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Mobile citizens, mobile consumers: Adapting regulation for a mobile, wireless world: T-Mobile's response

T-Mobile welcomes the opportunity to respond to Ofcom's consultation, "Mobile citizens, mobile consumers: Adapting regulation for a mobile, wireless world" (the "MSA"). Our response sets out our general comments on the consultation and our thoughts as to how regulation of the mobile sector should best adapt to market developments going forward as well as our answers to the specific questions raised by Ofcom.

T-Mobile is one of the world's largest mobile operators with more than 125 million customers worldwide and is the service provider of choice for around 17 million customers in the UK. T-Mobile has been a leader in the UK market in delivering better value services for customers. T-Mobile has also delivered significant consumer benefits in introducing a range of innovative products and services. We have just launched the T-Mobile GI, the first phone in the UK using Google's open Android platform, and our products include Solo, the SIM only option offering market-leading minutes and texts (at £30 per month) on a 30-day rolling contract; Combi, our best package deal; Flext, a unique tariff with a flexible allowance; U-Fix, a tariff that combines pay-as-you-go and a minimum term contract, and web'n'walk, which enables customers to surf the internet on the move. T-Mobile's competitive high-speed Mobile Broadband tariffs include access to the largest worldwide Wi-Fi network, with more than 1,000 HotSpots in convenient locations in the UK and 27,000 worldwide. Network coverage is among the best in the UK at over 99 % of the UK population. T-Mobile also operates an advanced 3G HSDPA-enabled network capable of supporting effective mobile broadband speeds of up 4.5Mbps and we are the first UK operator to provide a nationwide HSUPA capability for faster uploads. [✂]

The UK market is the most important mobile market in Europe. It is the largest by revenue; mobile accounts for over 50% of UK telecoms revenues and mobile retail revenue grew 9.4% in 2007. Mobile now represents 40% of voice call volumes. The UK is the only market in Europe with 4 major mobile groups competing head-to-head.

Executive Summary

Market context

The mobile market has performed remarkably well in terms of take-up, prices and innovation and is delivering productivity benefits to businesses, yet this consultation focuses instead on perceived problems**.** There any many economic benefits which mobile phones and the mobile industry convey to society. A recent report prepared by the GSM Association has attempted to quantify the contribution that the mobile industry has brought to social and economic development.[1] Since the introduction of mobile services in the early 1980s, the market has grown at an impressive rate. Mobile communication is now a key European industry, comparable in size to pharmaceuticals or aerospace, with revenues amounting to €208bn.

More broadly speaking, mobile services make a very strong socio-economic contribution to Europe: The mobile industry also makes a very substantial contribution to the European economy, generating an estimated 3 million jobs for Europeans. Key contributions include**:**

- Mobile operator GDP of approx. €135 billion (1.1% of total EEA GDP);
- Contribution to public funding amounting to approx. €125 billion – of which €40 billion is from mobile operators directly;
- Direct employment of 590,000 Europeans, and induced employment of 2.7 million from direct employees' spending and the mobile industry's contribution to public funding;

The UK mobile market is ferociously competitive with market penetration of almost 70 million active customers, and differs significantly from other European markets as there is no single dominant company. Ofcom should be congratulated for creating this vibrant market, and should work to ensure that this market structure continues as it leads to significant consumer benefit. The aim of telecommunications companies is to maximise profits and innovation is key to the provision of new products and services; for example, mobile broadband. As these new products emerge, prices are falling – led by the market. With the fierce competition from MVNOs, particularly in the prepay market, there is a huge amount of choice for customers.

The service that mobile operators provide to their customers now is very different to that which was provided in the 1990s. The focus then was on network provision, whilst now operators have evolved to being customer-service focused organisations. One of the key trends in recent years in the mobile market is self-regulation and 'putting the customer first'. This is distinct from many other industries and is something that Ofcom should be praising the industry for, as opposed to then burdening it with further inappropriate regulation.

[1] GSM Association, European Mobile Industry Observatory 2008, 19 September 2008, p6 http://www.gsmworld.com/europe_observatory/index.shtml

We think Ofcom is being overly simplistic in attempting to compare the fixed narrowband market with the mobile market. These are completely different markets and whilst competition from mobiles may lead to consequential changes in the appropriate regulation of the fixed narrowband market, there is no opposite impact from the fixed narrowband market to the distinct mobile market.

Such contextual information forms part of the recent report by Francesco Caio "The Next Phase of Broadband UK: Action now for long term competitiveness" and will also be relevant to Lord Carter's review of "Digital Britain" anticipated in spring 2009. Whilst we welcome Ofcom's specific consideration of this market it does appear that Ofcom in this consultation has failed to look at the bigger picture.

Key points from T-Mobile response

- There have been many developments to the fiercely competitive UK mobile market which have benefited consumers and ensured that operators are constantly re-investing into their networks;
    - Commercially provided mobile services have now become a key means of telephony access for low income households. As a result of the widespread affordable access, mobile services were not included in the EC's Universal Service Obligation.
    - Spectrum liberalisation and release, together with convergence of technologies, will act to increase competition in the mobile market in the future.
    - Ofcom should avoid providing regulatory advantages to new entrants that bring little benefit and can carry significant costs to efficiency.
    - These developments have come through enormous investment in the UK market. Ofcom need to ensure that their regulatory intervention does not discourage future investment.
    - Given the current mobile market, the appropriate focus for Ofcom should be to maintain effective competition and consider deregulation.
- There is no basis for access regulation in competitive markets. Where suppliers and customers have an effective choice of providers, an attempt by one provider to limit access for anti-competitive reasons would be defeated by the ability to switch to other providers.
- Ofcom's market analysis of the prepay market presents a distorted picture of how the market has developed in recent years. The current prepay market has two distinct trends which have lead to better value for customers:
    - The move to very low headline call rates by MVNOs; and
    - The move to incentive-based pricing by the MNOs and large MVNOs.
- The current mobile market can no longer be defined by just separate prepay and contract tariff groups. There is a large grey area as well which comprises SIM-

only and U-FIX tariffs, which allow consumers to benefit from the best points of both tariff types.

- There is a significant cost incurred by mobile operators in providing handset subsidies to customers in the form of 'box-breaking' which is ultimately borne by end-users.
    - It may be appropriate for Ofcom to take a regulatory position which stops this subsidy continuing.
- The mobile industry has very high levels of customer satisfaction which is key to T-Mobile's business. The mobile networks compete on service so it is in their interest to offer customers the best possible customer service at every touch point, whether in retail, online or telephone. [✂]
- Regulation is not needed to help provide transparency, as competition already acts to ensure that operators meet high levels of service.
- Ofcom should encourage the industry to respond itself to customer concern through self-regulation. Ofcom should not regulate unless there is a specific failure in the market. The fact that the market does not deliver a perfect outcome does not mean that there is market failure.
- If mobile phones are increasingly being used to provide a solution for specific societal problems, this should be welcomed as the vast majority of citizens could benefit as a result. Progress should not be stifled because of the small minority of people who don't have a phone.
- Whilst the mobile operators all achieve nearly 100% population coverage for their 2G services, the area coverage is lower given that there are areas with very few customers where there is no commercial incentive for mobile operators to provide coverage.
    - [✂]
- T-Mobile considers that Ofcom's four scenarios are extreme representations of what could happen in the future. In reality, the future of the mobile sector will contain aspects of all four scenarios:
    - In practice regulation is typically not forward looking – the current market should be the key consideration in deciding the relevant market, otherwise incorrect views on future market directions could lead to inappropriate regulation.
- Competition is already offering mobile customers a true internet experience. Given the high level of transparency that already exists, the issue of net neutrality does not need to be considered.
    - A blanket requirement for non-discrimination as advocated by some net neutrality proponents could result in quality of service offerings being inefficiently standardised
- The UK mobile operators have been extremely proactive over the last five years in addressing the risks associated with the use of new services on mobile phones including those associated with privacy and in relation to children. T-Mobile has

introduced and/or participated in the development of a raft of measures to combat perceived threats.

- Personal data and privacy is the concern of the Information Commissioner and is not within the remit of Ofcom. As far as consumer protection is concerned there is existing legislation and standards such as the ASA, CAP and BCAP Codes.
- T-Mobile does not think that a fundamental change to the termination rate regime is appropriate. A 'bill and keep' approach would cause severe disruption to the market as well as significant consumer harm, particularly to prepay customers, who represent around two thirds of all UK mobile consumers;
  - There are other options available to Ofcom which are still cost orientated and do not require Ofcom to produce a new detailed LRIC model
- Ofcom needs to be careful about the consequences of regulation for disabled customers. If we had to ensure that every service is available to everyone then there would be no innovation as the cost of providing equivalent services would be too high.
  - Networks should not be held accountable for the lack of terminal equipment in the market that can be used by disabled customers. Government should work with the handset manufacturers who make the handsets to encourage them to develop equipment;
  - The MNOs basically sell airtime and do not discriminate at all.

Overview of decision process for intervention

Ofcom set out a number of potential scenarios to frame its thoughts on future regulatory requirements. However, the linkage between the scenarios and outcomes and therefore possible regulatory intervention are spurious in numerous respects. Further, the scenarios themselves treat profitability rather than prices as exogenous whereas in a competitive market the opposite applies. Furthermore, they do not consider the feedback from regulation to the different scenarios.

Ofcom's consideration of end-to-end infrastructure competition appears similarly disjointed. Indeed, there is a sharp contrast between the Ofcom focus on end to end infrastructure competition and entry and the supporting analysis by Analysys-Mason which concludes that:

> *"...the benefits of competition solely from the entry into the market of additional broadband infrastructure players per se is limited.*" and *"...a fundamental question arises as to whether the focus of UK regulation should now shift from infrastructure-based competition towards encouraging the development of non-voice converged services."*

Whilst we do not support regulatory intervention to encourage the development on any particular service, we do feel that regulation should now be focussing on service rather than infrastructure based competition.

Given the continued high levels of competition between MNOs/MVNOs/fixed/VoIP etc, characterised and evidenced by the continued decline in prices, service, handset and tariff innovation T-Mobile considers that Ofcom is taking too narrow a view, identifying "problems" which, though worth considering, do not meet any relevant threshold for the imposition of regulation in an otherwise competitive market. T-Mobile is similarly concerned that Ofcom's consideration of these alleged problems fails to demonstrate a wider consideration and understanding of related issues in the market.

T-Mobile hope that this review will ensure that henceforth the mobile sector is regulated in a manner consistent with its competitive nature and the absence of market failure. Ofcom's regulatory principles state that:

- Ofcom will operate with a bias against intervention, but with a willingness to intervene firmly, promptly and effectively where required.
- Ofcom will strive to ensure its interventions will be evidence-based, proportionate, consistent, accountable and transparent in both deliberation and outcome.
- Ofcom will always seek the least intrusive regulatory mechanisms to achieve its policy objectives.

While Ofcom identifies a number of areas that may be improved in mobile services (some of which we concur with), Ofcom appears in many cases in the MSA to assume that potential issues will be problems which automatically require additional regulation. This is a fundamentally flawed and troubling new approach. T-Mobile believes that the market evidence does not warrant extensive new regulation and that a more balanced regulatory approach would put as much attention on the potential costs of regulation as on seeking to find new areas to regulate.

In contrast, T-Mobile proposes a process consistent with Ofcom's regulatory principle to operate "*with a bias against intervention*". Evidence of "market failure" should be the initial hurdle for intervention. This is not the same as looking for less than perfect outcomes; rather the initial hurdle for intervention should be clear evidence of a lack of competition or some other "market failure". Further, even then one should only intervene where the benefits are expected to outweigh the costs.

The diagram below sets out a proposed decision process for possible intervention in the mobile sector. Possible regulation is shown in the right in magenta, with the decision tree to the left. Spectrum liberalisation is shown separately since it is independently expected to lead to improved outcomes.

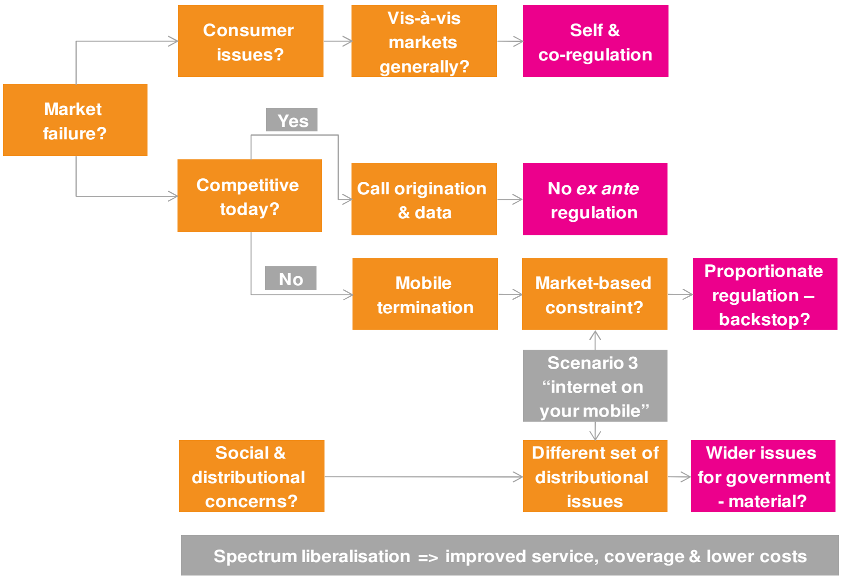
In particular we argue that:

- In relation to consumer issues outcomes need to be assessed relative to competitive markets more generally, and possible intervention calibrated relative to the norms developed by the primary regulator, the Office of Fair Trading ("OFT");

- Social and distributional issues are issues for government to consider against the backdrop of a wider policy agenda and set of tools for intervention (including income transfers and tax funded intervention); and

- Competitive bypass opportunities for mobile termination are anticipated to grow with the development of the "internet on your mobile" – e.g. easier access to data on handsets. It follows that a transitional form of back stop regulation may therefore be appropriate which need not be "cost reflective";

Figure 1: Decision process for possible intervention in the mobile sector



Threshold for intervention

In this consultation, Ofcom have not demonstrated that there is market failure and that the benefits of intervention would outweigh the costs. Rather, the consultation points to evidence of various "problems" which tends to create a bias in favour of intervention rather than the Ofcom principle of a bias against intervention.

The MSA does not apply economics and/or the principles of the European Framework to the mobile market. It differs markedly from the rigorous approach of the Telecoms Strategic Review where the focus was on identifying enduring bottlenecks and addressing these through regulation.

The relevant question for Ofcom is whether there is any material and identifiable market failure and not the current focus on narrow evidence of poor outcomes. This is approach is further flawed by the absence of good comparative information on outcomes relative to other competitive markets, and accordingly the lack of evidence that these outcomes are indeed out of the ordinary.

Given that the UK mobile market is fiercely competitive, then - unless other specific forms of market failure can be identified – a presumption that outcomes will be reasonable and in line with competitive market norms should prevail. The discussion of barriers to entry (which Ofcom should understand are inevitable at a wholesale level, given spectrum scarcity and the need for wide channels for efficient provision of mobile broadband) is unnecessary.

Further, in relation to consumer issues, there is a general question over whether Ofcom should either proceed formally, or refrain from raising poorly substantiated concerns about outcomes in the mobile market.

Regulatory intervention must be reserved for those situations where there has been market failure, and cannot be invoked simply where the market does not produce a perfect outcome. Regulation may be a proportionate response to market failure where it can be demonstrated that it will produce a net benefit, however, even then, additional regulation should be time-limited in order to ensure that the regulatory burden remains no greater than necessary and that market based mechanisms can be encouraged in the long term.

It follows that Ofcom must differentiate explicitly and transparently between markets in which there is market failure – where regulation may be warranted, and issues which do not arise from market failure – where regulation is unlikely to be warranted, but where e.g. Government may wish to consider its policy more generally.

On the current analysis, this leads to a distinction between three areas: spectrum, mobile call termination, and social and distributional.

(i) Spectrum

The relationship between developments in relation to spectrum and anticipated outcomes in the sector should have been set out. Some spectrum availability will in the near future ultimately also depend on broadcasting policy. It is after all spectrum which differentiates mobile services from fixed services and thereby characterises the "mobile sector" Ofcom is proposing to assess.

It follows that a significant area that the MSA fails to address is the efficient reallocation of spectrum, which requires decisions on refarming and on the digital dividend review. Some of the revenue arising from these auctions might be utilised to smooth the transition, for example assisting consumers in a move away from terestrial broadcasting. T-Mobile acknowledges that Ofcom is considering this and related issues seperately, however, to fail to address them in any substantive form in the MSA also suggests that issues are being considered in isolation whereas in fact they are inter-related. A sector assessment that fails to address all the issues that arise, and any policy that is subsequently derived, is therefore likely to be incomplete, if not flawed.

T-Mobile believes that forthcoming spectrum policy changes hold the greatest potential for building on the existing benefits for consumers that are generated by the industry. Spectrum liberalisation and the release of UHF spectrum in particular will:

- Lower the costs of extending the coverage of 3G services and LTE to a wider population of users;
- Improve in-building service and service levels generally;
- Lower the costs of providing a given level of service; and
- Increase competition between fixed and mobile broadband and possibly provide an incentive for further investment in high speed fixed broadband.

The propagation differences between 3G at 900 MHz and at 1800 MHz would imply a large risk of harm to competition if the current unbalanced distribution of 900 MHz spectrum were retained after the liberalisation of the spectrum for 3G use. Significant harm to competition would result from operators with access to 900 MHz being given substantial commercial advantages from liberalisation over operators with only 1800 MHz or higher spectrum. As a result T-Mobile considers that Ofcom's spectrum liberalisation proposals from September 2007 would benefit the industry. In particular, the re-assignment of 900 MHz spectrum is necessary to protect competition and encourage ongoing innovation and investment across the industry. The efficient use of the spectrum will also be promoted as the benefit to the non-900 MHz operators from gaining some 900 MHz spectrum will exceed the cost to the 900 MHz operators of releasing some of their spectrum.

Given the competitive distortions that have historically existed, with only some operators having access to lucrative low frequency spectrum, it is important that Ofcom utilise the opportunities created in the next few years by the liberalisation of 2G spectrum and the allocation of Digital Dividend spectrum to correct this historical impediment. Given that there will only be a limited amount of spectrum available, it may be appropriate for Ofcom to only allow the non-900 MHz operators, who have suffered due to the historical spectrum allocation, to bid for this spectrum in order to level the playing-field.

(ii) Mobile call termination issues

T-Mobile agrees that it is an appropriate time to review the regulation of call termination. As Ofcom has noted the regime in place over the last decade has served to reduce charges to cost levels. However, it is now appropriate to look at the requirements for future regulation and also costs and benefits of potential regimes going forward. However such a review should fully assess the benefit and costs of alternative systems for consumers, the market and operators, whilst being consistent with Ofcom's regulatory principles set out regarding cost orientation.
In summary, we believe that the changes required are more of an evolution from the current proposals than a fundamental change to the regime.

We do not consider that radical changes such as a move to bill and keep are desirable or practical – the disadvantages of such a system for consumers and operators would we believe very significantly outweigh the advantages. Ofcom should undertake a detailed impact assessment of any such proposal and it should in particular take account of the views of consumers and the impact that this would have on consumers.

Bill and Keep would risk serious consumer harm particularly for low income earners for whom mobile phones may be the only means of telecommunications access. In particular, Bill and Keep threatens the viability of prepay tariffs as these customers tend to receive more calls than they make. Bill and keep would also be likely to result in a highly inefficient price structure which reduces overall consumer welfare. A change to this regime would severely disrupt the market.

Whilst T-Mobile appreciate that applying a cost orientation approach may become more onerous for Ofcom in the future, it is still important to recognise that the current legal framework stipulates for this form of price control. Therefore other specifically non-cost orientated approaches like bill and keep need to be discounted.

In the long term T-Mobile believe that mobile call termination rates can be fully deregulated, however, we do not believe that we have reached the time for complete deregulation yet. We do consider that a step in that direction could be appropriate at the end of the current price control.
Whilst there is a need to set a price cap based on cost-orientation, this does not need to necessarily be the result of a detailed LRIC model. Using the final cost-orientated price control from 2010/11 as a basis, Ofcom could set a future glide path which reflects the general need for termination rates to decrease, but is primarily focussed on simplification and ensuring that distributional impacts are not too adverse. A simple cap under which nominal prices do not increase in line with inflation (and may decrease) would be consistent with this; i.e. an RPI – RPI price cap.

(iii) Social and distributional issues

The discussion in the consultation concerning social and distributional concerns including coverage and involuntary denial of access does not go into any detailed level of consideration. In relation to "involuntary exclusion" there is no analysis of the affordability of mobile relative to other goods and services, nor of the appropriate form or threshold for intervention.

The reality, which is confirmed by Ofcom's own analysis,[2] is that the competitive mobile markets have been critical in providing access to communication for low-income households, who have an inability to meet regular monthly payments. Very low cost options are available for mobile ownership, particularly if one wishes to mainly receive calls. Fixed-line customers, even those on low incomes who qualify for the new 'BT basic' service, need to pay a minimum monthly charge of £4.50 to be contactable by telephone. By contrast, a mobile customer only needs to pay a minimal amount every 3-6 months to keep their prepay phone active and will benefit from a similar service, allowing them to always be contactable.

In relation to coverage Ofcom have not identified any externality which would suggest that private levels of provision are inefficient, nor do they make the linkage to future spectrum liberalisation and increased availability of spectrum which might be expected to lead to higher levels of coverage over time. Even then, there will be a point at which increasing coverage further will make no commercial sense. Ofcom and other government bodies need to consider if there is any public benefit to increasing mobile coverage beyond this point, and if so, how they propose funding this.

The European Commission review of universal access, published in September 2008 after the MSA was published, concludes that:

> *"…the competitive provision of mobile communications in the EU has resulted in consumers already having widespread affordable access to mobile communications. The considerations for including mobile communications within the scope of universal service…are therefore not fulfilled."*

The unfortunate reality is that this status quo of widespread affordable access could easily be distorted by misplaced regulation, particularly in the area of call termination, As mentioned above, a 'bill and keep' style approach would risk serious consumer harm particularly for low income earners, who may then not be able to afford to continue with their mobile services.

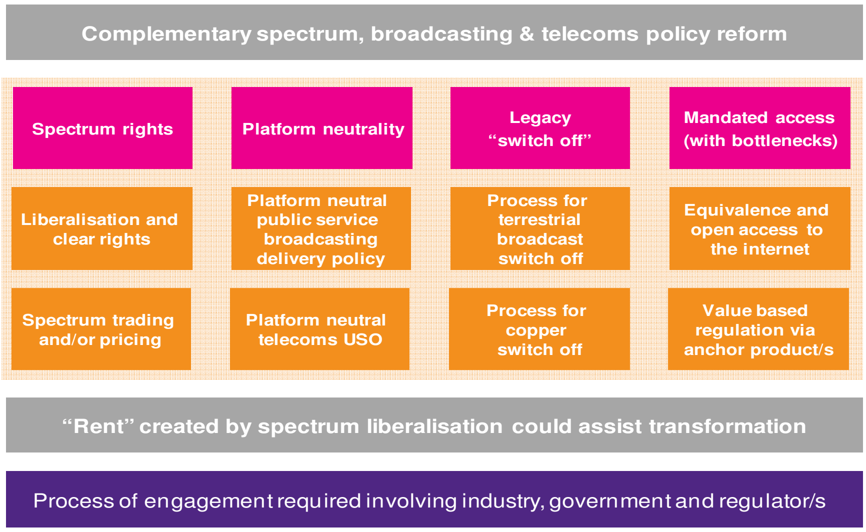
A "converged" policy prescription

[2] Ofcom, Low income consumers and the communications market, 20 November 2007, p.15

Despite being positioned as a wide ranging strategic analysis, Ofcom's consultation takes a remarkably narrow view of the mobile sector. In particular, Ofcom appears to focus on consumer issues, while largely omitting any consideration of some of the fundamental underlying factors that drive retail competition and customer service.

The following figure sets out T-Mobile's view of a wider ("converged") and longer term view of issues as context for this response. Issues are grouped under the magenta boxes at the top – spectrum rights, platform neutrality, network switch off and mandated access.

Figure 2: Longer term issues



T-Mobile would encourage Ofcom to consider these issues in the context of both its consideration of responses to the consultation, and also any subsequent documents it issues as part of its assessment. The next stage in Ofcom's MSA must demonstrate a wider view of the issues that affect the sector. Regulation in a rapidly developing sector such as mobile must remain evidence based and proportionate. Over-regulation, and regulation that contains no sunset provisions to ensure short term issues are dealt with proportionately, will only serve to undermine the market mechanisms that have so far delivered enormous developments in the services available to consumers, in productivity, and substantial investment in the UK economy.

In summary, Ofcom's approach in the MSA does not appear to reflect Ofcom's regulatory principles or the legislative framework of its powers. It appears to mark a significant departure from accepted regulatory practice, in particular, from evidence based analysis, application of competition law principles, transparency and proportionality.

Responses to Consultation Questions

Question 1.1: What are the implications of market change for mobile and wireless services?

T-Mobile believes that it is very difficult to determine what the shape of the industry will be beyond a few years.

Technological change is continuing at a rapid pace, altering the functionality of access and core mobile networks as well as changing the performance of rival technologies. Ofcom is midway through an ambitious programme of spectrum reforms. The changes will improve the way in which current services are provided as well as enabling innovative new services to be deployed. The changes will also transform the competitive interactions within markets as well as between the different parts of the communications sector (including with new content, service and application providers).

The greater competition brought by convergence should warrant a reduction in general regulation of the telecoms sector, although it is difficult to predict when and to what extent market definitions and competition will change. Convergence also increases the importance that, to the extent that regulation is retained, regulation be competitively neutral both between technologies and between existing operators and new entrants.

While future developments offer the potential of substantial consumer benefits, realising this potential will require operators to have the ability and incentive to undertake significant ongoing investment programmes. Operators' margins are already under pressure and the severe reduction in the general availability of credit is threatening external financing. Regulation over the next few years should take full account of the importance of facilitating, or at least not impeding, operators' investment programmes.

In Section 7 of this consultation, Ofcom (and Analysys Mason) have detailed many potential ways that the mobile market will develop. T-Mobile does not believe that any of these individual scenarios will accurately characterise the future state of the mobile industry. Rather it is likely to contain elements of all these schools of thought and potentially other unknown elements.

T-Mobile believes that the established regulatory principles are likely to continue to be appropriate, even if the result of applying those principles changes as the underlying markets change. In particular, we re-affirm our support for the principles that:

(i) regulation should be considered only in relation to operators with significant market power;

(ii) regulation should be imposed only where competition law is ineffective; and

(iii) regulation should be proportionate to the problem being addressed and be subject to a comprehensive impact assessment.

Given the current uncertainty regarding the future development of the mobile sector, it would be premature to change regulation now on the basis of future scenarios that may turn out to be far from the actual market circumstances that arise. The prudent approach is instead to limit regulation to areas where there is clear evidence of market problems. Regulation that has become obsolete should be removed. More generally, in an uncertain environment, regulation carries greater risks of unintended consequences (such as stifling the development of new services) and hence there is likely to be a greater case for forbearance. We hope that Ofcom uses the opportunity of the Mobile Sector Assessment to consider the appropriate deregulation that may take place.

Question 1.2: How are citizens and consumers affected by developments in the mobile sector?

The mobile sector is a constantly changing industry. Since T-Mobile launched as 'Mercury One-2-One' in 1993, there has not been a single period where industry participants could 'coast' along. T-Mobile was the third player in the market and was soon followed by Orange. The first MVNO was launched in 1999 and competition has steadily developed. Analogue was replaced by GSM; we now have 3G which has now included HSDPA and HSUPA. Wimax and LTE are around the corner. The cost of this investment made by T-Mobile in both its 2G and 3G networks, in addition to cost of the licence fees, has been considerable. In Ofcom's LRIC cost model, the total capital cost of the investments made for the 2G and 3G networks until March 2008, was £6.6bn for the 2G network and £1.7bn for the 3G network**.** [✂] It is clear that remaining an active player in the UK mobile market requires a large amount of continuing network investment. Ofcom need to ensure that any regulatory intervention does not discourage any future intervention.

[✂]
Figure 3: [✂] [3]

Instead of the market gradually evolving there has been a stream of innovations and developments across the industry. As a result of the fiercely competitive market environment, every player has needed to always be on their toes to ensure they are not left behind in the wake of another operator's development. This has lead to a market in the UK with extremely tight margins when compared to similar mobile markets across Europe. As a result, any seemingly minor regulatory developments can easily have a disproportionate impact on operator's profitability.

The result of this environment is twofold:

- Mobile Operators have never been able to sit back and 'reap the returns' of their considerable network investments. Rather they always need to be re-investing and thinking about further changes; and
- Consumers have benefited from a continual better quality of service and better value.

[3] [✂]

Whilst a mobile phone was originally only seen as a business tool or an expensive luxury good, these developments have ensured that there is an appropriate product for many different customer groups:

- The parent who wants to ensure that their teenage child is always contactable;
- The business user who cannot afford to be 'out of the office';
- The young person who wants to have the trendy new gadget;
- The young professional who wants to keep in touch with social networking sites; and
- The low-income individual who cannot afford to have a fixed line phone;

as well as many other different customer profiles.

Over the last year, there have been many developments in the services and products that T-Mobile offers:

- We are the first network to provide a price-guarantee to customers that they will get the best minutes allowance on our two new £30 price plans. Our guarantee, the launch of Solo (SIM-only plan) and Combi (high-value minutes and texts tariff) meant that by the end of June T-Mobile was taking a 41% share of new customers in the key £30 to £35 contract segment;
- Uptake of mobile broadband continues to accelerate and we estimate that in June 2008 we attracted more than a quarter of new mobile broadband customers, with the number of customers rising almost 360% year on year. We see this trend continuing and have reinforced our position in this market by being the first to launch HSUPA (High Speed Uplink Packet Access) nationwide to give customers up to a fivefold increase in upload speeds;
- Independent tests of 3G mobile broadband networks ranked us top for file download speed, browsing, email performance;
- Ground-breaking network sharing agreement with H3G will lead to 3G coverage levels being almost equivalent to those of our 2G network by the end of 2009;
- Launch of T-Mobile G1 ("Google phone") which is the first device to run on Android, an innovative 'open' platform that allows developers to create unique and innovative applications that customers can use to personalise their phone to suit their lifestyle;
- Expansion of retail footprint from 258 to 277 stores;
- T-Mobile is the network behind IKEA's new Family Mobile, a SIM card package targeted at 1.4 million members of the IKEA FAMILY loyalty programme and positioned as the UK's lowest priced pay-as-you-go service.

In 2008, there have also been many positive developments from the other mobile operators:

- O2 and 3 create UK's largest open access mobile video community – February
- Virgin Mobile move to flat rate prepay tariff - February
- O2 launch consumer mobile broadband – April
- Orange launch prepay animals tariffs – April
- Blyk announce that they have attained 100,000 subscribers – April
- Carphone Warehouse sells 50% of retail division to Best Buy – May
- O2 launches online billing for all consumer customers as default – June
- Vodafone launches super-bundles – June
- Three reduce mobile broadband pricing – July
- O2 launch 3G iPhone - July
- O2 reduces handset subsidy on high cost devices – July
- O2 launch combined fixed and mobile broadband offer – August
- Orange launch new Blackberry "Bold" device - August
- Asda MVNO cuts prices to be lowest priced pay-as-you-go operator – August
- LycaMobile MVNO, an ethnic targeted service, launches in the UK – September
- Orange launch unlimited business calls tariff – September
- O2 launch iPhone on prepay - September
- Virgin Mobile launch first MVNO mobile broadband offering - October

These developments have ensured that consumers benefit more from their mobile phone than they previously did.

Mobile phones can also now be used for a lot more than just making traditional voice calls. The development of internet on the mobile and mobile broadband has been a revelation and ensured that people can check an email or find information from the internet on the move. This service is constantly developing and consumers will find that in future the mobile internet will offer a lot more than the traditional fixed internet. An example of a recent development using the mobile internet is the "compare everywhere" application available on the T-Mobile G1. With this application installed, subscribers can scan a barcode using their phone's camera to instantly check the cheapest nearby location for this product and to read the product reviews.[4] There will undoubtedly by further developments that make use of the fact that customers are mobile when using the internet.

Mobile phones have now become the main means of telephony for many people. Competitive mobile markets have now become critical in providing access to

[4] See http://www.android.com/market/#app=compareeverywhere

communication for low-income households, who have an inability to meet regular monthly payments. Mobile services also bring wider economic and social benefits through boosting productivity in other industries. The concept of workers being unreachable has all but disappeared as the mobile industry has developed ways for staff to continue to be accessible for all key office functions (e.g. conference calls, checking emails, accessing the internet) irrespective of where they are.

New services are still being developed by the mobile operators and over the next few years. [✂] However in order to allow the operators to realise this potential for development, they require access to lower frequency spectrum and operators being allowed to earn sufficient returns to provide the incentive to undertake the costly investments that are required.

There are many other ways that mobile services will enhance our lives as citizens, and fulfil useful functions. The question therefore to answer is whether owning a mobile phone could be considered the equivalent of a utility, similar to a fixed line or electricity, which is essential for all citizens to own. On one hand T-Mobile would be happy for a mobile phone to be considered that important in society, as it will give recognition to the important service that we deliver. However enshrining mobile with this status will require costly investment to ensure that all citizens can get access to a mobile phone service. This investment does not make commercial sense for the mobile phone operators; otherwise they would have already carried it out. If, as a matter of social policy, Ofcom or the Government wish to treat the provision of mobile services as a utility, Ofcom would need to consider how they will compensate operators for this work. We do not see any public services being provided only on mobile. Nor is this outcome likely when most decisions not to use mobile services are made on the basis of choice and not price. Mobile operators however do not want to be utilities. In the short life of mobile telephony the industry has shown how it can continue to reinvent itself and Ofcom should not interfere with this competitive outcome.

One development in the mobile sector which has not helped citizens or consumers is the recent tendency for increasing regulation in the mobile sector. Since the regulation concerning voice roaming within the EU came into force in 2007, there has been a reduction in the volume of these roaming calls; the only reduction since international roaming began. This regulation also forced operators to increase the prices of other mobile services (e.g. calls to voicemail) to counter the loss of revenue. These negative effects were forecast by the industry prior to the regulation coming into force.

Similarly, any sharp change to the termination rate regulation regime is also forecast by the industry to have a severe negative impact on end-users, particularly those on prepay tariffs. We feel that the current regulation has already pushed up the cost of services we provide to end-users. Any further changes could see consumers, in particular those on low-incomes, finding mobile ownership prohibitively expensive.

Question 1.3: What are the purposes of mobile regulation, and where should its focus lie?

Before addressing the substance of this question it is important to consider the wider place of mobile regulation within the consumer sphere. In particular Ofcom must be careful to distinguish between mobile-specific regulation, and wider consumer protection regulation.

In principle, there is no basis for the regulation of consumer mobile services to be more onerous than general consumer protection regulation. At its most basic, specific regulation of the mobile market should be based on competition law principles around market failure. General consumer regulation may rely on wider public policy concerns, which are unlikely to be applicable to any proposal that places the mobile industry under more onerous obligations than other industries. This is after all a sector where the overwhelming majority of customers are happy with the service they receive. Retail shops provide services to consumers in the same way as mobile operators provide retail services. In the absence of specific competition issues, there is no sector specific consumer regulation applying to them; nor should there be to mobile operators. Why should consumers of mobile services be treated differently to shoppers at Marks and Spencer?

It follows that, in considering the purpose of "mobile regulation" the subject is the regulation of mobile networks, services and their use of spectrum. Regulation of this sector is specifically addressed by the Communications Act. T-Mobile is therefore to some degree perplexed at Ofcom's question, which appears to overlook the need to comply with the European Common Regulatory Framework (CRF) and the UK's implementation legislation.

In summary, the CRF provides that "mobile regulation" (but more accurately the regulation of networks, services and spectrum) should follow a number of Community requirements. These are set out at Section 4 of the Communications Act. First among these requirements is that of the promotion of competition. The fifth requirement, encouraging the provision of network access and service interoperability, is also specifically subject to this being required for efficiencies, sustainable competition and the maximum benefit of customers. Section 5 of the Act contemplates directions from the Secretary of State whilst Section 6 of the Communications Act sets out Ofcom's duty to review the regulatory burden. Section 7 sets out the requirement to undertake an impact assessment. Most importantly Ofcom's principal duty includes furthering the interest of consumers; which is done, where appropriate, by promoting competition.[5]

What is clear from the Communications Act is therefore that the purpose of "mobile regulation" is to promote competition, and that its focus must therefore be addressing areas where the market has failed to deliver, subject to a bias against intervention and a positive cost benefit analysis.

The market for access and origination of calls in the mobile market was declared competitive by Oftel. There is no requirement for regulatory intervention. In line with

[5] Section 3(1) (a) of the Communications Act.

Ofcom's regulatory principles, intervention is required "*where there is a specific statutory duty to work towards a public policy goal which markets alone cannot achieve…*"

It should therefore be clear to Ofcom that the only purpose of regulation is to intervene in the mobile market where:

- there is clear evidence of "market failure"; and
- the benefits of intervention outweigh the costs.

These economic criteria are mirrored in Ofcom's regulatory principles, in particular:

- Ofcom will operate with a bias against intervention, but with a willingness to intervene firmly, promptly and effectively where required;
- Ofcom will strive to ensure its interventions will be evidence-based, proportionate, consistent, accountable and transparent in both deliberation and outcome; and
- Ofcom will always seek the least intrusive regulatory mechanisms to achieve its policy objectives.

It follows that in considering the purpose of mobile regulation, Ofcom must establish whether there is evidence of market failure.

"Market failure"

The MSA does not take a definitive view on competition in the mobile sector. In paragraph 3.69 Ofcom notes that "Many commentators regard the UK market as among the most competitive in the world" citing Investec Securities and UK Trade & Investment.

Ofcom also notes that the UK market has the lowest concentration (HHI) in Europe, though they comment that it is still high. The HHI is based on an assessment of the mobile market in isolation from other markets including fixed and cable voice and broadband, whereas elsewhere in relation to the proposed fixed narrowband market review Ofcom is considering whether there is competition between platforms. Moreover, it wholly ignores competition from MVNOs: in considering competition for end consumers Ofcom's HHI calculation, and subsequent commentary, is therefore very misleading.

Regardless of the correct measure of its assessment, Ofcom does not seek to come to a view about the level of competition in the mobile market, albeit that it nevertheless identifies a number of "problems" which it suggests may require intervention. This approach appears to be neither specifically evidence based, nor in keeping with the Common Regulatory Framework generally. Instead, it is usual to ask if there is sufficient reason to contemplate intervention based on an examination of market structure and conduct, recognising that outcomes will never be perfect and that intervention itself is far from costless.

This philosophy is reflected in competition law and in the European Framework which utilises a Significant Market Power (SMP) threshold before ex ante intervention is contemplated. Under the European regulatory framework national regulatory authorities (NRAs) can impose regulatory obligations on telecoms operators:6

> *"only where the [relevant] markets are considered not to be effectively competitive as a result of such undertakings being in a position [of significant market power] equivalent to dominance within the meaning of Article 82 of the EC Treaty"*.

In other words, the hurdles that must be cleared before regulatory intervention can occur are defined explicitly to meet general competition law standards. Competition is seen as the best possible guardian of good, albeit not always perfect, outcomes.

The situation in relation to broadcasting differs in that Ofcom is explicitly pursuing a number of additional public policy objectives. This mindset should not spill across into telecoms.

Ofcom notes (paragraph 6.33 of the MSA) that:

> *"Ofcom's approach to the setting of rules has been to act only where specific market failures have been identified, in keeping with our regulatory principles."*

However, Ofcom's analysis does not identify market failures; rather they focus on market outcomes that are not consistent with what Ofcom might prefer. There is a crucial difference. By undertaking an extensive search for evidence of less than perfect consumer outcomes, or simply a perception of imperfect outcomes, Ofcom reverses the usual presumption and goes beyond the role assigned to national regulators.

This is a major and dangerous departure from the approach Ofcom has previously adopted in relation to the mobile market, and to strategic reviews of both the fixed and spectrum markets (the strategic review of fixed telecoms focussed on identifying "enduring bottlenecks"). It is as though Ofcom is thinking of mobile as a utility, or perhaps wearing its broadcasting hat. A simple analogy is with supermarket pricing. When shopping in Marks & Spencer consumers might wish to know what Lidl is charging for lobster but there is no regulation requiring comparative information to be available at point of sale. Looking at utilities, consumers may buy electricity on the basis of price alone but they are just as likely to buy mobile services because a particular handset is provided rather than just looking at price in isolation.

It follows that Ofcom's approach is a major inappropriate departure in terms of regulatory policy for the sector.

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[6] Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/C165/03), paragraph 5.

Is the mobile market competitive?

There is abundant evidence that the UK mobile market is competitive, such as recent continued developments around levels of service, price innovation and voluntary negotiation of MVNO arrangements. This is confirmed by international evidence in relation to assessments elsewhere[7] and the HHI.

In dealing with the competitiveness of the UK mobile market Ofcom in the MSA raise a number of "problems" which T-Mobile assumes are included for the sake of completeness rather than that they are areas where regulation is needed. We have dealt with these also for the sake of completeness and not in any way to detract from the simple answer to this question. One is the issue of whether there should be a requirement to offer roaming to third parties in considering spectrum liberalisation options. Ofcom decided that this is unnecessary. Weighing the potential costs and benefits, Ofcom noted that:[8]

> *"... the extent to which regulated roaming addresses competition and efficiency concerns is questionable, and that it risks imposing significant costs – not only the administrative burden, but also it may act as a disincentive for 900 MHz operators to deploy UMTS 900 networks."*

T-Mobile agrees, although its views on the competitive position of 900 MHz operators will not be settled until Ofcom concludes its spectrum liberalisation work, which T-Mobile requests that it does as soon as possible. Lord Currie, Ofcom's Chair, has also said that in encouraging investment in mobile means that Ofcom will adopt *"...a sympathetic approach to access network sharing to free up resources for new investment."*[9] This suggests that the potential loss of end to end infrastructure competition is not an overriding concern for Ofcom relative to the gains. T-Mobile concurs with this view.

In contrast to Ofcom's apparent emphasis in the MSA on end-to-end infrastructure competition (which T-Mobile acknowledges flows from the CRF), Analysys-Mason in their report for Ofcom emphasise competition in relation to applications and services, noting on page 8 of the Appendix:[10]

> *"The same analysis suggests that the benefits of competition solely from the entry into the market of additional broadband infrastructure players per se is limited;" and "...a fundamental question arises as to whether the focus of UK regulation should now shift from infrastructure-based competition towards encouraging the development of non-voice converged services."*

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[7] Annegret Groebel. March 2003. "Should we regulate aspects of wireless?" *Telecommunications Policy*. Volume 27 (5-6). This article concludes that "*empirical evidence is given that demonstrates the RegTP's analysis of an effectively competitive German mobile market.*"

[8] Ofcom. September 2007. "Application of spectrum liberalisation and trading to the mobile sector." Page 94. http://www.ofcom.org.uk/consult/condocs/liberalisation/liberalisation.pdf

[9] David Currie. 15 October 2008. "The Ofcom Annual Lecture 2008." Page 6. http://www.ofcom.org.uk/media/speeches/2008/10/annual_lecture

[10] August 2008. "Assessment of the UK mobile sector." Final report for Ofcom. Annex 9. Page 8. http://www.ofcom.org.uk/consult/condocs/msa08/msaanalysys.pdf

T-Mobile supports a move to consideration of service based competition, though it does note that the trade-off involved in allocating spectrum for entry versus the availability of more wide channels and more capacity for re-farming and LTE is not mentioned in the MSA.

The MSA focuses more on conditions for entry rather than assessing the current and prospective level of competition. It is not clear why consideration of entry is necessary if competition is sufficient. There are a number of standard measures and/or inputs in to an assessment of whether a market is competitive that Ofcom appear not to have considered as part of the MSA:

- that no one company is dominant in retail, so there is no SMP;
- companies aim to maximise profits rather than leverage any market power to pursue alternative aims;
- there is unprecedented choice, in tariffs, handsets, operators (i.e. including MVNOs etc);
- there are high levels of innovation – tariff choice, handsets, mobile broadband, online mobile services;
- prices are low and declining;
- individual companies do not have control over prices/services – instead these are dictated/led by the market;
- the availability of MVNO arrangements with each of the network operators, spectrum auctions (e.g. DECT guard band) and trading mean that there are low barriers to entry and exit; and
- there is ready availability and transparency of information for both companies and consumers.

Furthermore, Ofcom must be careful to distinguish between barriers to entry at different levels of the market. Clearly limitations on the availability of spectrum raise potential barriers to entry at the infrastructure and wholesale level. However the wide availability of MVNO arrangements etc means that barriers to entry at a retail level are in fact minimal. Given that regulation ought to be evidence based, demonstrating actual or potential consumer harm; the existence of a competitive wholesale and retail market suggests that barriers to entry are not a significant issue at any level in the mobile market.

In light of the above, it remains to be demonstrated by Ofcom that there is a real basis (in competition law and in statute) for further regulation of the mobile sector. By contrast, we see the opportunity - given the extensive competition that exists - for rolling back some of the existing regulation.

Are there other grounds for intervention?

There might be other grounds for intervention in terms of consumer market issues (imperfect information) or on distributional grounds. However, Ofcom does not identify specific market failures in respect of consumer issues leaving a possible lack of competition aside. We do not think that any additional legislation or regulation is required to deal with misleading conduct by any player in the mobile market and not that changes may in any event be required to implement likely changes to the EU framework. Mobile operators are competing on service and so there is no reason why they will not provide the information their consumers want. Ofcom needs to only reflect on how mobile operators have contributed to child protection issues, on a voluntary basis.

Further, in general it is preferable to assess and potentially intervene to pursue distributional goals in the context of wider public policy instruments including the tax and benefit systems, and recognising that such decisions are inherently a matter for Government.

Appreciation of the role of mobile in the broader economy

There is a clear focus on fixed broadband and the development of next generation fixed broadband at the national and European level and a clear sense of the importance of such developments to the wider economy. There is a much less explicit focus on the development of mobile broadband (for example, in the draft EC recommendations on next generation access). Whilst we understand the reasons for this, it obscures the current role of mobile broadband and its ability to stimulate investment in the fixed broadband market.

The Government has appointed Stephen Carter, Minister for Communications, Technology and Broadcasting, to develop:[11]

> *"An action plan to secure the UK's place at the forefront of innovation, investment and quality in the digital and communications industries..."*

The plan, due in spring 2009, is positioned as part of the Government's response to the financial crisis. Both broadband development and "identifying barriers to the release of spectrum and a fully functioning market in the trading and use of spectrum" are mentioned as priorities. This may provide an opportunity to give more prominence to the role of mobile and mobile broadband in the economy and the importance of not harming the sector's development through inappropriate regulation.

Arguably the current set of beliefs about the role of fixed and mobile broadband leads to underestimation of the potential costs of poorly thought out intervention (or lack of appropriate action). It is not obvious why this is the case, but it is clear that a change in perception is needed. T-Mobile suggests the following proposals:

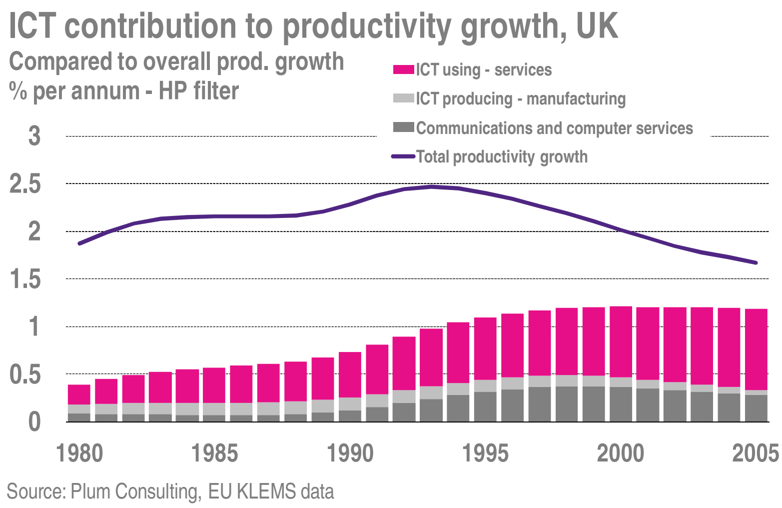
[11] http://www.culture.gov.uk/reference_library/media_releases/5548.aspx

- Mobile broadband should be counted in statistics on broadband penetration collected and published by Ofcom, the ONS and the OECD.[12] In Ireland mobile broadband is counted in published statistics on broadband.
- The impact of mobile on productivity growth, and the potential costs of disrupting the introduction and geographical extension of enhanced 3G and LTE, should be clearly understood by Ofcom.[13]

Other work has already considered the contribution of ICT to productivity growth, and there are specific studies looking at the welfare contributions of particular technologies. Academic work on the contribution has tended to be focussed on the contribution in developing countries.[14]

Figure 4 shows the overall contribution of ICT to labour productivity growth in the UK, and the contribution of communications and computer services. The latter contributed around 17% of overall labour productivity growth in recent years, far higher than its share of value added of 2.8%.

Figure 4: Overall contribution of ICT to labour productivity growth in the UK



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[12] For example, the OECD definitions of broadband exclude 3G.
http://www.oecd.org/document/46/0,3343,en_2649_34225_39575598_1_1_1_1,00.html

[13] The estimated economic contribution of the mobile sector is calculated in a paper by Access Economics:
Access economics, Australian Mobile Telecommunications Industry: Economic significance and contribution, June 2008
http://www.amta.org.au/amta/site/amta/downloads/pdfs_2008/AE%20AMTA%20Final.pdf
The GSMA also published a comprehensive review of European mobile industry this year:
GSM Association, European Mobile Industry Observatory 2008, 19 September 2008
http://www.gsmworld.com/europe_observatory/index.shtml

[14] Vodafone.
http://www.vodafone.com/etc/medialib/attachments/cr_downloads.Par.97534.File.tmp/SIM_Project_download_3.pdf
Waverrman, Meschi and Fuss, The impact of telecoms on economic growth in developing countries, 2005 http://web.si.umich.edu/tprc/papers/2005/450/L%20Waverman-%20Telecoms%20Growth%20in%20Dev.%20Countries.pdf

There is also broader evidence of positive social impacts of ICT and mobile use. For example, analysis by the Pew Internet & American Life Project found that technology, in particular the internet and mobile, are helping people maintain social ties instead of driving them apart.[15]

The mobile sector therefore needs to be seen as an important aspect of the UK economy which provides consumer services that are highly valued by individuals. This has developed primarily through market mechanisms. Although not all outcomes in a competitive market are perfect, deficiencies are not de facto problems that require regulation. The purpose of regulation is to ensure that the market is competitive, not that it is perfect. Regulatory intervention must be targeted at failures and deal with them appropriately. Ofcom has not adduced evidence that the "problems" it has identified arise out of market failure or that regulatory intervention would be beneficial or proportionate. Any intervention that does follow from the MSA must be evidence based and address only those failure that cannot be addressed in other ways, and for a minimum period to ensure that market mechanisms can develop in the longer term.

Question 1.4: What is the scope for deregulation, competition and innovation in the mobile sector?

This general question has not been dealt with by Ofcom as part of this MSA consultation, which makes it particularly difficult to respond to. T-Mobile accordingly will reserve its right to deal with this question about the scope for deregulation, competition and innovation in the mobile sector until the second phase of the consultation beyond making the general comment that in the light of the level of competition in the market we do see considerable scope for deregulation and would urge Ofcom to seize this opportunity to demonstrate its faith in competition.

As we have noted above, the mobile market is currently competitive and highly innovative and has been for years. The likely developments looking forward (e.g. spectrum liberalisation, ever expanding technology choice) suggest more rather than less competition. In line with this, it is difficult to see why large scale sector regulation would be appropriate in the mobile sector. Although this is not within Ofcom's power, international roaming is one area in which regulation should be rolled back; particularly as it has not had the impact expected and has led to lower volumes of traffic as well as lower revenues. We strongly believe that consumer protection issues should be covered by the OFT, which is better able to maintain a level of consistency in enforcement across competitive sectors of the economy.

<u>Feedback on the market analysis presented in Section 3</u>

[15] Pew Internet & American Life Project. 20 October 2008. "Networked families." http://www.pewinternet.org/PPF/r/266/report_display.asp

Contract Lengths and fluidity between contract and prepay tariffs

Ofcom note in paragraphs 3.29 – 3.32 that contracts lengths have increased in recent years, which Ofcom suggests may lead to a detrimental effect on the market. It is important to note that average contract lengths have increased as a result of consumer (and business) demand for continuing handset subsidies. Falling margins mean that attractive acquisition offers that consumers request, together with the need to keep monthly subscription charges low, require longer payback periods. Increasing contract lengths is a logical consequence of margins being squeezed and an ongoing preference by consumers for handset subsidies. Initially operators offered traditional 12 month contracts together with new 18 month contracts at a discounted monthly line rental. This discount accounted for the fact that the handset subsidy was spread over 18 months as opposed to 12 months. Customers were attracted to these new cheaper tariffs. This move to longer contracts, which discouraged the unnecessary upgrade of workable handsets, was also welcomed by environmental groups.

A major shift in the market for contract customers in recent years is the move to SIM-only monthly contract plans. This is mentioned briefly in paragraph 3.24; however its impact on the contract market has not been fully described. This growing new market, which currently accounts for over 1million customers across the industry, means that customers who are worried about committing to a long-term contract can still benefit from the value of a contract tariff. This development has countered any of the potential problems that Ofcom identified from the move to 18 month contracts. It also has helped persuade high-value prepay customers to move to more efficient bundled tariffs.

U-Fix is the name for a set of tariffs offered uniquely by T-Mobile which aims to combine the value and ease-of-use of contract tariffs with the flexibility and control of prepay tariffs. Customers pay a monthly fee for a set number of minutes. When they have used up all this bundle of minutes, they need to 'top-up' their account to make more calls. This type of arrangement is very popular with phones bought by parents for their teenage children. This ensures that they can be contactable without needing to worry about buying them top-up cards, whilst also having the ability to control spending and not having to worry about bill shock.

The current mobile market is therefore not characterised by two very distinct prepay and contract segments. Instead there is much more fluidity between the two segments. SIM-only tariffs and other tariffs like T-Mobile's U-Fix bridge the divide between the two tariff groupings. Additionally high value prepay customers are increasingly being seen differently by operators and are given benefits that were previously only enjoyed by contract customers [✂] T-Mobile is very strong currently in the market in ensuring that there are not just two distinct groupings of tariffs; but rather that there is a growing grey area in the middle for those who want the benefits of both prepay and contract.

Even with this fluidity in the market, there are still various reasons why some customers prefer to remain on a prepay tariff, even if switching to a contract would prove more cost effective in the long run:

- Some customers don't want monthly bills;
- Some have a poor credit rating;
- Some customers are only in the country for a very short time;
- Some customers wish to maintain a low profile and do not wish to be registered; and
- Other customers do not receive a fixed pay-package and so want flexibility.

Operators aim to provide different options to ensure that, where possible, a specific reason does not prevent customers being placed on the most suitable tariff**.** [✂]

Today's mobile market is therefore characterised as one where customers have many different options and choices regarding their mobile phone. Ofcom appear to have misinterpreted this as being a sign of customer confusion. In fact it is the direct result of an extremely competitive market.

Femtocells

In this consultation it appears that Ofcom (and Analysys Mason) view femtocells as definitely being the big driver of the future mobile market. Whilst Ofcom notes in Section 3 that *"the impact of femtocells on future market events could turn out to be profoundly important, irrelevant or important in unpredictable ways…"*[16] it places considerable importance on their development in the scenarios in Section 7. Indeed both "Scenario 2 – mobile voice wins" and "Scenario 3 – internet on your mobile" rely on femtocells changing the mobile market significantly.

There are various commercial, technical and regulatory issues that will need to be resolved prior to the commercial launch of femtocells**.** [✂] The major regulatory issues that need to be resolved are derived from current licence terms which would appear to require that femtocells need to be fixed at the property and not be moved by the subscriber and that they are installed by licensed operators. As femtocells are a type of base station, their location would need to be recorded and given to Ofcom, who will then have a right to 'check-up' on the cell. Requiring licensees to install femtocells would further increase their prices.

Other regulatory questions that still need to be resolved are:

- Ability to route all calls to Emergency Services and the passing of location information;
- Labelling of devices where emergency access is not always provided (such as when there is a power failure or failure of the broadband backhaul);
- Battery life; and

[16] Paragraph 3.126

- The provision of accurate location information if the femtocell is out of mobile coverage.

[✂]

Handset Subsidy

One important aspect of the mobile market which has not been addressed in the consultation is the existence of handset subsidies in current mobile business models. Currently operators subsidise handsets for both prepay and contract customers. It is clear that such subsidies are consumer driven. [✂] The existence of handset subsidies leads to a variety of consequential effects on the UK market:

- The trend to long-term contracts as there is a need to recover this subsidy for more expensive devices over a lengthy time period;
- the inability for customers to have an option of leaving their contract early without incurring contractually agreed early termination charges;
- lack of consumer understanding of the true cost of mobile phones. This has been particularly apparent with the reaction to the introduction of “free laptop” offers. Customers were evidently unaware that the new generation of smartphones are actually more expensive than laptops;
- the lack of a market for recycled and refurbished phones in the UK;
- the sale of handsets and their subsequent after-care is dealt solely by the service providers. Device manufacturers do not sell handsets direct to consumers;
- the risk of ‘box-breaking’ in the prepay market as the sad fact is that the majority of some of these subsidised phones are never connected to the network. Phones are likely to end up on sale in different countries; and
- the quick uptake of new innovations and services in the UK market as a high proportion of people has access to new phones.

It is unclear whether the existence of handset subsidies is positive or negative for the UK mobile industry. This could be different for contract and prepay markets. There are definite benefits for customers who want to get the latest handset and, as a result of the current system, do not need to pay the entire cost of the handset upfront. The benefits for innovation is also clear as developers can be certain that a high proportion of subscribers will be able to access the new mobile applications that are only found on newer handsets. In Belgium, where handsets are not subsidised, there is significantly less innovation and take-up than we find in the UK. [✂]

There are significant costs involved with providing handset subsidies, particularly to the prepay market. [✂] In a different regulatory framework, there may be some benefit to operators from Ofcom taking a regulatory position that stops the current situation of operators subsidising prepay handsets. This might have the added benefit of opening up the market of selling mobile handsets as device manufacturers may then deal directly with the consumer. This is unlikely to happen in the short term as even the strongest device manufacturers, such as Apple, prefer to work through traditional models.

In the contract market, the negative effects of handset subsidies are less pronounced, as customers are tied to the network afterwards and the subsidy can be recovered over the life of the contract. The biggest problem is that contract customers don't appreciate how much the handset actually costs. They therefore do not make an educated decision when deciding to replace their handset at the time of upgrading their contract. [✂] The SIM-only market addresses this to some extent.

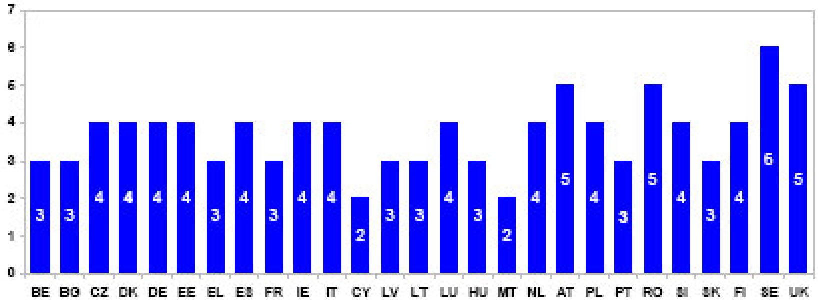
Question 3.1: What do you think are the features of a well-functioning mobile market? What evidence do you see that those features are present in the UK market?

One of the key features of a well-functioning mobile market is the penetration rate. A high penetration rate indicates that mobile services are ubiquitously available and not just to a small sector of society. The penetration rate across the UK, as well as across the EU more generally, has been growing in recent years. In 2007 the penetration rate of active SIMs was 117% across the European Economic area. This is very high and reflects the fact that mobile services are now being used across all age groups and socio-economic segments of the population. The UK has a penetration rate of 121%, above the European average.[17]

A feature of mobile markets which shows how well they are functioning is the number of mobile operators, and the size of the largest operator. According to these measures, the UK is the most competitive market across Europe. There are five major network operators in the UK, more than most countries in the EU. The higher customer satisfaction achieved in the UK is probably the direct result of the fierce competitive nature of the UK market, driven not only by the number of networks, but also by the very large number of MVNOs that they provide wholesale services to.

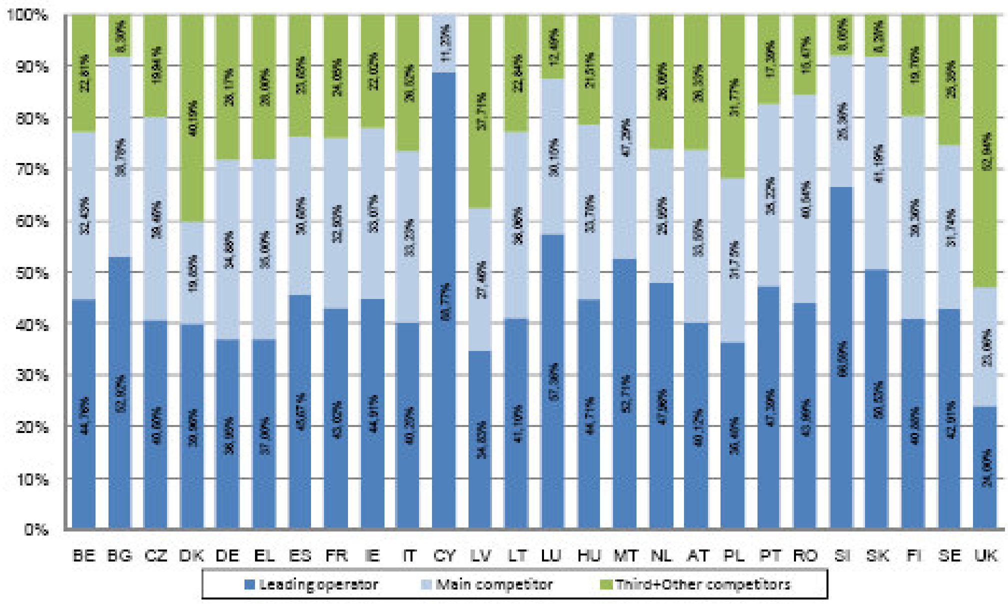
[17] GSM Association, European Mobile Industry Observatory 2008, 19 September 2008, p5 http://www.gsmworld.com/europe_observatory/index.shtml

Figure 5: The number of Mobile Network Operators in EU countries, 2007[18]



However more important than the number of operators, is their relative sizes. Unlike most countries, there is no distinctive market leader. As shown in **Error! Reference source not found.**Figure 6 the UK stands out in Europe as the country with the lowest market share for the leading operator.

Figure 6: Mobile market share based on subscribers, October 2007[19]



The existence of low prices for mobile services is another indicator that the mobile market is functioning well. This indicates that competition is flourishing and as a result consumers are benefiting. In Ofcom's recently published International Communications market report, they note that:

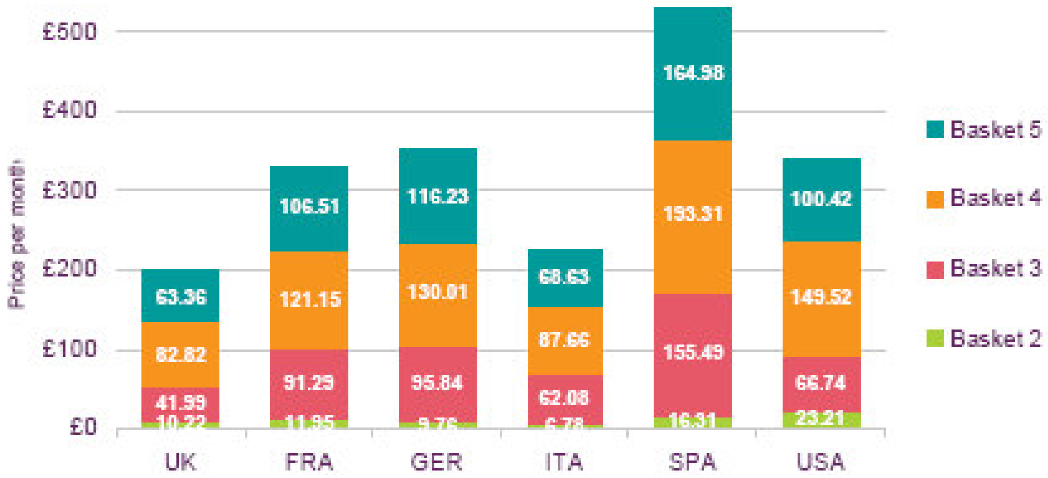
> *"The UK offers the lowest 'weighted average' prices for the mobile component of every*
> *basket except the lowest-use basket, where Italy offers the lowest mobile pricing (Figure*

[18] EC, 13th Implementation Report, 19 March 2008, p15
[19] EC, 13th Implementation Report, 19 March 2008, p19

2.6). In general, the UK and Italy are significantly cheaper than all the other countries.
This is perhaps indicative of higher levels of price competition in Italy and the UK than in the other countries"[20]

Ofcom's chart is repeated below in Figure 7. This clearly shows that the UK has the lowest prices for the majority of the different baskets of goods (as well as the cumulative lowest price) and is performing well according to this measure.

Figure 7: Comparative single-service 'weighted average' mobile pricing[21]



Another key indicator that the mobile market is functioning well is the level of customer satisfaction. Whilst the obvious aim for any industry is to achieve 100% satisfaction, this is not always practically possible. Therefore the most suitable benchmark in order to compare consumer satisfaction is to look at how the mobile industry compares to other industries. Therefore the Ofcom research which indicates a 94% level of customer satisfaction, the highest ever for mobile and currently much higher than that for fixed-line and broadband industries, is a positive indicator for the UK mobile market.

More generally across Europe customers have expressed very strong satisfaction with mobile services when compared to other services. A survey conducted for the EC showed that consumers ranked the mobile sector either first or second against a range of other services such as fixed telephony, utilities, banking, insurance and transport.

[20] Ofcom, The International Communications Market 2008, 20 November 2008, p63
[21] Ofcom, The International Communications Market 2008, 20 November 2008, p65

Figure 8: Levels of Customer Satisfaction with Mobile and Other Services in the EU25, 2007[22]

Measurement of customer satisfaction is key to the business of T-Mobile.

[✂]

Figure 9: [✂][23]

The mobile networks compete on service so it is in their interest to offer customers the best possible customer service at every touch point whether in retail, online or by telephone. T-Mobile regularly conducts customer satisfaction surveys of its own and also relies upon comparative research by specialist publications and industry standard research organisations such as JD Power. We believe that the customer experience and customer satisfaction are key indicators and at 94% satisfaction levels, the mobile market is doing exceptionally well. The indicators provide T-Mobile with a list of what the mobile networks think drives customer satisfaction. [✂]

We have described above the continuous introduction of new products and services in the UK mobile market, which again illustrates that the market is functioning efficiently. The investment of all of the 5 mobile network operators is another indication of this. We can see that the UK performs well according to most of the measures of “a well-functioning mobile market”. However the competitive nature of this market means that EBITDA levels are much lower than in other European markets. As a result, Ofcom need to be very clear about any new regulation as the unintended side-effect could be to critically disrupt this competitive market situation.

[22] Customer Satisfaction Survey: Final Report for the European Commission, Ipsos INRA, 2007

[23] [✂]

Question 3.2: What measures are most appropriate to assess whether the mobile sector is performing well for citizens and consumers?

The mobile market is ferociously competitive with market penetration of almost 70 million active customers. No one company is dominant. The aim of companies is to maximise profits and innovation is key to the provision of new products and services, for example, mobile broadband. As these new products emerge prices are falling – led by the market. With the fierce competition from MVNOs, particularly in the prepay market, there is a huge amount of choice for customers. Customers are able to switch between providers with ease as they look for value for money packages. The competitive pressures already force providers to furnish customers with information and advice to assist and enable them to make informed decisions. There is no shortage of information on mobile services, indeed, Ofcom is apparently concerned that there is too much information available to consumers[24].

For the regulatory assessment of the market, T-Mobile agrees that the standard criteria for assessing effective competition in the EC's SMP Guidelines are correct although Ofcom also needs to have regard to profitability in the sense of section 3 (4)(d) of the Communications Act. Whilst it could be said that profitability measures are too unreliable to be useful and are not generally used in competition law it is correct that Ofcom does need to have regard to profitability margins as investment and innovation require a return on capital employed.

Question 3.3: How will market dynamics change as a result of trends such as availability of new spectrum, mobile broadband and new ways of delivering voice services?

In looking at changes in market dynamics Ofcom has to first consider the fact that current regulation is threatening investment in new technology. Examples include enforcement of coverage obligations, failure to make decisions on liberalisation of existing mobile spectrum, ever increasing cuts in termination charges and increasing regulation of international roaming. Planned regulation may also act as a further break, including use of spectrum usage rights, regulation of mobile broadband speeds, too hasty implementation of changes to mobile number portability obligations and regulation of additional charges in bills.

Over the last year, mobile broadband has taken off in a big way for all mobile operators. As Ofcom have correctly identified, what previously was a niche application in the business market has now moved into the mainstream consumer market**.** [✂]

Whilst the MSA fails to address relevant spectrum policy issues, it is nevertheless appropriate to consider how spectrum availability will impact on the most likely

[24] This further demonstrates the apparent lack of a joined up thinking within Ofcom, which is in parallel considering mandating the provision of additional information to mobile service consumers on Quality of Service (Ofcom consultation entitled "Review of quality of service information phase 1" Dated 17/07/08.

scenario for the sector and market outcomes, thereby helping shift any presumption in terms of the possible need for intervention.

Further, the "Digital Britain" report by Lord Carter which is anticipated in spring 2009 will address both broadband development and spectrum, in particular *"identifying the barriers to the release of spectrum and a fully functioning market in trading and use of spectrum."*[25] We would expect Ofcom to await the findings of this report before considering future policy in this area.

Spectrum liberalisation and release (including UHF spectrum in particular) would:

- Lower the costs of extending the coverage of 3G services and LTE to a wider population of users;
- Improve in-building service and service levels generally;
- Lower the costs of providing a given level of service; and
- Increase competition between fixed and mobile broadband.

Therefore it is essential that Ofcom looks at the impact of its own spectrum policy when considering how it will regulate the industry in future years and the competitive environment that it wants to help shape. T-Mobile's own historical experience has allowed us to see first-hand the long-term negative impact that results from holding different spectrum to our competitors. Ofcom need to ensure that the new spectrum releases manage to level the playing-field as opposed to distorting it further. As we have made clear on numerous occasions we do not see spectrum trading as resolving this problem given the lack of substitutability of spectrum below 1GHz for other spectrum and the unwillingness of the holders of such spectrum to give it up.

Feedback on the market analysis presented in Section 4

Prepay market

The market analysis in section 3, together with the analysis of prepay prices in Section 4, presents a distorted picture of how the market has developed in recent years. In this analysis Ofcom has painted the picture that whilst contract customers now get much better value than previous years, prepay customers have seen no equivalent benefit. In reality, Ofcom's analysis of per month spending is a rather crude way of looking at the value that is currently offered to this group of customers. The current prepay market can be characterised by two distinct trends:

- The move to very low headline call rates by MVNOs. e.g. Asda Mobile currently offer calls at 8p and SMS at 4p; and

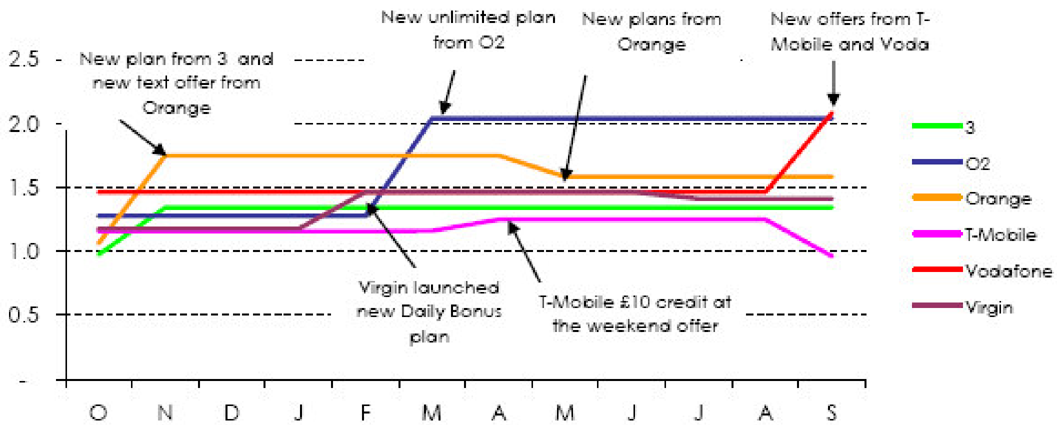
[25] DCMS. 17 October 2008. "Digital Britain – the future of communications." http://www.culture.gov.uk/reference_library/media_releases/5548.aspx

- the move to incentive-based pricing by the MNOs and large MVNOs. e.g. T-Mobile's Top-up & Stretch which gives customers who top up by £10 between Monday and Friday an extra £10 credit to use on the weekend.

In May 2006 T-Mobile ran a very aggressive marketing campaign to promote a new 'Everyone' tariff for prepay customers. This tariff offered the lowest headline call charges in the market at the time, at 12p/min for all calls and 10p for all SMS. [✂] In recent years, the established operators have begun instead to compete in a different way. As opposed to attempting to compete via headline prices, they have moved to offer incentive schemes for their prepay customers, for example, Tesco is giving away triple credit when customers top-up their phone so if a customer buys a £15 top-up in-store, they will in reality receive £45 of total credit which they have to use within a month. This is the equivalent of a 66% price cut to the headline rate. Other operators have similar schemes in place with varying restrictions as to when the additional credit can be used up. These prepay schemes are currently very popular in the market as customers feel they are being active in getting a bargain and provide real value to the consumer. This is the same reason why customers prefer "buy-one-get-one-free" offers in supermarkets than actually having a lower price throughout the year. The impact of these incentive-based schemes is that the actual revenue per minute recovered from prepay customers is much lower than the headline rate of the tariff they are on. [✂]

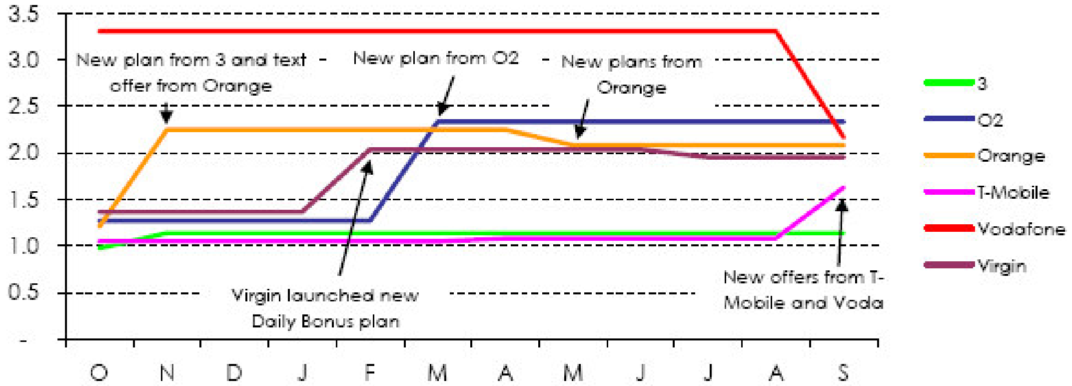
Pure Pricing's data from September 2008 shows that four out of the major operators (namely the five MNOs and Virgin), have shown increased value for prepay customers over the last year at both the £10 and £30 monthly top-up level. The other two operators instead concentrated on providing significant better value at one of these price points. This market information is shown in **Error! Reference source not found.**Figure 10 and **Error! Reference source not found.**Figure 11.

Figure 10: Value Ratio of £10 monthly top-up, October 2007 – September 2008



Source: Pure Pricing, Monthly Indicators, September 2008

Figure 11: Value Ratio of £30 monthly top-up, October 2007 – September 2008



Source: Pure Pricing, Monthly Indicators, September 2008

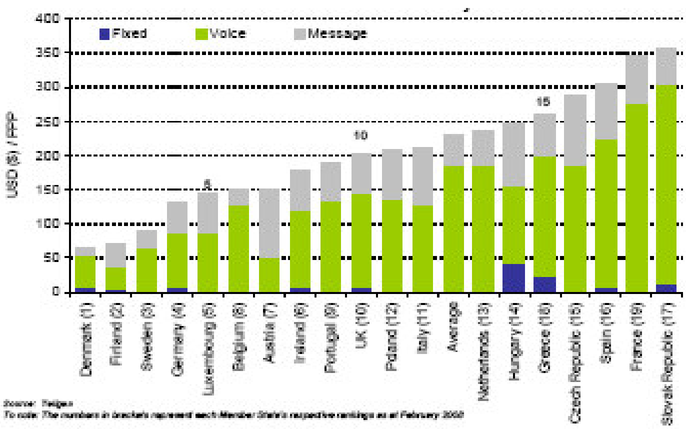
Ofcom's analysis which only looks at the headline tariffs of Vodafone, O2, Orange, T-Mobile and Virgin also omits another major section of the prepay market; the impact of increasing numbers of MVNOs. As mentioned above, Tesco Mobile currently provides one of the most attractive incentive based offerings in the market. Tesco Mobile generates approximately 15% of new additions to the prepay market [✂] Other new to the market MVNOs have specifically prepared new tariffs to ensure that they are considered the best value-operator and offer much lower headline rates than the more established players. MVNOs such as IKEA and Asda have specifically advertised themselves as offering the "cheapest headline rate in the market."

In recent weeks two MVNOs Lyca Mobile and Lebera have pursued a fierce marketing battle which can only be described as a price war. Both these MVNOs are targeting a similar market and have both launched reward schemes whereby customers get 50% extra credit when topping-up, as well as half-price call schemes. This is a result of an extremely competitive market where more than one MVNO will enter the industry targeting a particular customer segment.

It is clear that given these two major trends, which have not been picked up in Ofcom's analysis, it is incorrect to say that the prepay charges per user have remained stable or slightly increased in recent years.

Indeed when you compare the prices of a prepay basket of goods across Europe, the UK performs better than the average European country. ComReg publishes a quarterly key data report which compares the price of different mobile baskets across Europe. This information is produced for ComReg by Teligen, who use an OECD-approved methodology. Figure 12**Error! Reference source not found.** shows that the price for a prepay mobile basket in the UK is below the European average. This low level of prepay pricing needs to be seen against the backdrop of the high level of competition in the UK market which means that the returns to mobile network operators has been poor by international standards.

Figure 12: Price of OECD prepay mobile basket across Europe, May 2008[26]



An additional cost that is involved for prepay customers is commission that needs to be paid for retailers selling on top-up cards. The majority of the prepay top-up cards sold by T-Mobile are sold via independent retailers such as supermarkets and newsagents. [✂] This cost is not borne out for contract customers, where the monthly payment is made directly by the customer to T-Mobile. Therefore when comparing prices of prepay tariffs to contract tariffs one needs to consider this additional cost which significantly reduces the actual T-Mobile revenue generated by the customers.

Whilst we disagree with Ofcom's analysis, we do note that Ofcom has suggested that prepay prices have been relatively flat over a period in which there have been significant cuts in termination changes. It is important to realise that any further cuts in termination rates will severely jeopardise our ability to offer affordable prepay tariffs. In our response to question 8.6, we have detailed the negative impact that changes to the regulation of termination rates may have on this prepay market, which currently accounts for approximately 64% of the UK mobile market.[27]

The vast majority of these prepay customers, however, would not benefit from moving to a contract deal. These customers provide minimal revenue and yet receive the very good service of being reachable at all times. This service is not available as cheaply from fixed operators. The recently launched BT Basic tariff, which is only available to those on income support, does not offer the same level of value as low usage prepay customers can achieve through our general tariffs. [✂] It is clear that a prepay mobile phone therefore provides the best option for low income telephone customers. Even though the call charges for prepay customers are higher then those available from a fixed line provider, many customers will prefer the flexibility of a prepay deal with no monthly line rental. Difficulty in meeting regular payments has been found to be a key reason why almost all low income households that have mobiles are on prepaid tariffs.[28] Also, mobile prepay services alleviate barriers

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[26] ComReg, Irish Communications Market Quarterly Key data report, 10 September 2008, p57
[27] Ofcom, Telecommunications market data tables Q1 2008, 2 October 2008, p20 at http://www.ofcom.org.uk/research/cm/tables/q1_2008/q12008.pdf
[28] Ofcom, Low income consumers and the communications market, 20 November 2007, p.15

preventing marginalized groups from gaining a fixed line telephone e.g. having a fixed address, a bank account and a credit history. According to Eurobarometer 18% of European households have access to one or more mobile phones but not to a fixed line.[29] Operators do charge higher rates to prepay customers, as there is a need to recoup their costs including investment in network and subscriber acquisition costs. Contract customers will be able to achieve lower rates, given the more guaranteed income stream that they provide,

Question 4.1: What is your experience, as an individual consumer or an organisation that uses mobile services?

N/A – we supply services.

Question 4.2: How should regulators and policy-makers respond to signs of rising consumer concern?

Section 3(4) (c) of the Communications Act correctly moves Ofcom in the direction of encouraging industry to respond itself to any signs of consumer concerns in the form of self-regulatory codes. We of course take seriously any consumer concerns although we do not share Ofcom's belief that such concerns are rising. Self-regulation clearly works as the codes covering adult content, shortcodes, mis-selling and passive location services (amongst others) demonstrate. In addition, ensuring that effective consumer legislation is in place is critical since sector specific regulation should be targeted, and ideally unnecessary, so far as consumer issues are concerned.

Consumer 'concern' is able to be manipulated and Ofcom should not rely solely on reported or anticipated problems or on the number of customer complaints it receives. The treatment of consumer issues in the MSA mirrors the treatment of utilities and demonstrably the mobile industry is not a utility. The mobile industry has demonstrated willingness to work with Ofcom to tackle consumer issues to see if agreement can be reached on what are *real* concerns and a way forward to deal with them.

The whole issue with cashbacks is a clear example of Ofcom relying on customer complaints without understanding the underlying issues and treating it as a sector specific problem, rather than as a general issue of transparency and fairness in consumer terms of trade. Once the issue was taken up by Roger Godsiff, MP and discussed in Parliament, the whole issue was taken out of proportion. The mobile networks, in enforcing their voluntary code of practice, made it very clear that Ofcom would see a spike of complaints resulting from the termination of contractual relationships with dealers or dealers voluntarily going into receivership, but Ofcom still chose to react purely on the level of complaints. More than a year later there is no longer a cashback issue [✂] yet Ofcom continues to consult on the introduction of sector specific regulation through an onerous additional General Condition. The

[29] E-Communications Household Survey, Eurobarometer (2006).

danger of being led by consumer complaints alone is further illustrated by the so called uproar over the Russell Brand and Jonathan Ross programme which was aired on Radio 2 – which actually only received a handful of initial complaints. It was only once a newspaper began its campaign that the number of (secondary) complaints began to rise significantly.

The key to assessing whether and what action needs to take place is whether there has been a failure in the specific market in question (as opposed to a failure in consumer legislation generally). The fact that a market does not achieve perfect outcomes is not a demonstration of market failure or that further regulation is required. The CRF makes clear that regulatory intervention in the telecoms market should be evidence based and based on a competition law based market assessment. Regulatory obligations on telecoms operators and service providers can be imposed only:

> "*where the [relevant] markets are considered not to be effectively competitive as a result of such undertakings being in a position [of significant market power (SMP)] equivalent to dominance within the meaning of Article 82 of the EC Treaty"*.[30]

In addition, Ofcom's principal duties include *"furthering the interest of consumers … where appropriate* ***by promoting competition****."* It follows that whilst consumer concern could be used as an indicator of a potential area of investigation, any subsequent regulatory intervention must nevertheless follow the proper legislative and analytical methods and tests. Only if the consumer concern can be demonstrated to reflect market failure may *sector specific* regulation be an appropriate response. However, if the consumer concern reflects a gap in enforcement or consumer legislation then this should be addressed directly. Furthermore, even where intervention by Ofcom is demonstrably appropriate, direct regulatory intervention is one of several potential solutions: promoting self-regulation, leading changes in Government policy or the initiation of market investigations are examples of alternatives that may be consistent with a bias against intervention and the minimisation of the regulatory burden.

Even where regulation is deemed appropriate its application must be consistent (for example, a premium rate service accessed using a mobile phone is regulated under Section 120 of the Communications Act but not if the same service if accessed through BT Vision, Tiscali or Sky Broadband is not) and timely. It must also still satisfy the cost-benefit analysis of a regulatory impact assessment. Where there is insufficient justification of regulatory intervention, there should be none. However, if intervention is nevertheless contemplated, voluntary and co-regulatory approaches should be considered first,[31] and Ofcom should resort to formal regulation only in the cases where these fail.

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[30] Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/C165/03), paragraph 5.

[31] Ofcom. March 2008. "Initial assessment of when to adopt self- or co- regulation." http://www.ofcom.org.uk/consult/condocs/coregulation/condoc.pdf

Ofcom should not be taking action via the back door, for example, using the Numbering Plan to "increase consumer confidence". Clear examples of this are 03, 08 and 070 issues (though we welcome and wholeheartedly support Ofcom's statement on the consumer protection test for telephone number allocation[32]). The initial review of numbering policy which began in early 2006 promised a review of all aspects of the NTNP and the intention was to co-ordinate activity with the NTS projects. Almost three years later the issue of scams behind 070 Personal Numbers has not been properly addressed. T-Mobile was expecting Ofcom to close the 070 number range by the end of 2008 and move all 070 numbers to 06 numbers. This would have been a "quick win" for Ofcom by establishing a 'mobile brand' and addressing the apparent customer confusion between 070 and 07 numbers. As regards the handling of 08 numbers, T-Mobile remains unconvinced that customers need information on 08 pricing in advertising and promotional material.

Ofcom characterises its interventions on behalf of citizens and consumers by saying that:

- intervention to further the interests of consumers is concerned with addressing market failures, i.e. instances where the markets will not deliver economically efficient outcomes; and
- intervention to further the interests of citizens is concerned with addressing market shortfalls, i.e. instances where markets alone will not deliver the public outcomes that society wants.[33]

It does this by monitoring complaints, conducting research and engaging/consulting with stakeholders. However, Ofcom fails to consider how the mobile sector compares in terms of consumer satisfaction with other competitive sectors with high levels of use. Without this comparative information and without further details of the complaints which Ofcom has received, it is difficult to assess the statistics that Ofcom report. The thresholds for intervention that the OFT apply should also be taken into account. A lower threshold should not be applied to mobile compared to other sectors.

Ofcom has consumer powers for a reason. If there is a problem in the industries in which it has regulatory oversight and thus experience it should be able to more effectively target the necessary correction needed in the same way that the OFT uses a targeted approach (by use enforcement action to protect consumers and particularly vulnerable consumers, from rogue traders, unfair practices and other instances where businesses disregard their legal obligations). Rarely will this involve taking action against, or imposing regulation on, all industry participants. It follows that Ofcom will be more effective if it uses its equivalent or concurrent powers by taking direct action rather than forcing the responsibility on industry, an example being the recent case in collaboration with Staffordshire Trading Standards into Phones 4U under Part 8 of the Enterprise Act appears to be far more effective than seeking to impose changes to the General Conditions.

[32] http://www.ofcom.org.uk/consult/condocs/numberingcpt/statement/
[33] http://www.london.edu/assets/documents/PDF/Claudio_Pollack.pdf

The mission of the OFT is to make markets work well for consumers and its view is that competition and consumer policy are complementary in achieving this. The OFT has enforcement powers in both areas and carries out a number of 'softer' activities in both areas such as education and guidance. The relationship between Ofcom and the OFT in relation to competition issues is set out in a letter from the OFT setting out concurrency arrangements.[34] In its paper on consumer protection enforcement principles, the OFT states:

> *"Consumers are best served by competitive markets where businesses compete fairly for custom in compliance with the law. We believe that most businesses want to treat their customers fairly and to comply with the consumer protection law that the OFT enforces ... We encourage business compliance by providing guidance and liaising with representatives of business stakeholders on how this can be best presented and disseminated. We seek to empower consumers, providing advice through Consumer Direct and running public information campaigns. We also seek to improve trading practices through encouraging effective self-regulation. We prioritise our interventions so as to ensure our resources are used with maximum effectiveness and to avoid burdening businesses with the costs of unnecessary interventions, aiming to allow maximum freedom for effective competition within the law. We are committed to better regulation, enforcing in line with the Hampton and Macrory principles."*[35]

The 'super complaints' process offers another avenue. The OFT itself from time to time launches market investigations into conduct in particular sectors, for example the banking sector (under section 5 of the Enterprise Act 2002 (EA02) which facilitates a market-wide consideration of both competition and consumer issues).[36] We would urge Ofcom to be more joined up in its consideration of competition and consumer issues, too often its consumer decisions appear to be taken in isolation from its competition analysis.

Question 4.3: What are the important factors to consider in striking a balance between protecting mobile consumers and enabling markets to work flexibly? Have we got this balance right in today's mobile market?

A fiercely competitive market is the single best protection for customers and consumer protection should be limited to general overarching consumer and contract law (e.g. Distant Selling Regulations; Consumer Protection Regulations, Unfair Terms in Consumer Contracts Regulations, etc). Also, we believe that current regulation is not joined up and is an area where a consistent approach is lacking. At the EU level there is a proposal to simplify the existing legislation in order to protect consumers both in the UK and other member states. We support consumer protection

[34] http://www.ofcom.org.uk/about/accoun/oft/
[35] http://www.oft.gov.uk/shared_oft/reports/consumer_protection/oft964.pdf
[36] http://www.ofcom.org.uk/about/accoun/oft/

measures across industries. Sector specific regulation should only apply when there is market failure or if there is market dominance, neither of which is the case in the UK mobile market. In any case, competition law is there to be used as a tool as is the Enterprise Act (recently used by Ofcom in the Phones4U case[37]). Instead, Ofcom is becoming less and less light touch and an increasingly interventionist approach in relation to consumer matters and is scrutinising each aspect of the market despite there being fierce competition for customers which should deliver the right outcomes.

There has been a great flurry of activity in consumer areas that actually receive relatively low numbers of customer complaints, such as the provision of mobile quality of service information, the review of complaints handling and ADR, mobile broadband speeds and the investigation into General Condition 14.2. The one example that Ofcom always seems to quote when referring to the need for increased consumer protection in the mobile market as a result of customer complaints is the cashback issue. That issue has already been addressed and Ofcom struggles to find other examples. Also, Ofcom has used the Numbering Plan to tackle areas such as 070 and 0870 numbers. It has done so by imposing obligations to provide further information of little relevance to consumers in an intrusive manner. This regulation has costs for the operators which ultimately are borne by the end-users, who in turn see little benefit.

Ofcom thinks that consumers feel tariffs are complex and consumer concerns in this area are rising because consumers perceive there to be hidden charges such as rounding, non-inclusion of non-geographical numbers in call allowances, no roll-over of unused allowances and minimum call charges. We disagree.

Research was conducted by the Better Regulation Executive and the National Consumer Council in 2007, which:

> *"found much regulated information was not reaching its target audience – because there was too much of it, because the font was tiny or the language impenetrable, or because it was provided at a time or place that didn't make it useful to consumers. The research found consumers didn't take in many common examples of regulated information, let alone act on them. As behavioural economics research has shown, people do not always follow expected "rational" behaviours. Information itself may lessen consumers' ability to process and act on the messages they receive…..*
>
> *…Recent studies have shown that providing too much information may also damage competitiveness. An assessment exercise conducted by the Better Regulation Executive estimated the cost to business of government information requirements at more than £1.5 billion per year. Much of this may be accounted for by the legal advice and monitoring systems companies has (sic) to put in place to ensure they comply with the law.*

[37] http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ccases/closed_all/cw_985/

Information requirements can also conflict with companies' communication with their customers, damaging their brand."[38]

It is inevitably impossible to demonstrate whether Ofcom has or has not found the right balance between the protections of mobile consumers and enabling markets to work flexibly. However, the question in itself is striking: a properly functioning market should give rise to customer satisfaction. There ought to be no need to consider any balancing act since the market and consumer should be aligned. Ofcom's question and the examples above all point towards a different failing however: that Ofcom appears to be growing more interventionist, and its intervention is less evidence based.

No market will produce perfect outcomes all of the time, and there will inevitably be some consumers that strike bad bargains, or who are simply the victims of mis-selling, etc. However, such circumstances do not justify sector specific regulation, only taking specific action in relevant cases under appropriate and properly enforced consumer protection legislation. Sector specific regulation that goes beyond this must be demonstrably required, based on an established, material and ongoing consumer harm for which regulation is the most effective and proportionate response.

However, Ofcom appears to be losing sight of this and confusing the wider consumer protection regime with the micromanagement of sector specific regulation, a trend made all the more concerning by Ofcom's increasing tendency to shrink from evidence based policy and decision making.

Question 5.1: How does the use of mobile services affect our participation as citizens in society?

In Section 5, Ofcom have highlighted some of the many potential opportunities that mobile phones could be used for to benefit society as a whole. T-Mobile agrees that the mobile phone system creates a unique method for implementing benefits to UK citizens. The fact that mobile phones allow organisations to be able to contact citizens at all times, means that they offer significantly more than other communication services, like fixed-line phones and email.

The areas that Ofcom has highlighted in this consultation (democratic and health opportunities) are areas where traditional mechanisms have evidently failed:

- The turnout in elections in the UK is consistently very low, and has reduced considerably in the last decade;[39] and
- missed appointments cost the NHS £700m each year.[40]

[38] http://www.berr.gov.uk/files/file44372.pdf
[39] See http://www.ukpolitical.info/Turnout45.htm
[40] See http://www.telegraph.co.uk/news/uknews/1517730/'No-show'-hospital-patients-cost-NHS-andpound700m.html

Ofcom has described how mobile ownership could potentially create methods to overcome these significant problems. This can only be a positive or neutral development for UK citizens. It is possible that these new mobile opportunities will not make an impact on these problems. In which case, the problems may run deeper than just through ease of communication. However the reason why policy makers are developing these solutions is because they believe that these mobile opportunities may have a positive impact on some citizens. Whilst T-Mobile welcomes mobile services being used, this will be only one method of communication and the Government is unlikely to use only one method - instead it will continue to use the internet, the press, etc. as it needs to do so.

The last century has seen a plethora of inventions and positive developments. Some of these have had a significant impact on citizens as a whole and helped create cost-effective ways of dealing with issues. It seems nonsensical for Ofcom to say that it is problematic there is a development that could lead to positive benefit for the majority of the population and will be neutral for others. Surely this is a better outcome than not having this development, where no-one benefits?

Ofcom appear to consider it astute to think about how some may be left behind and as a result disenfranchised by some future technological development. In reality though the important thing to think about is how some will benefit from a future technological development. There have been numerous technological developments in history that not every citizen has benefited from. However it is incorrect to focus on those people as opposed to those who have benefited greatly. Ofcom does not dispute the fact that most people who don't have mobile phones have made a positive choice not to have them. Whilst Ofcom is correct to consider issues of inclusion, resolution of these is ultimately a question for government and not Ofcom.

For example, there are those who currently do not have access to the internet and as a result cannot benefit from internet banking. These individuals will still have to go to their local branch to conduct their banking. However what should be important is that there are some citizens who have benefited from the development and can conduct their banking easier.

In the unlikely event that the government would wish to develop mobile only services and make them universally available then they need to subsidise the availability of such services in the same manner as they subsidise other services which they wish to have universally available.

Question 5.2: What factors should we take into account in thinking about access and inclusion issues in mobile markets?

The MSA raises a number of concerns in relation to social and distributional issues; in particular concern is raised over coverage and involuntary exclusion from mobile use.

It is not entirely clear what is implied, if service provision for some individuals or locations is not commercially viable but is provided then someone else – other users or taxpayers – will have to pay more. The case for such a redistribution of resources is not made.

Neither is it clear that the social and distributional concerns raised by Ofcom are really issues that Ofcom should be focussing on or potentially addressing. If there are wider concerns, they should primarily be matters for government, since government has a wider view of issues such as access and a wider set of policy instruments and tradeoffs to consider including the distribution of income.

Since the Ofcom MSA was published the EC has published its review of USO.[41] In respect of mobile the review concludes that:

"This latest analysis reaffirms the conclusion in the first review that the competitive provision of mobile communications in the EU has resulted in consumers already having widespread affordable access to mobile communications. The considerations for including mobile communications within the scope of universal service (as set out in Annex V of the Directive) are therefore not fulfilled."

The Government intervenes to redistribute income through the tax-benefit system, provides services such as health care and education on a universal basis, and funds targeted interventions in specific areas such as housing. The Government is charged with making the tradeoffs involved in these decisions and has a wider set of policy tools than a sector specific regulator.

Where more targeted interventions are applied the thresholds can be relatively high (spending of 10 % or more of income on fuel defines fuel poverty),[42] and/or public funding is used to support specific groups ("winter fuel" allowances of £250 for those over the age of 60 and £400 for those over the age of 80 – a scheme that costs £2 billion per annum). Energy companies also offer social tariffs which are expected to cost around £50 million in 2008.[43]

Mobile expenditure on average constitutes 0.8% of income (the same level of expenditure as that on gambling and on pets and pet food) versus 3.3 % for fuel (electricity and gas).[44] There is also considerable consumer choice over the amount spent on mobile telephony, with low cost or free handsets (including second-hand handsets), pre pay for outgoing calls and no charge for receiving calls giving options for expenditure. It seems extraordinary to suggest that "involuntary exclusion" is an issue relevant to the regulation of the mobile market.

[41] EC. 25 September 2008. http://ec.europa.eu/information_society/policy/ecomm/doc/library/communications_reports/universal_service/572_final_en.pdf

[42] BERR. http://www.berr.gov.uk/whatwedo/energy/fuel-poverty/ http://www.berr.gov.uk/files/file48036.pdf

[43] House of Commons. October 2008. "Energy prices, fuel poverty and Ofcom: Government response to the Committee's Eleventh Report of Session 2007-08". http://www.publications.parliament.uk/pa/cm200708/cmselect/cmberr/1069/1069.pdf

[44] ONS. Family Spending 2007. Page 6. http://www.statistics.gov.uk/downloads/theme_social/Family_Spending_2006/FamilySpending2007_web.pdf

More generally lower income is a primary source of reduced consumption of all goods and services. We do not typically refer to this in terms of a failure of the market and involuntary exclusion. Finally, in relation to age, as current users come to make up the over 65 age group one would expect non-use to fall. However, there will remain a group who do not wish to utilise mobile (they may be content with a fixed line) or are not able to utilise mobile for reasons other than affordability (along with other new technologies).

Commercially provided mobile services have now become a key means of telephony access for low income households. As detailed above in our description of the prepay market, one key reason is the inability to meet regular payments. The prepay mobile market in the UK therefore offers an excellent communication service for low-income citizens, which is not replicated in the other sectors. Given this key difference in the make-up of fixed customers versus mobile customers, Ofcom should ensure that any regulatory measures will lower the cost of mobile provision (particularly spectrum), to ensure that these vulnerable customers can still retain the service they currently benefit from.

Question 5.3: What factors should we take into account in thinking about new services, and how those services may affect issues like protection of children, privacy and security?

The UK mobile operators have been extremely proactive over the last five years in addressing the risks associated with the use of new services on mobile phones including those associated with privacy and in relation to children. T-Mobile has introduced and/or participated in the development of a raft of measures to combat perceived threats.

Concerns around child safety broadly fall into three categories: content, contact and commercial. In all these areas UK mobile operators have actively participated in a range of successful self-regulatory initiatives. We firmly believe that self regulation has been pivotal to the success of the new media sector and must continue to be to be encouraged and supported.

<u>Content</u>

In 2004 the first code of practice for the self-regulation of content on mobiles was published. All customers now have to go through a process of age verification before being able to access 18-rated commercial content. In addition all providers have to provide a filter for the internet access point. These measures have been extremely effective in preventing children from obtaining inappropriate adult content via mobile networks. The Code has subsequently been used as the basis for the EU framework for the safer use of mobiles by teenagers and young children.

Some measures go beyond the safeguards implemented for content accessed from PCs. For example under the content code of practice all commercial chat rooms for mobile that are not moderated are placed behind access controls and only made available to customers that are at least 18 years old.

Passive location services based on mobile network location data are all subject to a code of practice developed by the industry. There are services available that allow parents to keep an eye on the whereabouts of their children. The Code requires for all such locators to prove their identity and address on registration. This measure guards against the possibility of those with no legitimate interest in the whereabouts of children making use of such services. The Code also requires that regular reminders are sent to 'locatees' so that their phones cannot be tracked without their knowledge. Again these safeguards only apply to mobile location feeds and no similar code is in place for other types of location providers such as GPS providers.

The mobile operators are all members of the Internet Watch Foundation (IWF) and abide by its Code of Practice. In addition, mobile operators have all agreed to use the IWF's database of illegal child sexual abuse images to block customer access to the listed sites.

Ofcom undertook a review of the UK mobile content code in the summer and concluded it was successful in protecting children from accessing inappropriate content. The mobile operators are now reviewing the code themselves and issued a consultation to key stakeholders in August. Responses are due in November.

Contact

T-Mobile has been a very active member of the Home Secretary's Task Force for child protection on the Internet. The Task force has developed numerous models of good practice. T-Mobile has been invited to join the UK Council for Children's Online Safety and will continue to be actively involved in formulating policy to ensure children remain protected when using mobile devices.

Commerce

The mobile device is increasingly a platform on which economic transactions can be executed. For example wallpaper, ringtones or music tracks can be bought through a premium rate charge. Mobiles are also used for direct marketing campaigns. We are very aware of the need to protect children from inappropriate commercial activity.

The Mobile Broadband Group (MBG), which represents the interest of all UK mobile operators, has recently joined the Committee for Advertising Practice. Mobile has the potential to become a significant channel for the distribution of advertising. The mobile operators realise the importance of having this channel properly regulated and will support the Advertising Standards Authority in its independent administration of the CAP Code.

Other risk areas presented by the Internet are:

- viruses;
- Fraud; and
- Privacy.

For many of these risks, customers of mobile networks are better protected than customers using a fixed connection. For example it is very rare for mobile devices to be attacked by viruses. This is partly because far fewer viruses are written for mobiles and partly because mobile operators devote considerable resources to keeping their networks secure. Similarly mobile operators have been successful in combating Spam and thus ensuring that their customers' services remain relatively Spam free. The consequence is that mobile customers are also less exposed to fraud activities such as phishing and invasions of privacy. Nevertheless, we will persist in our efforts to protect the whole customer base, including children, from these risks.
In summary there are already a range of mechanisms in place to protect customers' privacy and children from inappropriate content, contact and commerce:

- Self regulation, the mobile operators' Code of Practice for the self regulation of new forms of content on mobile, the Industry code of practice for passive location services, Good practice guidelines published by the Home Secretary's Task Force for child protection on the Internet and the IWF's Code of practice for tackling illegal content. Future Codes will be drawn up by the new UK Council for Online Child Safety;

- Network integrity measures to protect from security breaches, ID theft and viruses;

- Formal regulation such as the PhonepayPlus 11th Code of Practice for premium rate services (albeit PRS are not generally accessed via the Internet);

- Technical tools – Internet filters applied to mobile networks' Internet browsing facilities, blocking filters applied to the database of illegal child abuse URLs compiled by the IWF, access controls for 18 rated commercial content on mobiles; and

- Education: Ultimately no technical or regulatory intervention can provide a fool-proof safety surround. It is therefore absolutely critical that all interested parties continue in their efforts to engage and educate consumers (and parents of consumers) in the art of informed risk assessment and appropriate on-line behaviour.

Question 5.4: Have you been affected by issues about coverage or 'not spots'? How has it affected you?

This question appears to be primarily directed at consumers but T-Mobile, as a mobile operator, is also concerned with coverage. Geographical coverage, particularly of 3G services, is definitely currently incomplete. However, it is important to view this in the context of the rollout of services and the availability of spectrum, particularly 900 MHz spectrum. Over time one would expect the market to deliver higher levels of coverage, particularly if lower frequency spectrum is available for 3G services. However, it will never deliver universal coverage without some form of subsidy and, we would suggest, network sharing.

In Australia, with technology neutral spectrum rights and spectrum at 800 MHz, 3G population coverage by Telstra is 98%.[45] This suggests the part of the perceived problem relates to inability to progress liberalised 900 MHz spectrum.

In relation to the costs and benefits of "partial exclusion" due to gaps in coverage Ofcom comment in paragraph 5.48 of the MSA that:

> *"Quantifying the impact of partial exclusion resulting from gaps in mobile coverage is problematic due to the complexity of quantifying un-met demand and the resulting loss to citizens and consumers."*

This is not a sensible way to think about the problem since what we do know is that operators believe that expected revenues fall short of the expected cost in areas where coverage is not provided. If the business case cannot be made at present then Ofcom should address the question of whether there is any material externality which would imply a divergence between private and social costs and whether there is a low cost way of meeting the gap. Network sharing is an obvious answer, as is some form of government subsidy.

The current European definition of USO requires that there be a "general net benefit to all consumers" which warrants intervention. It is far from clear this is the case with mobile services.

[✂] This is because it is simply not commercially viable to build sites in areas where there simply isn't the market to pay for the investment or sustain the operational costs. A balance has to be struck between satisfying the needs of the vast majority of the population and being able to offer mobile services at the right price point. Moreover, with the UK the most competitive market in Europe, we can expect competition will further drive down prices putting increasing pressure on the cost base.

There are also large areas of rural areas where there is little or no population, or are Areas of Outstanding Natural Beauty or other protected landscape areas. Planning policy is more restrictive in these areas stating that in providing coverage the highest

[45] One reason for this is that Telstra were required to match existing levels of coverage as 3G was rolled out as a condition for the shutdown of their 2G CDMA network which occurred in April 2008.

priority should be given to protecting them. This means planning applications would be incredibly difficult to obtain and would potentially generate a large amount of negative publicity and public opposition. There are multiple ways of disguising masts to minimise impact but it would be very difficult to do so in some of country's national parks and countryside. There are also areas (hamlets, towns and villages) where there is strong local opposition, not only from the general public but also local planning authorities that adopt an increasingly anti-telecoms approach.

Figure 13: [✂]

The cost to build a network up to 100% outdoor landmass coverage, which would be needed to guarantee coverage in the UK, is very high (and significantly higher than to build up to 100% population coverage). T-Mobile has always built its network with the aim to achieve specific levels of population coverage. It would be an exercise in diminishing returns for any operator to meet this (The benefit of building a site would become less and less as we try to provide 100% landmass coverage). The costs incurred would mean that it certainly would not make commercial sense to voluntarily extend our coverage to these remote areas. Implicitly this has been recognised in successive coverage obligations.

Additionally there will be locations where it is simply not feasible to meet this type of requirement, where for example there are no roads or power. The costs for mobile are intrinsically more than for a fixed-line and there needs to be some recognition from Ofcom of that. Therefore the cost of providing 100% mobile coverage would be prohibitive for commercial operators. Hence any such extension of coverage needs to be subsidised and is best provided by a single shared network.

T-Mobile is committed to extending 3G coverage and for that reason entered into the network sharing agreement with H3G in December 2007. [✂] It is simply not economical for coverage to be extended further; indeed this coverage is only available because of the cost savings delivered through network sharing. If Ofcom, the Government or others believe it is important to have wider coverage than is commercially viable to meet public policy objectives, T-Mobile would suggest that the only economic way of delivering this is through a single shared network. Ofcom could look at facilitating this, particularly with infrastructure funding, as was provided for the extension of Vodafone's and O2's 2G networks. We would also expect Lord Carter's report to consider this issue.

Access to 900 MHz spectrum, and to the Digital Dividend, will also ensure greater coverage, both geographically and in-building. Any remaining coverage gaps will be uneconomic to serve for T-Mobile. Rather than requiring multiple operators to invest in uneconomic networks in these areas, it would be best for the government to offer a subsidy for coverage of these areas to be awarded on a competitive basis and only if the expected benefits would exceed the cost of the subsidy. This option is discussed further in our response to Question 8.9. Some very remote areas may still never be covered by mobile technology as the public benefits would not exceed the costs.

Feedback on the scenarios presented in Section 7

The Analysys Mason analysis presents four scenarios that range, with increasingly positive stories for the mobile industry, from 'steady as she goes' to 'SIMs everywhere'. These scenarios are intended to help Ofcom "develop a sense of the range of likely possibilities".

The analysis seems to have been developed with a narrow focus on developments internal to the mobile industry while ignoring the implications for the industry of more general developments including in relation to other technologies. As a consequence the analysis is overwhelmingly positive for the industry. However, if Ofcom wishes to consider the range of likely possibilities, then more analysis is required in relation to factors such as:

- The risk that take-up of fixed VoIP and penetration of dual mode Wi-Fi/GSM phones reverses fixed-to-mobile substitution putting mobile industry profitability under pressure and creating greater competitive pressure on voice termination pricing. Bizarrely the analysis only talks about VoIP and Wi-Fi providers being less able to compete despite the likelihood that the costs of fixed broadband technology continuing to be below mobile broadband because of spectrum scarcity. The focus on femtocells is also misplaced as it is highly unlikely that the femtocell market will ever be as significant as current or future Wi-Fi services;
- the increasing importance of convergent products more generally (e.g. to what extent will regulation continue to be necessary to prevent market power in fixed and content services or operating systems being leveraged into mobile services); and
- to what extent will mobile broadband present a competitive choice for some customers' in-home broadband needs and to what extent this will be impacted by improvements NGN fixed networks and improvements in cable broadband technology?

The fact that the analysis largely overlooks a number of key developments that are already identifiable highlights just how unreliable it is for a regulator to seek to develop regulatory policy today on the basis of expectations of how markets might look several years from today. T-Mobile believes that unless there is a demonstrable reason to act today then the most prudent course in relation to rapidly changing and uncertain market developments is to adopt a policy of forbearance. The danger of pre-emptive regulation is not only that regulatory resources are expended on matters that may never require regulation (and in this regard, the power of markets should not be underestimated), but that regulation actually results in harm. Pre-emptive regulation may have unintended consequences such as closing off the opportunity for new products to develop or deterring investment more generally.

T-Mobile is particularly concerned that much of the discussion of the scenarios seems directed at looking for new opportunities to regulate based on potential threats. Thus not only are the scenarios biased but so also is the analysis of the regulatory implications. A balanced approach would examine not only the possible role for regulation but also the possible harm that regulation may cause.

While noting our concerns around the partial nature of the analysis and its conclusions, T-Mobile does believe that there are elements of each of the presented scenarios that may well eventuate. For example, we think there is growing evidence that broadband on mobile devices will take off as a consumer service and that many people will be willing to pay for devices and access that deliver the mobile internet. Many of the services this provides access to are free or low cost including search, email/chat, VoIP and location services. The iPhone and the G1 illustrate what is currently possible and the combination of ease of use with the applications around these devices can be expected to enable the use of broadband on devices to grow rapidly.

We therefore think that many of the characteristics of Scenario 3 – the internet on your mobile – are likely to prevail. Ofcom acknowledge that this raises potential issues for calculating cost-oriented termination rates and, moreover, creates the possibility for mobile VoIP to competitively constrain termination rates such that regulation of termination rates may no longer be needed. Under this scenario, incentives for investment, spectrum liberalisation and reallocation of UHF spectrum to mobile are all more pressing matters.

We expand on our view of key developments within the mobile sector in our response to Question 7.1. In the following section, we provide further specific comments on the individual scenarios presented by Ofcom:

Scenario 1: Steady as she goes

- This has been commented on as a future in which the market does not deviate from current trajectory – however a detailed examination of the figures sees that mobile data growth is assumed to slow;
- Consolidation is likely to occur if the efficient scale of service delivery changes (or if the current number of players is inefficient) and this may occur in any of the scenarios. In any event, established competition law provides the framework for considering such questions;
- Figure 73 implies that innovation slows – why is this a logical implication from this scenario?
- Paragraph 7.26 implies that there is an incentive to mis-sell mobile – why is this a logical implication from this scenario?

This would seem an unlikely scenario to occur in its entirety, given the trends that we see emerging:

  - Post-pay bundles tending toward flat rate;

- o Femtocells and Wi-Fi cherry picking; and
- o Future spectrum auctions

Scenario 2: Mobile voice wins

- Why wouldn't the focus on cost reduction, described in paragraph 7.31, happen in all scenarios?
  - o [✂]

Scenario 3: Internet on your mobile

- Why would consumers value the content rather than the pipe, if they cannot get the content without the pipe? This does not make economic sense;
- The real problem could be that regulation prevents MNOs from making money out of pipes;
- Free internet services would increase the value of the pipe;
- Why would content tie-ins become more important if consumers can by-pass these?
- Why would consumers use MNO portals?
- Mobile data access would face increasing pressure on capacity:
  - o Data volumes per subscriber will double every 2 years (long-term average);
  - o Consumers expect their traffic to be carried for a static flat rate price;
  - o Future mobile technologies can only offer a finite capacity uplift;
- In this scenario we would expect greater fixed/mobile network integration;
- This may combine with VoIP to accelerate the commoditisation of voice ;
- This may be offset by increased potential for the 2-sided business model where mobile operators partner with suppliers, including advertisers, on one side and provide enhanced services to customers.

Scenario 4: SIMS everywhere

- Figure 76 states that "There is increasing likelihood of a new infrastructure entrant post DDR". However LTE would require wide channels and operators will want to minimise the cost of meeting growth – could this instead mean that there will be less rather than more network operators?
- Maintaining MNO profitability in this scenario requires a shift to a "smart pipes" strategy, where T-Mobile is able to utilise customer information to a greater extent
  - o This would require expertise in customer data handling;
  - o Trust and opt-in by our customers is vital; and

- Value creation is derived by converting customer data into useful information.

Question 7.1: What do you see as the most influential trends and features of mobile and wireless markets in future?

T-Mobile recognises that the UK mobile market is one of the most dynamic in the world, driven by the uniquely competitive market environment and a rich ecosystem of third party service providers that together deliver innovative and customer-focussed solutions.

[✂]

Question 7.2: What new policy and regulatory challenges could the trends identified in this section bring? Which policy and regulatory challenges could they address?

Numbering

Ofcom has not addressed the concerns raised by T-Mobile in respect of the allocation of mobile number ranges to new entrants using 07 numbers for diverse (non-mobile) services. With increased number of companies entering the mobile market by the allocation of mobile number ranges, Ofcom has chosen to ignore the implications of its policy and has delayed its activity of addressing the issue raised by T-Mobile. A review of the Numbering Plan has been promised since 2006 and in particular the review of the definition of 'mobile service' and 'mobile number'. T-Mobile clearly believes that organisations have sought mobile numbers in order to take advantage of an existing loophole in the Numbering Plan in order to gain mobile termination revenues and access to the number portability system.

Since 2006 Ofcom has been promising to take action in the numbering arena including reviewing and simplifying the Numbering Plan. The lack of joined up thinking between the numbering policy and administration and NTS areas within Ofcom is apparent and has been reflected in the way in which 070 and 0870 projects have been handled. T-Mobile is disappointed that Ofcom has not properly considered these issues. Instead it has tried to implement policies using the Numbering Plan by attempting to implement pre-call announcements (for 070 and 0870) and the inclusion of 08 pricing in advertising and promotional materials, in the name of 'consumer protection' and 'consumer transparency'. The measures have either been unsuccessful, relevant more to fixed networks or is disproportionate to the perceived customer harm.

The MSA concentrates on the mobile networks, for example, on coverage and consumer issues, yet when it comes to numbering the focus changes without any discernable reason. Ofcom uses the principle of technology neutrality to continue to allocate mobile number ranges to non-GSM Wi-Fi and call-forwarding operators. This is fundamentally flawed as there are different perceptions of services by consumers and they are very confused by this use of numbers. The result of Ofcom's continued allocation is only exacerbating the problem. These companies are able to exploit a loophole in Ofcom's Numbering Plan so that they can earn mobile call termination revenues (an issue on which Ofcom has been slow to confront) and join the MNP OSG. The review of the Numbering Plan is now extremely urgent – especially in respect of the definitions of 'mobile service' and 'mobile number'. Further delay will mean that review is too late. Until such time as Ofcom reviews these issues, there will continue to be disputes in these areas.

Termination rates for alternative networks

New entrants to the mobile industry, with varying levels of spectrum ownership and investments in network costs, will also create significant issues with regards to what the appropriate termination rate is. While there should not be asymmetry between operators with equivalent costs, where new networks are built with substantially different costs and business models to recover those costs, then a distinction must be drawn – it cannot be assumed that the termination rates of existing operators are also appropriate for new entrants. Indeed, it is likely that with their substantially smaller networks, using low power, cheaper equipment, their efficient costs of termination will be significantly lower.

Ofcom should ensure that new entrants set termination rates that are cost-oriented. Ensuring a competitive market does not in itself make new entry prima facie pro-competitive. New entry serves to promote competition, but the aim of competition is not new entry per se: rather it is to ensure an efficient market that serves the consumer. Where new entrants charge high termination rates to other operators that do not reflect the efficient costs of termination, then new entrants do not per se add anything. This is particularly the case where the market is already competitive and characterised by high levels of choice, innovation and falling prices. Allowing new entrant networks to charge substantially above their efficient costs, in order to seek high levels of return on investment, cash flow positive positions in the short term, or the subsidisation of retail services, would place these operators in a position of substantial advantage in these areas.

The retail market for mobile services is already (highly) competitive, but this competition will be diminished if new and not so new entrants are permitted to market services priced at a level sustained only by inefficient and excessive termination charges. In particular, where wholesale charges are used to subsidise a retail service, in circumstances where competitors are unable to do the same (i.e. because their wholesale charges are closely regulated) then this distorts retail competition by allowing that company to set retail charges beneath the market price for that service.

A close examination of the business models and business cases of many of the new entrants will demonstrate that T-Mobile's assertions are factual: several of the new entrants are explicitly proposing high/equivalent termination rates on the basis of subsidising their retail services, and/or ensuring profitability etc within timeframes that are unsupported by industry norms.

Indeed, the inappropriate level/use of termination rates by some new entrant operators using the 07 range is well known within Ofcom, in particular with respect to those operating arbitrage services for international calling. Ofcom has allocated many million mobile (07) numbers to new entrants and must properly consider the issue of number allocation and termination rates for such operators. Although the use of 07 numbers and high termination rates will of course benefit new entrant operator and positively contribute to any initial success of theirs, requiring existing operators to in effect subsidise new entrants that have neither the coverage and other obligations nor associated costs of the existing operators will in the long term only result in inefficient investment and higher prices than would otherwise exist across the market if Ofcom were to ensure charges reflect efficiently incurred costs as assessed in line with its current approach.

Further details of our views on the changes that are necessary to the mobile call termination system are set out in our response to question 8.6.

Regulation of Femtocells

Paragraph 7.37 of the consultation raises an important issue: "would terminating a call over a fixed broadband backhaul connection to an in-home femtocell be considered fixed or mobile voice call termination?" We also note in paragraph 8.41, in the first bullet point, that the consultation mentions that a femtocell allows a "mobile access network to use a broadband service as backhaul".

Is this call to a femtocell a call to a fixed or mobile network? We believe that now is not the right time to be assessing these issues in order to come to a final view. [✂]

Bearing in mind that Ofcom's regulation should not stifle innovation and should promote and encourage innovation[46], we think that Ofcom should revisit these issues when the technology has developed fully so that the necessary analysis can be carried out. Any attempt to take a view at this early stage of this technology risks stifling the full emergence of this technology, since the idea that regulation will be a certainty in the near future may discourage some companies from fully developing this technology. We welcome a more detailed discussion of these issues at a later date.

New MNO business model

The new MNO business model, describe in scenario 4, will generate a host of issues in terms of protecting the privacy of consumers. We deal with these issues in our response to question 8.5.

The future for MVNOs

[46] See paragraph 8.27, the third bullet point of the MSA consultation.

The developments of home-zone pricing and further mobile broadband services are just a couple of ways in which mobile operators may significantly develop their traditional core services in the future. As described in our response to Question 3.3, it is unclear how MVNOs will be able to provide distinctive unique mobile broadband products, given the competitive nature of the wholesale market. However, it is clear that some MVNOs will be in a position to be able to do so, e.g. Virgin Mobile and BT Mobile. As Ofcom also note, other MVNOs will potentially struggle to offer the same home-zone solutions that the MNOs will be able to offer but the fact that it is possible will mean that there is no major reduction in competitive pressure from MVNOs. The larger MVNOs obviously exert the most pressure and they are best placed to offer the necessary solutions.

Question 8.1: Should Ofcom do more to promote competition in mobile and wireless markets?

The UK mobile market is already effectively competitive - as confirmed by the evidence presented in the Consultation and earlier in this response. Ofcom's focus should be on maintaining effective competition. For example, Ofcom's Spectrum Liberalisation decision may critically impact the future level of competition in the sector if 900 MHz spectrum is not re-assigned in a more balanced way. In addition, Ofcom should avoid providing regulatory advantages to new entrants that bring no or little benefit - given prevailing competition in the market - and can carry significant costs to efficiency by preventing competition on the merits.

Ofcom notes potential problems that may arise. However, it is important to also consider to what extent these are problems that may arise in any market and for which general competition law and consumer protections are appropriate. For instance, there is no clear reason why the mobile sector should face a more onerous consumer protection regime than other competitive sectors.
It is also important that Ofcom reviews current regulation to ensure that it is not adversely harming competition. In this regard, we note that Ofcom has recognised the importance of less intrusive forms of regulation to promoting investment in next generation broadband networks. In the Ofcom annual lecture David Currie noted that encouraging investment means:

> *"Setting the right financial framework for Openreach; and leaving the market not the regulator to determine the price of next generation wholesale broadband bitstream product."* [47]

In their consultation document on next generation broadband, Ofcom state that of the options for regulation considered they favour anchor product regulation noting that it is likely to be the most efficient pricing approach for risky next generation access

[47] David Currie. 15 October 2008. "The Ofcom Annual Lecture 2008." Page 6. http://www.ofcom.org.uk/media/speeches/2008/10/annual_lecture

products.[48] Essentially, this involves limiting regulation to a service or group of services that would provide a degree of protection for customers while allowing other prices to be set flexibly.

Ofcom's anchor pricing approach shows that there can be benefits in:

- regulation that departs from mandating a uniform level of prices based on one approach to costs; and
- price flexibility for efficient and timely investment.

We also note that there is a sharp contrast between the Ofcom's focus on end to end infrastructure competition and entry and the supporting analysis by Analysys-Mason which concludes that:

> *"...the benefits of competition solely from the entry into the market of additional broadband infrastructure players per se is limited*." and *"...a fundamental question arises as to whether the focus of UK regulation should now shift from infrastructure-based competition towards encouraging the development of non-voice converged services."*

Question 8.2: Ofcom's strategy in telecommunications is to promote competition at the deepest level of infrastructure that is effective and sustainable. How might this strategy be applied, given future developments in the mobile sector? Under what circumstances, if ever, would it make sense to consider access regulation for mobile platforms?

T-Mobile expects that competition will remain strong in the mobile market given the number of operators and increasing numbers of service providers, new spectrum releases and increasing competition between rival technologies as a result of convergence. The UK retail market has more MNOs than any other major European country and no UK operator has market power. The UK market also managed to deliver national roaming twice on a commercial basis for H3G as well as for Cable & Wireless. The evidence suggests that there is no basis for Ofcom to impose measures to increase competition between mobile operators.

It is the case that the economics of deployment of new technologies may require particular deals between operators to share elements. However, deals consistent with competition law can preserve competition in relation to services and, in any event; rival operators will continue to discipline the parties.

There is no basis for access regulation in competitive markets. Where suppliers and customers have an effective choice of providers, an attempt by one provider to limit access for anti-competitive reasons would be defeated by the ability to switch to other

[48] Ofcom. September 2008. Delivering superfast broadband in the UK – setting the right policy framework. http://www.ofcom.org.uk/consult/condocs/nga_future_broadband/main.pdf

providers. Competition drives operators to carry the services that are most valued by consumers. Further, where a content or application provider can effectively reach customers using one network then there is no case for access regulation simply as a means for the provider to obtain better terms and conditions from another network.

The only foreseeable areas where access regulation may be required are (a) continuing access to the local loop to enable operators without their own fixed networks to supply convergent products and (b) access to premium content where an exclusive access deal would otherwise threaten competition in downstream markets.

Even for SMP operators, T-Mobile believes that access regulation is only warranted where (a) there is a reasonable expectation that access would otherwise be withhold for anticompetitive reasons and (b) the regulation would bring competitive benefits that outweigh the potential costs and risks of the regulation.

It is the case that the level of uncertainty implies that it is not possible to rule out future measures at this stage. However, any such regulatory measures should only be implemented when there is actual evidence of a significant market problem and where the measure will bring benefits greater than costs.

An important example for Ofcom to consider is that two years ago, many in the industry considered that there was no space for new MVNOs in the market. This could easily have been interpreted by Ofcom as a 'future development in the mobile sector' which could lead to a reduction in competition. In reality, over the last eighteen months there has been significant entry into the MVNO market, with several more high profile brands in negotiations to enter the UK mobile space. This example should highlight the risk of incorrect forecasts and the potential for resulting inappropriate regulation. It is for this reason that Ofcom needs to ensure they act with a 'bias against regulation'.

Ofcom's strategy should be according to 'evidence based regulation' in circumstances where intervention is required and proportionate in order to generate a net benefit. To date, it has not been necessary to regulate infrastructure competition and there is no reason to suspect that any infrastructure operator will develop SMP in markets other than voice call termination (which is not itself specifically a feature of infrastructure).

Question 8.3: What role can competition play in ensuring that future development of the mobile internet provides an open and flexible environment for a wide range of services? Should Ofcom explore open access requirements to ensure opportunities for innovation? What role might 'net neutrality' play in the mobile sector?

Competition is already offering mobile customers a true internet experience. T-Mobile pioneered open mobile internet access with the launch of our Web 'n' Walk service in November 2005. Unlike the traditional walled garden approach, T-Mobile customers are able to gain unlimited access to the whole internet via a mobile device (subject to the regulation of content – see further below). This strategic decision to move away from offering a limited range of content reflects customer insights that show very low acceptance of limited access. Over 1 million customers are actively using T-Mobile's Web 'n' Walk services in the UK.

On 30th October we launched the new T-Mobile G1 device in the UK. Built in partnership with Google, we've designed the T-Mobile G1 especially for the internet and as the ultimate communication tool. The G1 is the first device to run on the Android operating system. Android has been developed by the Open Handset Alliance (a selection of operators, Google, and handset manufacturers) interested in accelerating innovation within the mobile industry.

Android allows developers to create applications for mobile phones without restriction. The Android Market already includes over 50 applications, all designed for on the move and at launch all free. Customers can make their T-Mobile G1 relevant to how they want to use it by downloading the applications they want, and deleting the ones they don't.

Whilst T-Mobile is at the forefront of these developments we recognise there is some tension between an open access approach and the need to provide safeguards for children. This is because social networking and interactive applications are now at the forefront of driving mobile internet usage. Consumers value the ability to generate their own content and update their personal social networks wherever and whenever they choose. However, T-Mobile recognises the concerns parents have over potential access to inappropriate content, bullying and grooming. New interactive services, such as video sharing sites, pose particular challenges due to the number of postings and subscribers.

Nonetheless, in developing such new services T-Mobile is committed to ensuring that adequate safeguards in place. Customers expect companies to adopt a responsible approach to allowing access to such sites.

To enhance the safety of children T-Mobile applies rigorous content protection safeguards for customers accessing interactive sites hosted on its own portal T-Zones. All other interactive services on T-Zones, such as BeOn TV where customers upload video clips are fully moderated. All chatrooms and blogs in T-Zones are fully moderated. Sites not fully moderated are placed behind Content Lock and therefore only accessible to over 18s.

Where T-Mobile is contracting with providers to provide access, its ability to influence applicable standards is restricted to that of commercial negotiation. As a minimum standard it requires that all social networking providers should meet the Home Office guidance. If providers meet T-Mobile's higher child safety standards and moderate content themselves (or use an aggregator) it would directly connect to them. If providers do not meet these criteria, their services will be placed behind Content Lock and only be available to over 18s. Similarly the G1 device only allows access to its full range of applications for customers who are over 18.

T-Mobile believes that mandating open access requirements is unnecessary and may allow some applications to bypass our Content lock system. [✂]

Furthermore there is no evidence to suggest that Ofcom needs to intervene and promote open access requirements. T-Mobile considers that unless Ofcom establishes that there has in fact been market failure, there is no basis on which to intervene to regulate, unless Parliament (through legislation) or Government policy (where appropriate) specifically provides otherwise.

Given the high level of transparency that already exists, the issue of net neutrality does not need to be considered. To ensure all customers have the ability to access the internet equally with no capacity problems , T-Mobile has consistently and transparently restricted the use of VoIP on many of its tariffs whilst permitting it on one specified tariff and making this information clear in the terms and conditions of each tariff. In the one public speech made by Ofcom on the issue of net neutrality, Dougal Scott confirmed that this issue was not relevant to the UK market.[49] He said that such a measure could hinder both innovation and investment in the UK market. T-Mobile supports those views.

T-Mobile and other mobile operators need to be able to manage the use of their network capacity to ensure that services can be provided at acceptable quality levels applicable to each service. Spectrum is a limited resource for a mobile network operator. Mobile operators face distinct capacity management issues as a result of limited spectrum, changing traffic patterns and untethered user locations.

Most concerning would be if a customer were unable to contact emergency services because of network congestion caused by the unexpected use of a bandwidth-hungry application.

Given this, a blanket requirement for non-discrimination as advocated by some Net Neutrality proponents could result in Quality of service offerings being inefficiently standardised. Where Quality of service is deficient for some services, they may not be provided at an acceptable quality for customer use. On the other hand, excessive Quality of service may unnecessarily lead to network congestion or impose costs on operators, and hence customers, that are not justified by additional value to customers. A simplistic call for high Quality of service to be provided for all services and applications is unlikely to be welcomed by consumers who must ultimately bear the cost of such investment.

The general principles applicable to access regulation are relevant. In competitive markets, operators are unlikely to engage in anti-competitive discrimination and, even if an operator attempted to do so, overall competition would be unlikely to be affected. In particular, if an operator sought to block or degrade content or an application that was valued by customers, those customers would switch to alternative operators. Mobile operators however do need to recover the cost of their investments including the cost of customer acquisition. For example, mobile operators may set a

[49] Presentation at London Business School on 25 May 2006

particular price plan (including upfront investment in acquiring the customer) with the expectation of obtaining sufficient revenues over the subscriber life to recover that investment. To ensure that operators recover their costs, an operator may need to impose rules about fair usage and even restrict access to a particular application.

Regulation to prevent discrimination with respect to Quality of service is likely to only be relevant in relation to operators that have significant market power in the downstream market and where a specific problem has been identified. It is noteworthy that the Net Neutrality debate has emerged in relation to fixed networks and in the US where regulation of fixed 'last mile' access services has been reduced.

There can be the potential for an operator with significant market power to engage in anti-competitive conduct in particular circumstances. In relation to such cases, competition law and existing regulatory frameworks that enable proportionate ex ante regulation (including non-discrimination obligations) can be used effectively to address specific circumstances in such risks may otherwise arise.

Finally, while there are unlikely to be access problems in relation to competitive markets, it is the case that competition relies on consumers having sufficient information to be able to choose the services that best meet their needs. In this regard, there can be an important role for regulators in ensuring that customers are made aware of any limitations in relation to services at the point of sale. T-Mobile has always sought to be transparent in the way it operates its networks.

Question 8.4: What role might competition play in addressing questions about transparency of prices, services and contractual conditions offered to consumers of mobile and wireless services? What role should regulation play in addressing these questions?

T-Mobile submits that any market for mobile and wireless service (if such a market can be defined) is highly competitive and that competition is already serving to ensure that operators are both providing transparency and delivering what customers want. As noted above, mobile operators compete on service and accordingly meeting customer demands is as paramount to their own success as it is to customer satisfaction, which is very high. Price, service and service levels, and contractual conditions are all aspects of competition between operators and in each case are highly transparent.

Competition means that those companies that give consumers what they want will be successful and therefore will already play a key role in addressing these questions. The retail market is very competitive and as a result, meeting the customer interest and expectations is key to commercial success. Whilst this competition will mean that consumers get good value, it will also mean that customers receive a good service. Part of this good service to consumers is the transparency of prices, services and contractual conditions. An individual operator cannot commercially afford to not to do so, as a positive customer experience is key to retention and acquisition. Indeed a recent advertising campaign run by T-Mobile focussed solely on the number of its customers who would recommend their Flext tariff to a friend. The UK mobile market is in such an advanced competitive state, that the transparency of prices, services and contractual conditions and a positive customer experience is essential for each operator and being delivered through competition.

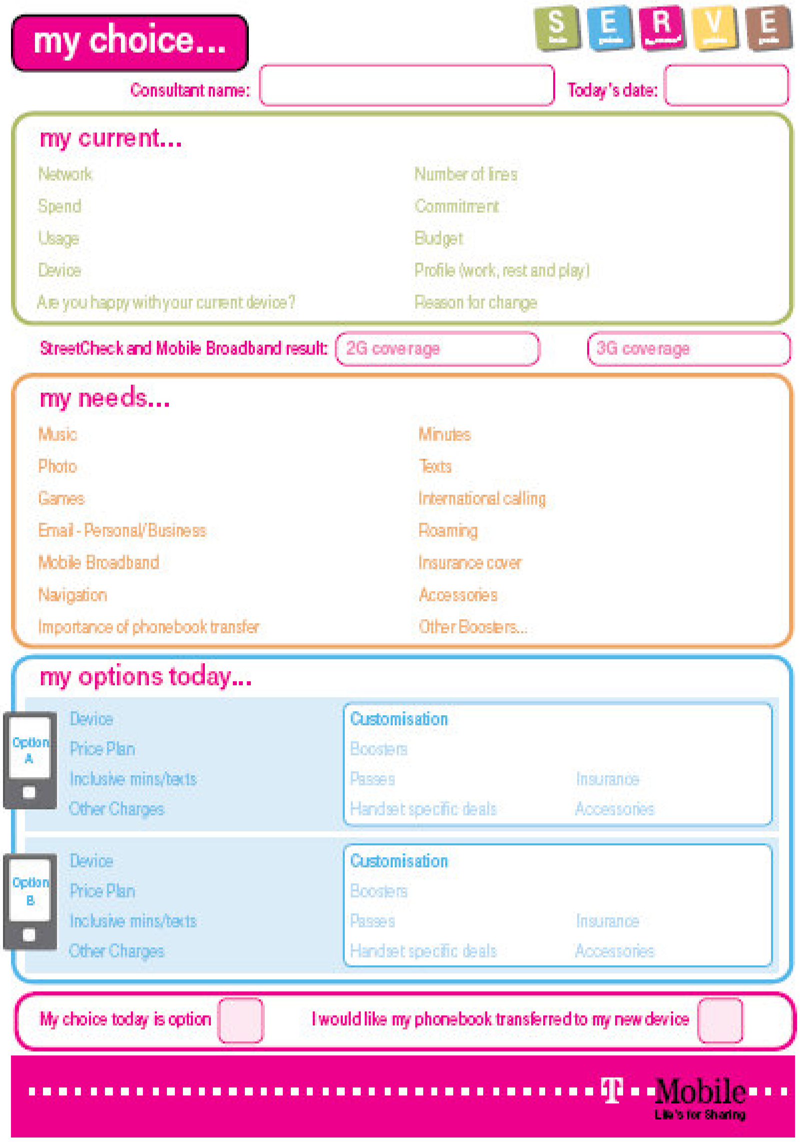
[✂] Improving the customer experience is something that all mobile service providers have been working on over recent years, and it is clear that this work is paying off, through better customer feedback.

What is clear to us is that regulation in this area will not deliver more than competition already has. We would be very surprised if any customer was aware of the current 'metering and billing' regulation that is currently in place (costing several hundred thousand pounds a year in auditing fees), specifically to help consumers. If Ofcom decide to further regulate this area, there is a very strong risk that the regulation would be as costly and also irrelevant to the actual measures that customers want to improve their satisfaction with their mobile service. Any relevant measure would already be delivered by the market.

[✂]
Figure 14: [✂]

T-Mobile also offers all customers a "my choice" form which they can go through with the sales attendant to ensure that they purchase the correct product. This form is shown in Figure 15. This goes through their current mobile usage as well as their thoughts as to the new service required. The sales attendant will also perform 'Street Check' to ensure there is 2G and 3G coverage in their home postcode. The customer takes this form home as a record of their sales decision. This process ensures that customers have transparency of the product being offered. If a customer realises that they are consistently exceeding their monthly bundle of minutes, they can call customer services at any point in their contract and find out which tariff would provide better value for them. For example a customer on Flext 30, may find that their monthly bill would be reduced by moving to Flext 35, even through the actual line rental is more expensive. Customers can therefore be clear in the knowledge that sales attendants will aim to ensure that they are on the appropriate tariff.

Figure 15: My Choice form given to customers in retail stores



T-Mobile's tariffs are specifically aimed at providing upfront transparency (e.g. U-Fix and our £30 price guarantee), together with subsequent text reminders of outstanding balance, and are clearly summarised in our printed literature and on the Internet. The terms and conditions of contracts are available in store and on the Internet, and can be requested or queried through our contact centres. T-Mobile's contracts have a clear summary of the key terms upfront, with important aspects further explained ahead of the detailed provisions

The competitive market means service providers provide a range of tariffs, aimed at increasing take up across a broad spectrum of consumers, including those with relatively niche requirements. Therefore whilst Ofcom may imply that the complex pricing arrangements may be negative, it should be apparent that this due to competitive pressure and the need for bespoke products. Whilst customers, on entering a T-Mobile store, may not be able to quickly identify how a particular service may best suit their specific circumstances, T-Mobile has trained its retail staff to be able to go through the “my choice” process described above to ensure the most appropriate service is chosen. This is the area in which the T-Mobile does better than other service industries. Whilst supermarkets will also offer a variety of products to suit all needs, for example, there are many varieties of tomato soup on the shelf in a Sainsburys store and customers are left to make their own choice because staff won’t be specifically trained to help match the product with the customer. This is a unique positive experience within a mobile retail store and ensures that the variety and number of tariffs on offer can be narrowed down to suit the customer’s need leading to the best customer choice as opposed to information overload. Independent retailers also train their staff to meet customers’ needs although we like to think customers receive a better service in our stores.

Given the positive experience that customers benefit from in our retail stores, we are attempting to open more stores to ensure that more of our customers can benefit from this. We have increased the number of retail stores in recent years to now have 277 stores [✂]. Having our own retail stores, as opposed to relying on independent retailers and resellers, has many benefits for T-Mobile:

- The ability to train our own people in the way that we feel will help improve the customer experience;
- The ability to monitor good and bad experiences regarding customer sales;
- Being less reliant on independent retailers, who may be commission driven so may not give customers the appropriate advice and as a result tarnish the name of actual operators;[50]
- Giving existing T-Mobile customers a place to come if they have questions about their handset or price plan, or merely want to know how a certain feature works, or who have broken phone; and
- Improve our brand perception

It should be clear to Ofcom that competition is working to ensure a high level of transparency of prices, services and contractual conditions. Therefore regulation, in addition to general consumer law, is not required.

[50] See Ofcom's recent Competition and Consumer Enforcement Bulletin relating to closed case CW/00985/04/08- Investigation into Phones 4U Group Limited regarding allegations of misconduct in the retail selling and marketing of telecommunications goods and services.

Question 8.5: What is the best way to promote content standards and ensure privacy protection for increasingly complex content and transaction services? How will privacy issues fare in a world where services are more personal and more complex?

Personal data and privacy is the concern of the Information Commissioner and is not within the remit of Ofcom. T-Mobile works closely with the Ministry of Justice and the Information Commissioner to deal with privacy issues. As far as consumer protection is concerned there are existing standards such as the ASA, CAP and BCAP Codes. PhonepayPlus regulates premium rate content through its codes of practice and the mobile networks have signed up to the self regulatory code of practice for content on mobiles. Through contracts with third parties, T-Mobile requires them to have controls in place.

Nevertheless, content regulation needs to be consistent across different media. For example, if a customer downloads a ringtone using their mobile phone they would be regulated but if they downloaded it from the internet they would not be regulated. This would appear to indicate that the competitive market will best deliver the necessary regulation, backed with legislation to cover the worst excesses, such as extreme pornography.

Customers are primarily concerned about receiving SPAM and the loss or theft of their identity. T-Mobile believes that privacy can be protected by being explicit and transparent and providing the tools to give customers the capability of protecting their own privacy.

Article 5 of the Human Rights Act automatically guarantees privacy for all individuals. Unless this is waived, T-Mobile guarantees the privacy of its customers. In order to monetarise the data being held, T-Mobile would have to be given express consent by individual customers. This consent cannot be open-ended. In its experience the benefits have to be apparent to customers before they agree to give consent and the vast majority of T-Mobile's customers do not want to do this. An example of where this is demonstrated in practice is directory enquiries: less than 1% of customers want their details to be included in directories. Also customers are concerned about the loss or theft of personal data being held by organisations. There have been many examples of incidents where Governmental organisations have lost the data of millions of customers.

Within the content value-chain the network operator has more to lose as it is answerable to its customers. So as the party with most to lose, T-Mobile is concerned about the protection of its customer's privacy. T-Mobile offers privacy enhancing technologies to *'pseudo-anonymise'* telephone numbers. By hiding the identity of customers it prevents third parties from being able to create profiles so customers will not be located by third parties, for example, advertising companies. Electronic marketing can only take place if customers have given consent to receiving the calls or SMS. If a customer does not waive its right it can choose not to use the tools and they would remain unhidden, but this would be their choice. T-Mobile itself does not create customer profiles based on ownership and additionally when ownership of devices changes it would not automatically be aware.

Question 8.6: Will the mobile termination rate regime need to evolve or change more fundamentally? What is the best approach to adopt?

Summary

T-Mobile's comments set out below are without prejudice to any submission it may have made or will make in the continuing appeals from Ofcom's last call termination statement.

T-Mobile agrees that it is an appropriate time to review the regulation of call termination. As Ofcom has noted the regime in place over the last decade has served to reduce charges to cost levels. It is appropriate to look at the requirements for future regulation and also costs and benefits of potential regimes going forward. However such a review should fully assess the benefit and costs of alternative systems for consumers, the market and operators, whilst being consistent with Ofcom's regulatory principles regarding cost orientation.

In summary, we believe that the changes required are more of an evolution from the current proposals than a fundamental change to the regime.

We do not consider that radical changes such as a move to Bill and Keep are desirable or practical – the disadvantages of such a system for consumers and operators would we believe very significantly outweigh the advantages. Ofcom should undertake a detailed impact assessment of any such proposal and it should in particular take account of the views of consumers and the impact that this proposal would have on consumers.

Bill and Keep would risk serious consumer harm particularly for low income earners for whom mobile phones may be the only means of telecommunications access. In particular, Bill and Keep threatens the viability of prepay tariffs as prepay customers tend to receive more calls than they make – in the US, where termination charges are low, so called prepay tariffs have significant monthly spend commitments. Bill and Keep would also create a higher risk of nuisance calls as callers would no longer need to pay the full cost of the calls they make. Bill and Keep would also be likely to result in a highly inefficient price structure which reduces overall consumer welfare. If the UK were to move to Bill and Keep while other countries continue to charge for termination, there would also be a net loss to the UK which would require UK consumers to cover more of the costs of the UK networks without offsetting benefits from those other costs.

T-Mobile notes that the current legal framework stipulates for the current type of price control where there is a return on the service involved. Economically this must be the right approach. Therefore other specifically non-cost orientated approaches like Bill and Keep need to be discounted in the absence of a change in the law.

In the long term T-Mobile believe that mobile call termination rates may be able to be fully deregulated. However, we do not believe that we have reached the time for complete deregulation yet. We do consider that a step in that direction (e.g. moving to a nominal cap) would be appropriate at the end of the current price control.

The Ofcom approach to regulation of next generation fixed broadband, involving a degree of forbearance, the potential application of “anchor product” regulation and tolerance of price discrimination to promote efficient and timely investment provides an intellectual parallel which might support a shift in approach to mobile termination.

Whilst there is a need for call termination regulation to be based on the principles of cost-orientation, this does not necessarily mean a detailed LRIC model, with every aspect of this calculation open to a legal challenge. Using the final price control from 2010/11 as a basis, Ofcom could set a future glide path which reflects the general need for termination rates to decrease, but is primarily focussed on simplification and ensuring that distributional impacts are not too adverse. A simple cap under which nominal prices do not increase in line with inflation (and may decrease) would be consistent with this; i.e. an RPI – RPI price cap.

This section considers:

1. Assessment of Bill and Keep Approach to Call Termination;

2. Assessment of other non cost orientated alternative approaches to call termination;

3. Cost Orientation based regulation of call termination;

4. Alternative solutions open to Ofcom for call termination;

5. EC guideline on termination rates; and

6. SMS and MMS termination

<u>1. Assessment of Bill and Keep approach to Call Termination</u>

Ofcom are looking for a fresh way forward on mobile call termination. There is now some momentum behind “Bill and Keep” as a principle. We do not consider that radical changes such as a move to Bill and Keep are desirable or practical – the disadvantages of such a system for consumers and operators would we believe very significantly outweigh the advantages. If it becomes legally possible to consider such a system, Ofcom should undertake a detailed impact assessment of any such proposal and it should in particular take account of the views of consumers and the impact that this would have on consumers.

It is important to realise that a Bill and Keep regulatory regime would have substantial negative impacts

- for consumers – increasing unwanted calls, likely to mean charges are made for calls received
- for the market – putting at risk the prepay pricing model, increasing the likelihood that people switch off their phones and drop out of the mobile market
- for operators – reducing network efficiency, distorting investment incentives.

Impact on consumers

(i) Spam

Consumers would be detrimentally affected as Bill and Keep fosters the problem of SPAM/SPIT (spam over internet telephony) because the diffusion of vast amounts of traffic would be nearly cost free. The argument that the called party just should not accept the call in case of a SPIT call is short sighted because the main problem of SPIT is not only the content of the call but also the telephone ringing at every time of the day and night. This would incentivise customers to switch off their phones. . In the US where customers are charged for receiving calls and texts, the receipt of unwanted text messages (for whom customers must bear the whole cost) has led to significant customer dissatisfaction and litigation. Many US customers now disable their phone's text functions.

(ii) Charging to receive calls

It seems correct to assume that under a Bill and Keep system it would be necessary to charge customers to receive call in order to respond to the sharp loss of revenue. Limited information would be available to the receiving party to allow them to make an informed decision on whether answering the call will represent sufficient value to them that merits the cost of paying to receive the call. They may not receive the ID of the caller and if they do, they may not recognise the ID. Even armed with the ID of the caller, in most cases, they will not be aware of the nature of the conversation that the caller wishes to have. Customers have a legitimate fear of paying for receiving sales calls or other calls that they did not want to receive in the first place, wasting not only their time (which would always be the case) but also their money. An example of a form of receiving party pays ("RPP") system occurs in international roaming. This is, in our view, not generally a popular way to charge for calls, and has the result that people often turn their mobiles off abroad. Our experience is that charging for receiving calls is unlikely to be popular for retail customers in the UK. We would expect considerable disapproval from customers and the consumer organisations. There is a strong customer preference in the UK to only pay for calls made and there is a fear of paying for receiving sales calls that the customer did not want to receive in the first place. Given this strong customer preference in the UK, charging customers for calls received could well have a negative impact on all mobile networks that operate in the UK[51].

[51] The idea that RRP is unpopular can be seen from the posted comments on the article dealing with Commissioner Reding's proposal to allow MNO to charge customer to receive calls: see the website,

(iii)Call prioritisation

A further risk is that networks would give priority to calls originated by their own customers instead of calls being received from other operators, particularly if it is subject to capacity constraints. This would be detrimental to customers of all networks. The existing arrangements for interconnection payments across the UK appropriately place the costs onto the party who tends to derive the greatest benefit from making the call. In the case of a personal call, the greatest benefit will tend to be derived by the call originator – he or she has made the decision to call and the connection facility is provided by the originating and terminating operator in response to this demand. With Bill and Keep, the retail charge is not shared between the networks enabling the call. In the absence of an appropriate cost-related interconnect payment to the terminating operator there is a reduced incentive for the operator to terminate a call originated by one of his competitors. If the originating customer is unable to connect to the customer of the terminating network, the customer is more likely to blame his or her own service provider for failing to provide the facility, whilst the called party may never know that a party attempted to call him.

Impact on the market

(i) Prepay model

The UK market has flourished through the development of prepaid market that allows customers the flexibility to purchase telecommunications services as and when they need to without minimum monthly commitments. 64% of the subscriptions in the UK are PAYG subscriptions. [52] However, a significant proportion of prepaid customers receive many more calls than they make – indeed, a large number of prepaid customers make very few calls [✂] Current prepaid plans will therefore need to be reviewed if termination charges are substantially reduced. Operators may seek to raise call prices or impose minimum monthly spend requirements. This could limit further subscriber growth or discourage customers from being mobile subscribers where they are concerned about committing to regular payments. This would also act to reduce access to communications services.

Vodafone argue in their submission to the European Commission on termination rates that substantial decreases in termination rates could result in significant numbers of

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www.theregister.co.uk, and the article "Reding would OK charges to receive mobile calls", 16 June 2008.. The article and the comments are available at
http://www.theregister.co.uk/2008/06/16/reding_charges/comments/
A large number of the comments posted on this article on the register.co.uk's website indicate that charging to receive calls is not a popular idea.

[52] Ofcom, Telecommunications market data tables Q1 2008, 2 October 2008, p20 at http://www.ofcom.org.uk/research/cm/tables/q1_2008/q12008.pdf

mobile users abandoning mobile (up to 10 % of users or 40 million users in total).[53] Frontier Economics also set out the potential adverse impacts to the market of a significant reduction in mobile termination rates.[54]

Operators may be forced to scrap the concept of a pay-as-you-go tariff and instead provide the equivalent of the USA prepay tariffs where prepay money has a specific expiry date and there are daily minimum access fees. This model would not be popular in the UK, as we have seen with some of the responses to this consultation on public forums.[55]

Ofcom's International Communications market report shows the very different customer profiles between European countries and the USA, Canada and Japan who all employ a Bill and Keep system for regulating termination rates. This difference is shown in Figure 16.

Figure 16: Mobile subscription by type: 2002 and 2007[56]

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[53] Vodafone. 1 September 2008. Vodafone comments on the Draft Commission Recommendation on the regulatory treatment of fixed and mobile termination rates in Europe.

http://ec.europa.eu/information_society/policy/ecomm/doc/library/public_consult/termination_rates/vodafone.pdf
The Commission's video response by Martin Selmayr is available here:
http://ec.europa.eu/unitedkingdom/press/frontpage/29082008_copy_en.htm

[54] Frontier Economics. July 2008. "Assessing the impact of lowering mobile termination rates." A report prepared for Deutsche Telekom, Orange, Telecom Italia, Telefonica and Vodafone.
http://www.frontier-economics.com/_library/publications/Frontier%20publication_MTRimpact.pdf
See also presentation of 20 October 2008: http://www.frontier-economics.com/_library/publications/Frontier%20presentation%20-%20mobile%20for%20IBC%20Final.pdf

[55] See http://www.theregister.co.uk/2008/08/29/ofcom_mobile_assessment/comments/ and http://comment.ofcom.org.uk/msa_summary/2008/08/121.html#comments for examples of consumer hostility to such an arrangement.

[56] Ofcom, The International Communications Market 2008, 20 November 2008, p235

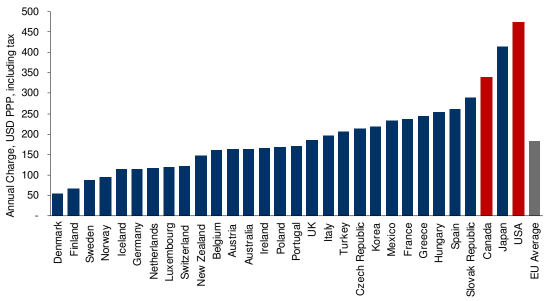
(ii) Affordability of mobile phones

This form of call termination regime would have a negative impact on inclusion and affordability of mobile phones.

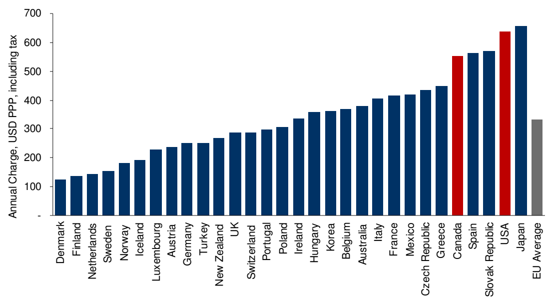
It is often argued that a Bill and Keep/RPP regime would lead to lower retail prices and higher usage. But empirical evidence reveals that countries with Bill and Keep systems have higher instead of lower mobile retail prices for all usage profiles compared to the EU average. This is the result when examining how much it would cost to purchase a representative bundle or 'basket' of services in each country, based on OECD data which provides a well-established methodology for analysing international telecommunications price levels. The OECD notes that the use of a standard consumption basket "*…is the most efficient and meaningful way to do cross-country comparisons of such telecommunications prices.*"[57] However, a problem can arise when using the reported prices from this methodology to compare CPP and RPP because the methodology calculates prices only for outgoing minutes. Hence it does not accurately reflect the price paid in RPP countries. This issue has been addressed in recent work by GSME, which adjusted the corresponding figures by doubling the basket of minutes for RPP countries in order to facilitate a meaningful comparison between the two different pricing regimes.[58]

The following figures show the results of the OECD's comparison for representative baskets of mobile services bought by a low, medium and high usage customer.

Figure 17: Adjusted OECD basket of low user & medium mobile telephone charges, May 2008[59]



Low usage



Medium usage

These comparisons strongly suggest that the US has amongst the most expensive mobile prices in the OECD for low and medium user groups. Even for high-usage customer the US value is slightly above EU average. Notably, for all three usage baskets it is the Nordic (CPP) countries that are the cheapest. The OECD pricing comparisons provide no support for arguments that Bill and Keep/RPP systems with no (or low) mobile termination charges would contribute to low mobile retail prices.

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57 OECD Communications Outlook 2007, p.211.

58 GSME, GSM Europe's response to the ERG IP interconnection consultation", July 2008.

59 Adjusted Teligen data, May 2008

We note that some proponents of Bill and Keep, such as WIK, have presented figures that suggest that European mobile phone prices (which they proxy by average revenue per minute) are relatively expensive and that European mobile usage is relatively low compared with RPP markets. The data relied upon by WIK contains a number of serious flaws which make it unreliable for policy-making. For example, the data overstates minutes of use in Bill and Keep markets and thus understates average revenue per minute. In particular, on-net calls are double counted as a consequence of being charged to both the caller and the receiver and this problem is exacerbated by allowances for unlimited on-net calls on standard mobile plans being common in the US – a factor unrelated to termination charges. Minutes of use are also inflated in North American by the much more frequent use of per minute rather than per second billing in North America (e.g. a call lasting 2 minutes and 1 second will be recorded as a 3 minute call). In addition, average European minutes of use per subscriber are lower as a consequence of the presence of many low usage subscribers in Europe while in North America such consumers continue to be excluded from the mobile market. Further, the data also overstates revenues in calling party pays markets because termination charges are effectively double-counted (i.e. by being recorded by both the operator receiving the termination revenue as well as by operators in their off-net call revenues which include a component that must ultimately be paid to other operators as termination payments). The problems in the data imply that it cannot be reliably stated that the difference in termination charge levels results in higher minutes of use per capita in North America than in Europe.[60]

(iii)<u>Impact of Waterbed Effect</u>

The mobile operators compete in the UK to win subscribers, who then provide a stream of revenues. They compete by offering attractive prices for outbound mobile calls and subscription and, in the case of post pay customers in particular, attractive handset offers. In doing so they will take into account all of the revenues that will result from acquiring a customer and equally all of the costs of servicing that customer. Part of these revenues will come from the termination revenues that flow from people calling the subscriber. When considering its pricing policy, a mobile operator will take these termination revenues into account. The higher an operator expects these to be, the less it will be prepared to charge for outbound calling and handsets. This is because lowering subscriber prices increases the level of subscriptions as the service becomes cheaper, which in turn increases the termination revenues earned. It follows from this that if termination charges and hence revenues rise, then operators will be willing to lower outbound prices in order to win additional subscribers. The reverse is also true: if termination charges and revenues fall, operators will raise their prices to subscribers.

Regulators generally accept that the 'waterbed effect' will be complete when competition for subscribers is sufficiently strong to ensure that no operator is able to make excess economic profits. Consider the effect of an increase in termination charges in this situation. This would increase the level of termination revenues

[60] Indeed, adjustments to remove some of the problems with the data shows that minutes of use per capita in Canada are likely to be significantly below the European average.

associated with each subscriber, tending to make subscribers more valuable to acquire for the mobile operators. However, in competing to acquire the more valuable subscribers, operators would now have the incentive and ability to reduce prices to subscribers to attract them to their own networks. The final result would be a complete 'waterbed effect' in the sense that changes in termination prices would change outbound prices in such a way that economic profits remained zero. In this market, regulation of termination charges would affect the structure of prices, but not overall profitability. It would imply that some consumers were better off (those who make many calls to mobile phones but make few calls from mobile phones), but that others were worse off (those who make few calls to mobile phones but make many calls from mobile phones). The profits of the operators would be unaffected by changes in the level of termination charges.

Understanding the existence and magnitude of the 'waterbed effect' following the reduction of termination rates is essential to explain the social costs and benefits of the regulation of mobile termination rates. Whilst the 'waterbed effect' is likely to be 100% under a fully competitive market; even with imperfect competition it is clear that lowering termination rates will lead to retail prices being higher than they would be in the absence of this regulation. Genacos and Valletti (2007) test the "waterbed" hypothesis and conclude that "*the waterbed effect is strong, but not full.*"[61] Lowering mobile termination rates would therefore be expected to both lower overall returns to the mobile sector and lead to an increase in other charges.

Considering the fact that the waterbed effect exists, any reduction in termination rates will lead to a transfer of money from mobile subscribers to fixed operators and fixed subscribers (the exact split will depend on the pass-through rate of wholesale price changes by the fixed operators). As the vast majority of people who *call* mobile phones also *own* (and receive calls on) mobile phones, the two customer groups will inevitably be largely the same people (Ofcom's own survey evidence shows that 92% of households with a fixed phone also have at least one mobile phone[62]). It follows that there can be expected to have been a very small overall distributional effect arising from termination rates being reduced.

Impact on network efficiency and investment

Probably the most substantial drawback from T-Mobile's perspective is that it would not allow T-Mobile to recover the efficiently incurred network costs for terminating the calls from a key service (the provision of termination) which causes those costs to be incurred.

Bill and Keep would also induce technical inefficiencies and leads to free riding problems instead of efficient network usage (so called hot potato routing) – there would be an incentive for all parties to hand over calls at the earliest possible opportunity rather than at the most efficient point. This "hot potato routing" problem results from parties not being compensated for the costs they incur for transmitting

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[61] Genacos and Valletti. October 2007. "Testing the waterbed effect in mobile telephony." CEP discussion paper No 827. http://cep.lse.ac.uk/pubs/download/dp0827.pdf

[62] Ofcom, The Consumer Experience, 20 November 2007, Figure 20.

and receiving calls. The operators will then only focus on minimizing their costs, irrespective of the fact that their actions may lead to the routing of the call in fact being more costly. In the current system, with operators compensated for these costs, this incentive to inefficiently minimize costs does not exist.

Give the lack of traffic symmetry between the interconnection partners in the UK (network size and structure, costs, traffic) it would lead to massive market distortions and reduce incentives for network investments. Larger networks are at disadvantage because they bear higher network costs than small networks. Small operators could free-ride on the bigger operators´ networks. Therefore Bill and Keep would additionally lead to an adverse selection problem.

There are also additional arbitrage problems that would need to be considered when setting up a Bill and Keep style arrangement. This is because if operators in other countries maintain existing call termination arrangements there will be arbitrage opportunities given a different arrangement in the UK

2. Assessment of other non cost orientated alternative approaches to call termination

(i) Complete deregulation from 2011

Complete de-regulation would enable mobile operators to negotiate rates bilaterally. Whilst this is theoretically a desirable outcome there will be difficulties arising. The scope of negotiations in most cases will be very narrow and will lead to a direct transfer of value from one party to the other. Given the trend towards inclusive pricing (bundles) rather than cost plus pricing, there is a significant incentive for the purchasing party to wish for as low an MTR as possible, whilst the selling party would wish to maximise the per minute rate to the extent that it did not impact demand.

One need only look at the number of MTR related actions currently open to understand the sensitivity of these rates. Challenges have been brought by a number of parties each time the price control regime is altered. The number of parties involved in rate setting would explode were rates to be set bilaterally; therefore it is highly likely that the number of disputes would also be likely to increase substantially.

The likelihood is that Ofcom would be required to determine a number of these disputes providing a precedent to guide future negotiations. Guidance that was published in advance, such as a price control, based on a rigorous analysis of the market and appropriate factors to take into account when rate setting, would significantly reduce any future workload in resolving potential disputes.

(ii) Regulation to a common price for calls to fixed and mobile networks

The practical problems with this are very similar to the Bill and Keep solution. The only additional difference is that it promotes asymmetry between fixed and mobile providers as fixed providers are still able to recover their costs from the calling party whilst mobile providers are not. In effect this distorts the competition between fixed and mobile operators by forcing mobile customers to subsidise the cost of inbound calling in a way that is not required in the fixed market.

As noted by Ofcom, in the consultation, this approach is similar to that used in the US. The other relevant factor which cannot be ignored is that the costs of voice telephony on mobile networks are higher than those of fixed networks.

(iii) Capacity based charging

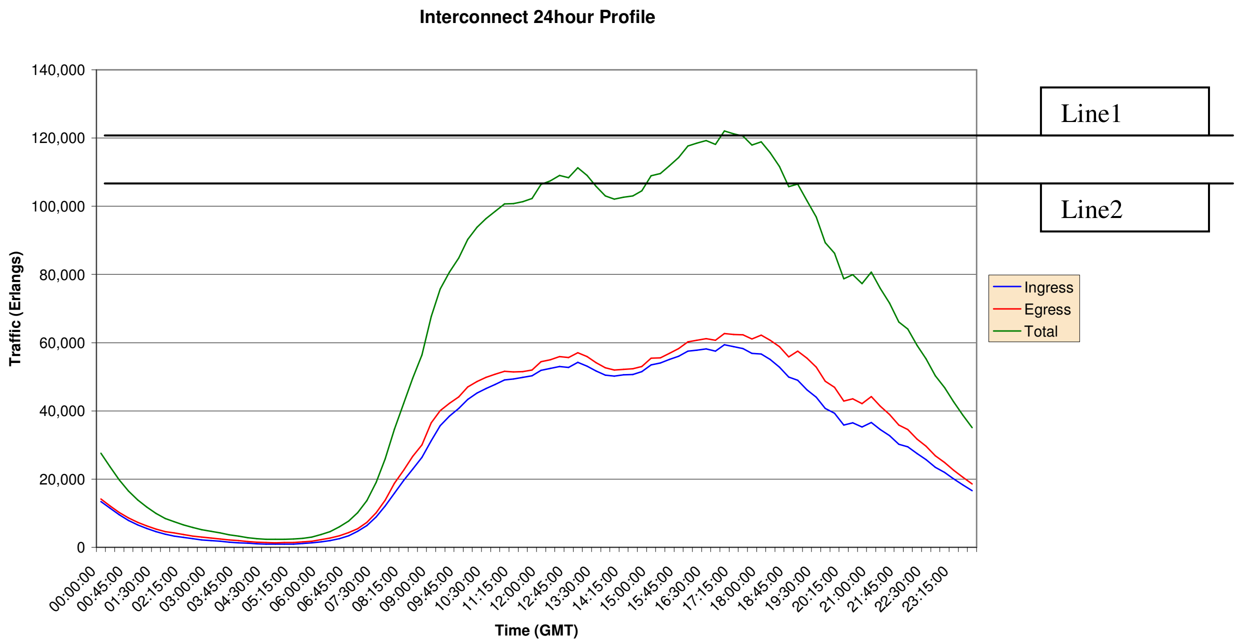
Capacity based charging is another significant departure from calling party pays principles. Even if the originating provider pays for the capacity enabling termination on the terminating network the absorption and allocation of this cost/revenue is not straightforward as it cannot be straightforwardly apportioned to any event.

It is assumed that under capacity based charging a payment is made for connectivity to a switch based on the size of the connection. Today there are two charges for an interconnection. Firstly, a payment made to a fibre provider to lease transmission between two points, the value of which will be based on the location, the distance between the two switches being connected and the capacity being purchased. Secondly the per-minute charge for terminating traffic over the interconnection. The second of these charges could be replaced by a flat charge governed by the size of the connection.

The main issue with this approach is that it exacerbates the issue of how big a connection to put in. One must dimension the network and all connectivity according to peaks in demand, with much capacity lying idle at off peak times. There is an incentive to earn revenue and manage customer experience by terminating calls and not failing them due to congestion. However if one has to pay a significant premium i.e. invest in a new STM-1 to terminate one further minute (if there is congestion at peak times) it may well not be cost effective to invest in that additional capacity. This issue exists today in the leased line provisioning, but the costs of leased lines are significantly lower than the costs of call termination making decisions to have over provision more palatable than they would be under capacity based charging.

This situation is highlighted by Figure 18 below showing the peaks and troughs of demand through a typical day. Line 1 shows the full capacity requirement to successfully terminate all calls. Line 2 shows the situation where a decision has been made to invest in less capacity and allow some call failures due to congestion.

Figure 18: Profile of demand through typical day



Per minute charging avoids this dilemma through the charging only for what the customer uses. In some ways it is similar to rounding usage by the second compared to a much larger increment that it not sensitive to the actual usage. Capacity based charging would therefore benefit the operator with a flat time of day profile, but discriminate against an operator with a tall thin traffic peak.

The structure of costs today appropriately reflects the way in which retail customers are charged and this is widely understood by them. It is simply not feasible to consider charging customers on a capacity basis. How would this be allocated? One could not reserve channels for an individual customer's use. How could one distinguish between high and low capacity requirements? The only sensible proxy for the amount of the network used by customers is the per minute charge. In the same way, the appropriate way of allocating costs between wholesale customers of MT services is also by the measurable minutes. T-Mobile does not therefore consider that capacity based charges represent a cost based approach to regulation.

3. Cost Orientation based regulation of call termination

T-Mobile notes that the current legal framework stipulates for the current type of price control where there is a return on the service involved. Economically this must be the right approach. Therefore other specifically non-cost orientated approaches like Bill and Keep need to be discounted in the absence of a change in the law.
T-Mobile understands that continued price control regulation on a very detailed cost orientated basis is likely to become more onerous and time-consuming for all parties over time. However T-Mobile thinks that there are other options open to Ofcom based on the principles of cost orientation which would enable a simpler approach to be adopted. These are described in section 4 below.

The principles of cost orientation are particularly important in ensuring that operators are able to recover the costs of investment.

(i) <u>Current legal framework</u>

What needs to be recognized is that any proposed changes to the framework for call termination charges needs to be considered within the current legal framework, in particular the provisions in the Framework and Access Directives.

- Art. 8 (2) of the Framework Directive which requires Member States to promote efficient investment and to avoid distortions of competition.
- Under Article 13 of the Access directive, NRAs can impose obligations relating to cost recovery and price controls, including cost-orientation of prices. They are obliged to take into account the investment made by the operator and allow a reasonable rate of return. The principle of cost recovery including a reasonable rate of return on the capital employed means that for example an arbitrary setting of interconnection prices at zero is excluded under the framework

Bill and Keep and any other non-cost orientated price control would be in breach of these statutory principles.

Bill and Keep will also result in incentives for network operators to hand over the traffic to another network as soon as possible because usage is for free and transport over distance is not compensated (so called Hot Potato Routing). Regulatory obliged Bill and Keep would also lead to adverse selection in the context of quality of service. As network operators would not get paid for the network usage, higher costs for better quality of service could not be recovered. Hence, the incentive to invest in better quality declines.
Hence Bill and Keep is contrary to the objectives laid down in Art 8 (2) of the Framework Directive which requires NRAs to promote competition by, amongst other things, ensuring that all users derive maximum benefit in terms of choice, price and quality of service, that there is no distortion or restriction of competition, and that efficient investment in infrastructure is encouraged.

(ii) <u>The need to set up appropriate cost orientation for new entrants</u>

Appropriate rates will need to be developed for all parties who terminate 'mobile calls' which is an increasing number of players. There are now an increasing number of parties who have mobile numbers but not national mobile networks; these include providers of services using the DECT Guard Band spectrum and Wi-Fi hotspots. The termination rates for these parties, is likely to resolved, in the short term, through the dispute resolution process. Such operators typically have very localised networks with sites being based on street furniture not requiring planning permission,63 or

[63] [✂]

simple wireless routers accessed through an aggregator and access to which is paid for separately by the end user before any mobile service is used.[64]

Once the initial disputes have been resolved, a cap similar to that proposed above could also be applied to these operators. This would reduce the number of disputes in this area.

(iii)The need for regulatory certainty in investment

Given the competitive nature of the mobile market and the substantial levels of investment that need to be made over the coming years, including in new technology such as LTE as well as possible changes on mobile number portability, call termination regulation should not put this investment at risk by reducing cash flows too quickly or providing significant opportunities for arbitrage eg as a result of changing to a non – cost orientation regime.

Operators also invest in billing systems to support the billing and settlement of interconnect costs and revenues as well as to support the retail price plans. Due to the volumes of traffic being dealt with by these systems and the complexity of some interconnect billing arrangements the investment in these systems is significant**.** [✂]

As a result any change to billing methods must be planned over a long timescale so that if any new systems or development of existing systems are required there is sufficient time available to implement those systems effectively in advance of any changes. Unnecessary changes should be avoided to avoid wasted costs. There should also be sufficient notice given such that any current systems can be appropriately written down over a sensible period of time. It would be completely unreasonable, for example, to expect T-Mobile to replace an expensive new system within the next few years given that regulatory change was unforeseeable and would have led to different investment decisions.

4. Alternative solutions open to Ofcom for call termination

(i) Long Term: Will operators continue to have SMP in future?

As the mobile market continues to develop and the number of ways of contacting a particular mobile subscriber increases, there will be a need to revisit whether operators continue to have SMP in the market for call termination on their network, as well as the appropriate remedy.
This will require a detailed assessment of the alternatives to call termination, which over time are increasing. T-Mobile urges Ofcom to undertake this economic analysis.

[64] i.e. “free” calls can only be made/received on the basis that the user has already subscribed to a home broadband service with a Wi-Fi router, or paid for a connection to a public hotspot. In such cases, the user directly pays for the infrastructure used for call termination on a separate basis, regardless of whether that infrastructure is used for calls or other Internet services. In such circumstances the c7ppm termination rates sought by Wi-Fi operators using mobile numbers are groundless.

T-Mobile believes that there are a number of factors which mean that call termination regulation can be removed in the longer term. These factors include:

- The increasing level of competition in the mobile market
- The increasing number of alternative methods to reach a mobile subscriber (e.g. instant messaging, email, VoIP…)
-

Ofcom should have a bias against intervention and where possible allow competition to work so that the market regulates itself. Historically the mobile call termination rate has been the only one which has been regulated, as Ofcom concluded that each operator had SMP for terminating calls to that customer. No regulation has been necessary for other retail prices, as competition has worked instead to ensure efficient prices.

However this market appraisal for call termination will not continue indefinitely. It may still be true that currently, in order to connect a call to a person's mobile number, one needs to go through their mobile operator's network. However it does not follow that this will continue to be the only method of reaching that subscriber. With the advent of VoIP and Wi-Fi enabled phones, customers are able to choose to be contacted separately from the mobile network. The market for contacting a customer would therefore need to be extending to include all the potential ways to contact a customer. Some of these services and products may be less convenient than traditional mobile voice calls, but they will nevertheless act as a constraint on operators making super-normal profits on call termination.

Market definition in the telecommunications industry relies on establishing the constraints; both from a demand and a supply perspective, facing providers in a market were they to attempt to affect an increase in price. Competition authorities generally adopt a SNIPP test – whether a 'Small but Significant Non-transitory Increase in Price' of one product leads to consumers moving to another product - to determine which products and services might fall within a single market. Using this definition, and given that alternative communication mechanisms that will be available to reach individuals, the case for regulation of termination will not be as apparent as it has been historically.

Ofcom have alluded in this consultation to the fact that the strict mobile call termination is not strictly a monopoly now, and any market power that does exist will be eroded in future by growth in internet applications. In other words concern over abuse of market power in the call termination market is expected to diminish.[65]

> *"...widespread use of mobile internet access may enable competition for the delivery of calls from, for example, mobile VoIP services, as well as for outbound calls. This could raise the possibility of a market-based constraint on termination rates, enabling de-regulation." Paragraph 7.48*

[65] The development of new software applications illustrate the likely trend. For example, a VoIP application for the iPhone from "Truephone" is available now, whilst "3" offer a handset supporting Skype calls, albeit that these are not routed through the open internet

> *"With the majority of current bundled tariff plans including anytime, any network' minutes it is likely that users are taking advantage of mobile to mobile calls being less expensive than fixed-to-mobile calls." Paragraph 3.35*

(ii) Short Term: Is there a more 'proportionate' solution?

T-Mobile understands that continued price control regulation on a detailed cost orientated basis is likely to become more onerous and time-consuming for all parties over time. In respect of the five 2G/3G mobile operators this will require additional detailed assessments of factors such as:

- the treatment of calls to femtocells (see our response to question 7.2)
- the treatment of combined fixed and mobile networks (e.g. calls to a mobile customer using a homezone product which means that the call terminates on a fixed network)

In addition, the practical problems in adopting a cost oriented approach are anticipated to grow as calls reach end users in more diverse ways. In future a call might reach an end user via a landline phone, a mobile phone, Wi-Fi to a mobile or a 3G pico cell etc. Cost orientation would require different termination rates for the various possibilities. This would not appear to be practical, or transparent from a user's perspective

In relation to scenario 3 "the internet on your mobile" Ofcom note that it would make cost allocation more problematic and increase opportunities for bypass:

> *"An increase in mobile data traffic and/or an increase in calls not carried across the RAN (and delivered using, for example, fixed broadband connections paid for by consumers) may impact the amount for fixed costs allocated to voice calls, and in turn increase the risk of regulatory uncertainty in calculating cost-oriented termination rates." Paragraph 7.47*

However, whilst there is a need to set a price cap based on cost-orientation, this does not need to necessarily be the result of a detailed LRIC model, with every aspect open to legal challenge. We think there are a few options open to Ofcom which still make use of the principles of cost orientation, but will lead to a far more simplified approach. These options are described below.

(iii) Alternative solutions using cost based principles

A nominal cap

The Ofcom approach to regulation of next generation fixed broadband, involving a degree of forbearance, the potential application of "anchor product" regulation (which is not cost oriented), and tolerance of price discrimination to promote efficient and timely investment provides an intellectual parallel which might support a shift in approach to mobile termination.

An explicitly non-cost oriented approach is called for which reflects the need for termination rates to decrease, but is primarily focussed on simplification and ensuring that distributional impacts are not too adverse. A simple cap under which nominal prices do not increase in line with inflation (and may decrease) would be consistent with this; i.e. an RPI – RPI price cap.

Such an approach has a number of advantages

- it provides certainty for all parties
- it guarantees that call termination prices reduce in real terms each year
- it reduces the regulatory burden on all players in the market place

A nominal cap would recognise that there are factors that are likely to increase costs over time (such as the costly extension of 3G and even 2G coverage) as well as factors that tend to reduce costs. A nominal cap would overcome the need for a further detailed costing exercise and would provide the certainty that is critical to investment planning.

Indexation based on the existing model

It is the case that Ofcom has invested substantial resources in the development of its current cost model. However, now that this cost model has been built it provides forecasts for costs going forward. T-Mobile believes that the existing cost forecasts can provide a sound basis for future regulation and also avoid the need for further detailed cost estimation. Moreover, with charges now being set in line with costs, there are relatively little welfare losses if small differences emerge over time between the level of charges and the precise level of costs. Accordingly, the simplicity and investment certainty benefits of basing charges on the current cost forecasts are likely to substantially outweigh any cost from small errors in the level of charges.

Indexation to retail prices

Now that termination charges have been brought down to costs there are grounds to re-consider a potential remedy of indexation termination charges with retail prices. In particular, as retail market prices come down in line with costs going forward (as is to be fully expected in the competitive UK market), termination charges can be brought down by the same indexation factor.

A form of this approach was previously applied by the ACCC in Australia which linked termination charge controls to an industry-wide basket of mobile retail prices. Ofcom has previously rejected such an approach as creating a risk that operators would be deterred from reducing their retail prices because that would then also feed through into a lower level of termination charge control.

T-Mobile believes that this problem could be overcome by requiring an operator's termination charges to be reduced in any given year by the average reduction in a bundle of retail prices of the other operators for the previous year. By linking an operator's termination charges to the retail prices of the other operators, there would be no risk of distorting retail price setting.

5. EC guideline on termination rates

In paragraph 8.40, the consultation document mentions the draft EC Recommendation on termination rates as one of the views that recently have been raised on termination rates. We think it is important to note that these guidelines on termination rates are in the form of a draft Recommendation from the EC. The current draft is likely to change. However, a final Recommendation will have persuasive value only and will not be binding on the NRAs.

T-Mobile believes that preventing termination charges from contributing to common costs would be arbitrary and ignore principles of efficient pricing. Ultimately, the efficient pricing approach needs to be determined taking into account the effects on demand for each service affected by different cost recovery approaches and the consequent implications for private and external consumer benefits.

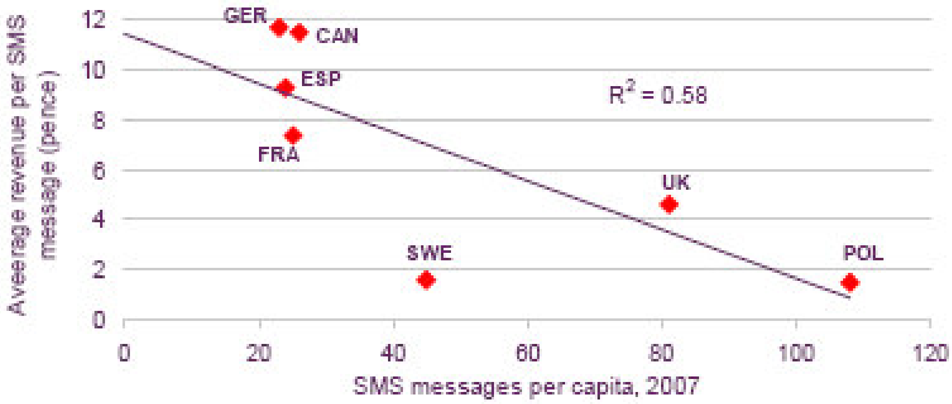
The Commission proposes that termination should not contribute to the cost of the mobile access network. This proposal fails to recognise a critical difference between fixed and mobile networks. In particular, while the costs of the access network in fixed networks (i.e. the local loops) are customer-dedicated and not traffic-dependent, use of the radio access network results in significant traffic-dependent costs including that scarce spectrum is not available for other users. Moreover, demand for mobile subscription is significantly more elastic than demand for fixed subscription. Efficiency requires the costs of the radio access network be recovered in prices for services that make use of the network including termination charges. More generally, the Commission's discussion of the treatment of coverage and spectrum costs is inconsistent with the principle that the Commission has elsewhere put forward that charges should be set in line with forward-looking opportunity costs.

6. SMS and MMS Termination

The SMS retail market is a highly competitive market in both the prepaid and post-paid sectors. Numerous tariffs are available offering consumers the option to purchase individual messages, bundles of messages or unlimited usage of SMS. All such offerings are available to both the post-paid and prepay sectors. SMS volumes continue to grow month on month and the UK market place has one of the highest level of SMS consumption in Western Europe.

Ofcom's recently published International Communications Market report shows that the UK has a large number of SMS per capita as well as low prices comparatively compared to other countries. This information is shown in Figure 19.

Figure 19: SMS messages per mobile connection and average revenue per SMS, 2007[66]



[✂]

One of the most significant concerns raised by our customers has been regarding SMS spam. SMS spam is an extremely intrusive form of SPAM that has the potential to materially damage the SMS product. We have found that the only way to manage SMS spam is to set SMS termination rates at a level that makes sending SMS spam uneconomical to the sender. This approach has proven successful over many years. We are concerned that if SMS termination rates are lowered further there is a risk that SMS spam becomes economical. We know from past experience that this will directly impact the level of customer complaints and customer acceptance of the SMS product. As noted earlier, many customers in the US have disabled the SMS function because of the proliferation of spam due to the bill and keep system.

Whilst email SPAM can be dealt with through filtering on the email client there are no facilities to deal with SMS spam. Every message arriving on a user device will alert the customer irrespective of the content. In the past when we had a serious SMS spam issue there were cases of customers receiving dozens of SMS spam messages per hour. Such customers complained that they were unable to sensibly use their phone.

In light of the competitive nature of the SMS retail market and the requirement to have termination rates at an appropriate level to avoid SMS spam we do not believe any regulatory intervention with SMS is appropriate.

Volumes of MMS messages continue to grow as expected for an immature product. We believe the product is still in its development phase and that usage will continue to grow as handsets continue to improve the user experience of sending and receiving MMS message. We do not believe any regulatory intervention with MMS is appropriate.

[66] Ofcom, The International Communications Market 2008, 20 November 2008, p235

Question 8.7: If competition does not reduce international roaming charges sufficiently, how should regulators respond, if at all?

This is one area which is essentially outside Ofcom's control given the current EU regulation and intended changes to that. T-Mobile continues to believe that market developments including the now extensive use of traffic direction technology will lead to effective competition in roaming pricing at both wholesale and retail levels. In this context, retail and wholesale regulation is ineffective and undesirable. T-Mobile notes that the introduction of the EU Roaming Regulation has led to reductions in both roaming revenue and volumes. This decrease in roaming volumes is the first since roaming was introduced and indicates that the regulation has been counter productive and contrary to consumer interests. It appears that short term political gain has been prioritised over long term competitive development and customer choice.

Question 8.8: How might universal service and universal access need to adapt in a world where we increasingly rely on mobile services? What role might mobile play in universal access delivery in future?

T-Mobile considers mobile operators should be able to bid to provide a universal service if they wish. However, we do not think mobile services should be included in the universal service obligation for all the reasons given by the EC in its recent review of universal access, published in September 2008 which concludes that:

> *"…the competitive provision of mobile communications in the EU has resulted in consumers already having widespread affordable access to mobile communications. The considerations for including mobile communications within the scope of universal service…are therefore not fulfilled."*

If it is decided that levels of inclusion and/or coverage should exceed privately efficient levels (given income constraints), then the least distorting intervention should be chosen. In choosing the form of intervention policy makers should seek to achieve social objectives at least cost in terms of delivery (potentially via competitive provision of USO[67]), should avoid distorting competition and should fund the scheme from a wide base – ideally general taxation given the high economic costs of sector specific taxation. It is inefficient in economic terms to tax specific inputs to production.[68] Further, US research indicates that the welfare cost of funding the USO through cross subsidy is roughly three times the cost of funding the USO by general taxation.[69]

[67] Wallsten. April 2008. "Reverse auctions and universal telecommunications service: lessons from global experience." http://www.techpolicyinstitute.org/files/wallsten_global_reverse_auctions-1.pdf
[68] In setting policy to maximise welfare in a second-best setting it is not desirable to tax the use of inputs. Peter Diamond and James Mirrlees (1971) "Optimal taxation and public production 1: Production efficiency and 2: Tax rules", *American Economic Review*, vol. 61, pp. 8-27 and 261-78.
[69] Crandall, Hahn, Litan and Wallsten. May 2004. Universal Broadband Access: Implementing President Bush's Vision, AEI- Brookings Center for Regulatory Studies.

Question 8.9: Can markets and commercial agreements address issues such as 'not spots' and emergency access? If not, what role might be played by a regulator to address these issues?

Markets and commercial agreements can address the issue of emergency (999) roaming where there is coverage from another operator. It is interesting to note that GSM standards are set up to allow emergency roaming to occur, even without SIM cards in the phone. However following a request from the emergency services, this functionality was switched off in the UK. The reasons for this were to reduce inappropriate 999 calls and to ensure the emergency services can call the user back if the line was last. A recent EC report indicates that 98% of emergency calls made from SIM-less phones in Sweden were hoaxes, and Germany is planning on disabling this feature from mobile phones.[70] This is evidently not a trivial problem, and Ofcom, having sought advice from the emergency services, will need to advise MNOs if it is beneficial for them to enable this feature for emergency calls. If the emergency services are happy to have this feature enabled again T-Mobile would be happy to do so.

The issue of 'not spots' and areas with no coverage is not something that be addressed through commercial agreements. This is because, as we detail in our response to Question 5.4, it is not commercially viable for an operator to build out their network to these outlying regions.

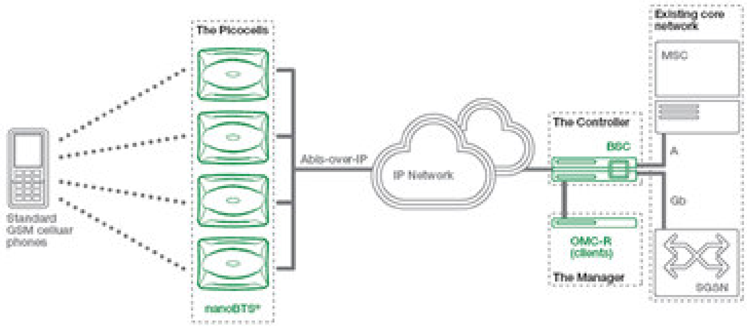
One potential method to rectify this situation would be to provide limited coverage solutions using products like the nanoBTS. The nanoBTS Picocells are complete GSM base stations that use the standard "Um" interface to the handset and an "Abis" interface carried over IP for the backhaul. The nanoBTS is available in four variants covering the 850MHz, 900MHz, 1800MHz and 1900MHz bands. The nanoBTS offers high-speed data rates with full support for EDGE and significant increase in voice capacity with half-rate AMR.

The base station offers:

- Indoor range up to 200m;
- Low-cost IP backhaul;
- Simple deployment – using a single Ethernet connection for power, traffic and signalling; and
- Network Listen™– supplements RF planning, allowing the planners to see into the difficult indoor environment to optimize coverage and avoid interference issues.

[70] European Commission, Implementation of the European emergency number 112 – Summary Report, 23 July 2008, p7 See http://ec.europa.eu/information_society/activities/112/docs/report.pdf

Figure 20: How NanoBTS works within T-Mobile's network



However the majority of these products require an ADSL backhaul to provide coverage. If a synergy could therefore be found with an obligation on BT to provide broadband coverage, this would provide a simple and easy solution to the coverage gap. Otherwise, for the same reasons as described above for Femtocells, we do not think they will resolve the coverage problems.

The only efficient way to build out a network to these outlying areas would be to have one network, on which all the operators could provide services using national roaming. This arrangement would mean that the costs could be split five-ways between the operators. However it is still likely that providing coverage to these areas may still not be cost-effective. If this is the case, Ofcom or government will need to offer a subsidy to help build this network, as well as working with local authorities to ensure that appropriate locations can be found for sites.

The benefit of this type of network would be that once a subscriber left his or her home coverage and roamed on the 'national' network the costs could be easily split and that once you left its coverage footprint you could easily attach back onto your home network by way of a location update. Revenues could be referred back by IMSI and calls charged at a standard rate.

There are however important technical issues regarding national roaming; e.g. the operator brand-name will not always display on the handset. There may also be handover issues in moving between the 'national' network and your home network, which will need to be resolved before any such national roaming arrangement is contemplated.

Question 8.10: How might access for particular groups (such as the elderly and disabled users) need to evolve in future? What role can competition play in addressing these questions?

The majority of commercial services can be used by both able-bodied and disabled customers. Where there is a gap, for example 999 SMS, this is being addressed on a voluntary level by the mobile networks via the 999 Liaison Committee. In 2003 the mobile networks produced the Code of Practice for the Provision of Services for Elderly and Disabled Customers. This included commitments from mobile networks to take reasonable steps to comply with the existing Disability Discrimination Act as well as the anticipated General Condition 15. However, as a result of General Condition 15 many requirements were forced on the networks at high cost and very little benefit, for example provision of the Textlink service. [✂][71] We already provide services for disabled customers including a dedicated team, the Disability Services Team, which addresses the needs specifically of registered disabled customers. As a result of GC15 being implemented, we have only one or two Textlink customers.

[✂]

Networks should not be held accountable for the lack of terminal equipment in the market that can be used by disabled customers. Instead, if they consider there to be a problem, Ofcom should work with the handset manufacturers who make the handsets.

The MNOs basically sell airtime and services and these services do not discriminate at all to those with disabilities. Indeed, with respects to our specific services; we provide the option for a bill to be given in either Braille or audio format, and customers have various ways of contacting our customer service department. We believe that this is an area where the mobile industry has a particularly good record and it should be clear that many disabled people have a better quality of life, in a number of areas, as a result of the advent of mobile services.

If operators had to ensure that every service developed was available to every single potential disability then there would be no innovation as the cost of providing equivalent services would be too high. We already have to consider wholesale/resellers when we develop and launch products. Ofcom needs to be very careful about the consequences of regulation in this area, as it is likely to reduce everything down to the lowest common denominator. Indeed under the DDA we are only required to make ‘reasonable’ adjustments to services. Therefore if innovation is curtailed and [✂][72] then it can be argued that this action is unreasonable.

Question 8.11: Do you have any comments regarding our proposed way forward and the objectives of the next phase of this Assessment?

We agree that a further consultation is necessary next year to detail the proposals that will result from this assessment of the mobile sector and to enable Ofcom to roll back existing regulation. This assessment is of vital importance to T-Mobile and the mobile industry in general, and it is important that correct regulatory procedures are in place to develop proposals.

We hope to meet with Ofcom over the coming months to discuss the issues raised in this response document and are happy to participate in any further discussions prior to

[71] [✂]
[72] [✂]

the new consultation being issued. We do see the possibility of the mobile industry working with Ofcom together in the consumer area to see if agreement can be reached on what regulation is appropriate.