 people, and an annual budget of £125m, that’s just under \$250m.

Whilst we cover similar territory to the Federal Communications Commission, there are some significant differences in the way we are structured. Most obviously, at the top of the organisation we do not have Commissioners affiliated to political parties. Instead we have a Board, modelled on that of a public company, consisting of a non-executive chairman, Lord Currie, appointed by the UK Government; a Chief Executive Officer – myself, appointed by the non-executive members of the board which includes the Chairman; and a mix of other executive and non-executive members, with the non-executives always in the majority. All are appointed on the basis of relevant business or policy expertise, rather than from a party ticket. This structure was a significant innovation in Britain and has generated a lot of interest throughout the world. We think it is working well.

And I would like to emphasise that we are an *independent* regulator, not part of the Government or the civil service, and we are, to all intents and purposes, self-financing, drawing our income from licence fees, although within financial parameters set by our finance ministry. I am here before you today representing the views of the Board of Ofcom and not on behalf of her majesty's Government. I am not a civil servant or in any capacity a Government official. Ofcom does however enjoy a close and positive working relationship with the Government and in particular the department of Trade and Industry, and department of Culture, Media and Sport, though Ofcom is accountable to Parliament not the respective Ministers. This enables Ofcom to have close understanding of Government policy but to operate independently from them.

Let me turn then to our approach to telecoms regulation. First, I want to explain a bit about the market context we are now facing in the UK.

Second, I would like to briefly compare the history of our regulatory model with yours. I hope this will make sense of some of the other points of divergence in regulatory approaches that we may discuss later.

And third, I want to talk about how in the UK we are addressing some key regulatory issues which I believe are of interest to this committee including promoting competition in telecoms, stimulating investment in next generation broadband and wireless, addressing concerns about 'net neutrality', and using new spectrum management techniques to create greater scope for innovation and competition in the telecoms arena.

About the UK telecommunications market

Perhaps it might be useful to provide a brief snapshot of the UK telecommunications market.

We estimate that telecoms service revenues in the UK are around \$50bn a year, compared with around \$250 here in the US. UK consumers spend a little less per capita on telecoms services than here in the States – \$820 per annum compared with \$855 per annum.

Fixed line penetration in our two countries is again pretty comparable, but as the committee will no doubt be aware, for historical reasons the UK and EU mobile or wireless markets are more heavily penetrated. Our figures for 2005 indicate 108 mobile subscriptions per 100 people in the UK, compared with our estimate of around 70 mobile subscriptions per 100 people here. Though your numbers will also have changed since then.

Behind these numbers lie some important shifts in consume behaviour which are themselves now affecting the market. Fixed line voice revenues – for many years the bread and butter of telco businesses – are in decline partly because of declining prices spurred by competition but also as a result of substitution to wireless voice and to fixed and wireless data services. In the

UK in 2001, fixed voice revenues were at \$24bn and mobile service revenues were at \$16bn. By 2005, these numbers were \$20bn and £26bn respectively. Within the mobile or wireless industry there is a separate, significant shift of revenues from voice to data services.

Perhaps the most interesting statistics for this Committee relate to broadband. Our latest research on the UK market suggests that our figure has now grown to over 50% of households in the year since the last survey, and there was a 31% increase in the number of connections over the course of the last year.

Part of the growth spurt can be attributed to a sharp increase in the competitiveness of pricing of broadband. Basic 2M/bit broadband is now widely available for \$30, compared with \$100 in 2003. Faster speeds are becoming widely available and services offering headline speeds of 8 M/bits per month are now being offered by some providers for as little as \$20 a month. Increasingly we are seeing bundled offerings, in which broadband is offered in a triple or quad play alongside fixed voice, pay TV, VoD and mobile services.

Evolution of the UK regulatory approach in telecoms

So that is where we are today in headline terms. How did we get here?

The UK was one of the first countries in the world to follow the US lead and introduce competition into the telecoms market back in 1984.

Although our policy has always been strongly influenced by the US, there were some features of your policy that we chose not to replicate in the UK. There was no equivalent of the 'Bell Break Up'. Our incumbent, BT was left as a single, vertically integrated business when it was privatised in 1984. Partly because of this we have not had the kind of segmentation of the market that was a feature of US policy. We abolished all vertical restrictions between local, long-distance and international markets in 1991 and allowed unrestricted local access competition, something which was permitted here in your 1996 Telecommunications Act. Cable and telecoms have also been subject to an essentially identical regulatory regime, so we have not had the same long-running issues that you have faced over the classification of cable services.

I should also say that we removed all foreign ownership restrictions in telecoms in the 1990s and US investment has been a continuous and highly welcome feature of our market in consequence.

So from a common root in a desire to introduce the forces of liberalisation and competition into telecoms, our markets and regulatory strategies have evolved along slightly different paths. Seen from outside, the US approach fostered early and dynamic growth and competition in the telecoms market, but over time it has become progressively more important to remove certain artificial segmentations of the market. Your story, as we read it, is one of a series of

deregulatory phases of policy which have allowed convergence to take place and which have led – as demonstrated most recently in the AT&T-SBC merger – to a significant vertical reintegration of your market.

The UK on the other hand, has had a market substantially free of artificial restrictions on competition. But, lacking the decisive ‘big bang’ of the Bell Break-Up, we have struggled for some twenty years to create the conditions for really effective and sustainable competition in the face of the continued market dominance of our incumbent.

The 2004-2005 Strategic Review of Telecommunications

Therefore, in 2004 Ofcom, as one of its first major tasks, began a strategic review of telecoms regulation in the UK.

The strategic review was designed to answer some very simple questions. Why, after twenty years of regulatory intervention, were we still struggling to create the conditions for effective competition in our UK market? In particular, why had broadband services – seen as strategically important to our long-term competitiveness - been rolled out more slowly in the UK than in other comparable countries? And why was BT still a dominant player across so many market segments?

The conclusions we came to were stark. The many regulatory interventions introduced over years had not had the effect of creating sustainable, effective competition. Quite the opposite in fact – they had created a culture of weak, fragmented competitors dependent on regulation for their ongoing survival, whilst the regulation had not prevented BT from discriminating in favour of its own downstream businesses.

And the regulatory model was not only sub-optimal but probably unsustainable. The alternative carriers were reliant on profit from voice and narrowband data traffic across the old Public Switched Telecoms Network. But these profits were being competed away, and the industry was also facing a transition from a business predominantly based on narrowband voice revenues to a business predominantly about broadband and data services, which would require new investment and would not provide any guaranteed future returns.

Whilst one might expect the incumbent telco, BT, to be nominally a beneficiary of ineffective regulation, BT was itself struggling with the regulatory burden. It too wanted to meet the new broadband challenge head on through investment in new infrastructure – specifically, a new all-IP network. But it needed greater regulatory coherence and certainty to make this investment.

So the question was, how could we exit this muddle.

We looked very closely at the work conducted in 2003 by the FCC in its Triennial Review. The option of simply deregulating – removing all or most of

the regulation introduced in the previous twenty years and seeing how the market would react – had considerable attractions.

This might have led us to follow the FCC lead and remove all wholesale access and unbundling requirements from BT, relying instead on inter-platform – as it is sometimes called, inter-modal – competition between vertically integrated end-to-end access infrastructure providers.

But we had two problems with this approach. First, the position of the *existing* infrastructure competitor to BT, the cable industry, was (and is) very different in the UK to here in the US. Cable is rolled out to around 50% of the UK population compared with over 80% here. And at the time we started out review, both the principle UK cable players were either in or had recently completed financial restructuring exercises and their future competitive strategies were highly uncertain.

Second, we examined the scope for competition to the incumbent from wireless infrastructure providers, using both the existing cellular operators' infrastructures and those that might follow down the technology upgrade path in the next few years. We concluded that wireless networks would always lag wired networks in their ability to shift bandwidth-hungry services and applications from one fixed location to another. Wireless is very important to us – and there is a premium on getting the right policy approach to spectrum management, which I shall discuss shortly – but wireless services were unlikely to compete head on with fixed, broadband enabled networks. We also looked at all the more radical technology ideas such as Powerline, but for varied and complex reasons these are unlikely to be viable in the UK.

Forbearance in the application of unbundling style regulation would have led not to liberated inter-modal competition, but to a reinforcement of the incumbent telcos existing monopoly. Not a desirable outcome.

At the other end of the range of policy options, we looked at the desirability – twenty years down the track – of our own 'Bell' break-up of BT. The argument for doing this was that by separating the natural monopoly elements of the BT business – the access infrastructure – from the remainder, we would at a stroke remove the ability and incentive that BT had to discriminate in favour of its own downstream business. To achieve such a split, Ofcom would have had to make a case to the UK Competition Commission, our most senior competition authority, which would itself have had to conduct an investigation which could have lasted up to two years. So this would be a slow and uncertain route.

But it also was not clear that this was a necessary or even desirable course. The core problem of discriminatory treatment by BT in favour of its' own downstream businesses might be achievable in a less irrevocable and more proportionate fashion through the introduction of operational or sometimes known as functional separation. This would be a re-organisation of the natural monopoly elements of the BT business into a separate business unit, subject

to separate governance arrangements and required to abide by tough non-discrimination rules.

Following consultation, in September 2005, BT agreed to make a series of changes along these lines. It created a new business unit, Openreach, which is responsible for its bottleneck access infrastructure, has its own management board, brand, management team offices, and employee incentive schemes. It is, in large measure, a fully separate business operating within BT Group. The Openreach structure and governance provides a guarantee of non-discriminatory treatment, though this is backed up by detailed obligations on Openreach in the way that it provides equivalence of input to specific wholesale products. By equivalence of input we mean that BT's own downstream businesses and those of its rivals should receive the same products at the same prices, same quality of service and terms and conditions. With these measures we had a comprehensive solution to both price and non-price discrimination by the incumbent on behalf of its own downstream businesses.

These guarantees of competition in the upstream wholesale market have allowed us to significantly deregulate downstream markets, and to provide considerably more certainty on the trajectory of future regulation – critically important, as I shall explain, to encouraging new waves of investment in next generation infrastructure. BT derive some particular benefit from the process. Most obviously, it avoids the possibility of protracted competition investigation which could have led to the eventual break-up of BT. But we also undertook to review and where possible remove existing regulation, particularly of BT's retail businesses once equivalence of input was provided. On this basis for example we have now removed all retail price control from BT voice telephony services following the deletion of equivalence of input from relevant wholesale products.

We have also reinvigorated our approach on unbundling of the BT network. Unbundling is a term used in a slightly different ways in our two countries, so let me be clear that the focus of our unbundling is the physical connection between the customers' premises and the local exchange. One irony is that when unbundling was a cornerstone of US policy after the introduction of your 1996 Act, the then UK regulator, Oftel, was sceptical about whether it could be made to work and indeed, when first introduced in our market, local loop unbundling was a failure. But now, through considerable hard work and focus on both process and price issues, we believe we have developed a viable LLU model.

The creation of Openreach and the reinvigoration of local loop unbundling has already had a significant effect on the UK market. It has revived investor confidence and has led to major new investments by a range of players. I have already mentioned the strong top-line numbers for broadband. There is now a particular focus on using unbundled broadband lines to offer retail bundles of broadband, telephony and entertainment services. A price war has commenced in which broadband is being offered in some cases 'free' as part of a bundle which also includes such telephony and entertainment elements.

The Ofcom approach is attracting a lot of interest in other countries. The European Commission has recently indicated that it is considering making UK-style Functional Separation a regulatory approach available to all EU regulators.

Tackling the challenges of next generation investment

As I am sure you have seen in the US market, convergence is accelerating the need for change, with the proliferation of uses and technologies and the erosion of traditional boundaries. Next generation networks will accelerate the convergence of services and technologies. Any changes in our policy approach provide a solid basis for promoting further investment and innovation in the UK market. But we face some specific challenges.

In all developed markets, infrastructure companies are now planning major investments in new infrastructure, often termed next generation networks or NGNs. NGN plans around the world are taking different forms. We are of course well aware of the plans announced by a number of companies here. In the UK, BT announced an upgrade of its core network to a next generation network, what it terms the 21st Century Network. This is a huge undertaking, involving the complete replacement of the PSTN network throughout the UK with an all-Internet P infrastructure. When it's completed in 2012, the 21st Century Network will have cost BT some \$30-36bn in total. That investment only covers the core Next Generation Network – BT has not yet confirmed any plans for a Next Generation Access Network, involving new fibre or wireless connections to customers.

The 21CN plans require Ofcom to find a policy which creates the right incentives for investment and for ongoing competition. On the investment side, we recognise that regulation can create sufficient uncertainty to deter investments which are highly desirable from a market and consumer perspective. We are seeking to reduce regulatory risk by:

- Stating in advance how we will calculate the cost of capital in any future regulated wholesale prices for use of the 21CN.
- Agreeing how long wholesale products on the existing network should be made available in parallel with the new ones.
- And agreeing how we would treat the costs of operators migrating from PSTN wholesale products to new NGN wholesale products.

These measures may not seem particularly dramatic, but they significantly remove risks and uncertainties that would otherwise exist. We have looked at going much further and introducing policies of regulatory forbearance. Some incumbents in Europe, though not BT, have called for 'regulatory holidays' for NGN investments – essentially the removal of all pro-competition rules. We do not agree that this is necessary to secure NGN investments, and we think the price of such a policy in a UK context would be extremely high. We would be sacrificing competition in return for an investment that BT can and will make in any event. Again, I return to the differences between our market

conditions and yours. The forbearance policy here assumes widespread intermodal competition between cable, telco and wireless systems. This is not realistic in UK market circumstances.

We have also followed carefully the debate here in the US about the principle of net neutrality. So far this has not really resonated in the UK or EU discussions of the future of telecoms policy. As we see it, the core of the debate is the extent to which discrimination, whether between different types of traffic or between different service providers is acceptable business practice. We believe that discrimination is not a bad thing per se. Indeed, we strongly believe that some forms of traffic discrimination will be essential in an all-IP environment. The key issue for us in judging whether discrimination is likely to be a good or a bad thing for consumers is whether the parties engaging in discrimination possess a degree of *market power*. In the UK (and Europe generally) our powers to intervene in markets are, in the main, subject to a requirement to show that such market power exists. If an infrastructure operator with market power nakedly discriminated in favour of its own downstream business, clearly we would intervene to prevent this from happening in accordance with the general regulatory approach I outlined earlier.

It is, however, vitally important that consumers have access to information that allows them to track differences between suppliers and switch easily to alternative providers – otherwise the ability to punish discriminatory behaviour is lost. This is likely to be an area of significant work for us.

It follows that we are not convinced by the case for an over-arching net neutrality law, at least in our market conditions. But I look forward to further discussion on this.

Spectrum policy

I would like to say a little about the area which Ofcom believes offers potentially the greatest long-term benefits from our regulatory approach – the area of management of the radio spectrum.

The UK and the USA share a similar vision of the importance of spectrum as an economic resource for a future generation of convergent applications and services. We share a belief in the need for flexibility in the terms on which spectrum is released to the market, in a complex and fast-moving environment where pre-selecting successful technologies is not possible. And we both believe in the importance of creating secondary trading markets for spectrum, allowing users to swap or sell spectrum to maximise its economic potential.

How are we progressing this issue in the UK? The basic groundwork was created by a 2001 report written by Professor Martin Cave, commissioned by the Government, which recommended a move to a predominantly flexible and market-led approach. As I have already mentioned, Ofcom is the agency responsible for managing the civil spectrum in the UK. The UK's 2003

Communications Act gave us a specific mandate to optimise the efficient use of spectrum, and enabled us to introduce a spectrum trading regime, in accordance with the conclusions of the Cave Review.

In November 2004, we set out our strategic approach to spectrum management. Historically, most of the UK radio spectrum (around 95%) has been subject to what we call a 'command and control' approach where the uses to which spectrum can be put are predetermined, in many cases along with the technology that may be deployed. Our vision is to move, by 2010, to a predominantly market-led approach, with some 70% of spectrum available for use for any purpose and with any technology, subject only to the minimum necessary restrictions to prevent harmful interference.

As part of this, we announced a major programme of spectrum auctions. Collectively, these auctions will release some 350 MHz of prime spectrum below 3 GHz to the market. In each case the auctions will be open to all companies, regardless of nationality, and licences will be granted that allow flexible use, freedom of choice of technology and the right to trade spectrum. The programme is well advanced, with a number of significant auctions planned to be held this year and next. Alongside this programme, we will look to progressively remove unjustified restrictions from other, existing licences already issued.

One important element of the UK's approach has been the introduction of what we term Administered Incentive Pricing (AIP) fees for many existing classes of user, including those in the public sector. AIP seeks to reflect the opportunity cost of spectrum being used for its current purpose as opposed to other possible uses on the open market. This has created significant momentum for users to relinquish holdings of spectrum that they do not need, enabling these to be made available for reuse via the spectrum auction programme mentioned above.

More recently, following an independent audit of public sector holdings of spectrum in 2005, Ofcom is looking to further extend these principles to public users of spectrum. This includes the wider application of AIP and the introduction of spectrum trading and greater flexibility to a number of bands used by the public sector.

We are of course encountering significant complexities in the move toward our spectrum vision. In particular, the UK cannot operate in a vacuum but must both co-ordinate usage of spectrum with our nearest geographic neighbours and, to an increasing extent, co-ordinate our activities with the rest of the European Union. However, the EU itself is placing increasing emphasis on the need for the forms of liberalisation that we have pursued in the UK.

Conclusions

Mr Chairman, we see many points of similarity between our two nations in relation to the challenges we face in the area of communications policy. We are both deeply committed to market-based policies which promote innovation, investment and competition. Our countries have benefited

historically from high levels of inter-penetration of capital, of companies, and of ideas. I hope that we can maintain a strong and fruitful dialogue over the coming months and years and for our part Ofcom is committed to strengthening our close ties with our counterparts here in the United States.