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Organisation (if applicable):

OAKley Solutions Limited

What do you want Ofcom to keep confidential?:

Keep nothing confidential

If you want part of your response kept confidential, which parts?:

Ofcom may publish a response summary:

Yes

I confirm that I have read the declaration:

Yes

Ofcom should only publish this response after the consultation has ended:

Yes

Comments:

Question 2.1: Do you agree with our principles for mobile regulation?:

In recognizing, the Ofcom 'light touch regulatory' approach and the importance of regulatory certainty to stimulate investment in the mobile sector, we believe the recent changes in fundamental market dynamics, from high growth to a low growth, churn based market, make it essential for Ofcom to develop more detailed future oriented positions to stimulate the continued growth, innovation and investment in the mobile sector.

While these principles are sound as far as they go, the recent and planned technology changes, the advent of more intelligent end user devices and more significantly perhaps, changes in the value chain mean that a more proactive leadership position is required, which sets out a much clearer mobile sector vision of the impact of technology change.

Already we are seeing some Mobile Network operators taking advantage of fixed broadband links to deliver some services.

Market growth in terms of customer numbers has started to flatten, and the industry may seek to achieve revenue growth, and improved profitability by for example:

- ? Addressing new market niches ? use of Femto Cells in up to 20M+ homes,
- ? The use of Near Field Communication applications
- ? Government stimulated introduction of Mobile Phone technology in all new vehicles to facilitate improvements across road transport in Britain. This would help to drive innovation and mobile subscription growth, and yield potential benefits across a broad spectrum of vertical industries.
- ? Providing Mobile Network Unbundling to create and grow the Mobile Wholesale business
- ? Exploiting Machine to Machine applications
- ? Developing mobile / wireless solutions to improve the UK?s carbon footprint and other environmental applications

Because mobile has been a very powerful catalyst for a range of ?convergence? trends,? conventional boundaries have become blurred and possibly less relevant than in the past. Industry analysts have often discussed Fixed Mobile Convergence, implying a Fixed operator led convergence, when what seems to be actually happening in the market is a mobile operator led ?Mobile Fixed Convergence? enabled by LLU.

Unless a clearer picture of the current and future market dynamics is developed by Ofcom as a foundation for these assessments, Ofcom?s role, the telecoms sector performance, and ?UK plc? competitiveness will be compromised

We believe that the vision and scope of the regulatory controls may need to be re-evaluated when a much clearer blueprint has been developed and articulated. At that point in time, (hopefully within the near term), Ofcom will be ?on the front foot? and then the appropriateness, efficacy and suitability of these principles can be better assessed.

Using Markets where we can ? we rely on market forces to deliver our vision where ever possible

This is a sound principle; however with the massive task of providing better than 2G national coverage for 3G, and then rapid 4G rollout, mobile network operators will require the support and enablement of UK government in order to satisfy the proposed Universal Service commitment. This is analogous in to the original thinking for the PCN / DCS1800 license awards in 1989/90 to facilitate ease of radio site acquisition, and rapid rollout.

The size of this challenge can best be illustrated by the following top level calculations: Let?s say UK MNOs have between 7500 and 12000 radio sites each, the build requirements for 3G have been estimated as 2.5 times that requirement to achieve 2G equivalence. 4G will be more than 2.5 times. Annual build rates per operator, in the earlier part of this decade seemed

to have rarely exceeded 1500 sites built and operational. While Network sharing will reduce the overall number of sites, the uncertainty of 2G to 3G migration coupled with higher capacity requirements per cell coverage area and the way WCDMA technology works, mean that the total site requirement may be much harder to predict.

Using these simple assumptions on build capability results in a long and unacceptable rollout period. Thus MNO site build rates per annum then dictate the period required to achieve the required Universal Service Commitment rollout.

Recognising the limits of markets ? we will respond to the risks of market failure and consumer protection needs with focused intervention

We believe this is a good principle.

With the current macro shifts in the UK telecoms market and the increasing dominance of the mobile sector, it may be difficult to imagine the possibility of telecom market failure. The rapid uptake of VOIP applications may damage fixed and mobile revenues and affect the overall strength of UK telecoms and have an adverse impact on the UK economy.

Ofcom may choose to reflect on the strategic national importance of fixed telecoms to UK plc and how far fixed revenues and margins can be allowed to fall, before strategic thresholds are reached and recovery becomes more difficult.

Widening the focus of our attention to reflect a changing world. We will act with a view of the bigger picture, keeping regulation relevant by ensuring that it evolves to reflect the growing importance and complexity of mobile services.

Ofcom must elaborate their view of the ?bigger picture? and the future vision. Is this in another Ofcom document we have not read? We were unable to really perceive Ofcom?s future view of the bigger picture. Without this more detailed future vision, Ofcom?s approach may be described as reactive rather than proactive to enabling mobile sector growth, innovation and investment.

Question 3.1: Are there any additional sector trends that we should consider in our analysis?:

Market dynamics are driving radical changes to the mobile sector Value Chain, and the value chain choices made by MNOs. This will introduce value chain elements and new players.

Realising the synergies and benefits of multinational MNO organizations, is profoundly changing the national capability in Mobile Network engineering and planning, and mobile network operation

Key IT trends, the use of the Internet to deliver Applications to smart phones, MNO Globalisation / Regionalisation, are all drivers of cost reduced infrastructure and operations. This may mean that current UK network based service delivery systems will move offshore, and be subject to non UK operational management and alternative legal frameworks.

Closer dialogues with industry players and trade bodies like the GSM Association should

provide a more comprehensive set of trends.

Widespread adoption of Femto Cells could profoundly impact fixed voice decline.

Some UK Mobile Core Networks have already become NGNs that creates new market possibilities that need to be encouraged by Ofcom.

NGNs offer the possibility of creating and growing a mobile wholesale market by providing generic RAN interfaces, and use of other emerging technologies.

New niche market applications of mobile and 2G/3G wireless applications can be exploited.

Near Field Communications will be integrated into handsets as standardized by the GSM Association and may require increased vigilance and consumer protection.

Some of these trends will have profound effects on the mobile market and may require stronger regulatory intervention.

Question 3.2: Have we identified the right regulatory challenges?:

Fixed Mobile convergence means many different things to different people. With the fixed networks in decline and mobile becoming more dominant, the Mobile Operators are looking for ways to extend this substitution of fixed. This is being enabled by their use of LLU to bundle a fixed telecoms service say in conjunction with a Femto cell together with a mobile offer i.e. ?Mobile-Fixed Convergence?. As the ?mobile-fixed convergence? position of mobile operators progressively grows and possibly dominates the market, the boundaries between fixed and mobile may become less relevant. Does this then lead to a more unified regulatory regime, or does an entirely new regime need to be developed?

Ofcom could end up maintaining traditional separate regulatory regimes for fixed and mobile while the market moves on. This then makes separate regulatory regimes harder and harder to sustain and becomes less and less relevant to the direction of the market.

With the erosion of traditional sector boundaries and the rapid integration of technologies into mobile services and applications, and the use of product bundling, telecoms regulatory controls need to be adequately balanced with other sector regulations. Who should play a coordinating role on behalf of UK government? Is this Ofcom?

Question 4.1: We have outlined a number of factors which may affect the future market structure, including network sharing, spectrum and potential consolidation. Do you agree with this assessment, including risks and benefits that we have outlined?:

We believe that Ofcom has not addressed this issue deeply enough. Our responses to previous questions outline additional factors, which introduce additional challenges and risks. In particular key lessons learned from previous new entrant attempts at market entry need to be reviewed, especially business plan commitments to rollout and use of new spectrum allocations.

Question 4.2: you see any risks to competition that we have not highlighted?:

NGNs could enable further market structural changes to facilitate faster rollout of 3G and 4G networks, and stimulate more innovation and customer choice.

Relying entirely on the Mobile Network Operators alone to provide what would be uneconomic coverage to meet the USC obligation would in our view be unrealistic.

We believe that Ofcom and the UK government's Digital Britain and UK plc would be best served by encouraging and leveraging the fixed network operators to provide some of the required geographic coverage and capacity by creating a mobile wholesale market and stimulating new Femto Cell based access network operators.

We believe that a strong stance on future spectrum utilisation is required so that this scarce national resource delivers value and is used innovatively. A more effective scheme to deal with business failure/merger/acquisition and the release and re-allocation of spectrum needs to be developed and published.

Market performance and focus generally seems dominated by the mass-market consumer aspects, we believe that a stronger focus on the enterprise segment is required as this is a cornerstone of overall market performance and revenues.

Question 4.3: Do you agree that a market review in the mobile sector (other than in the call termination market) is not currently required?:

We agree that a review is not required at this time.

Question 4.4: We have concluded that competition in the mobile sector is currently addressing access concerns adequately. Do you agree?:

No, please refer to our earlier comments on NGNs, the possible creation of a mobile wholesale access market, and the widespread adoption of Femto cells.

Question 5.1: Do you agree with our assessment of investment in the UK mobile market and our priorities to secure future efficient investment?:

The structure of the UK Mobile Market is probably unique in Europe, in that none of the 5 Mobile Network Operators owns or operates a fixed network. In addition the fact that no single MNO has more than a 30% share of the market means that the fundamental structure and concentration of the market is very different from the rest of Western Europe, although this is set to change with the recent announcement concerning Orange and T-Mobile. In our view, this is not only an inhibiting factor for future investment in new technology and services, especially those which require convergence with the fixed network, but also is having a detrimental effect on pricing and consumer choice.

These factors will have a significant impact on the evolution of services in both the consumer and enterprise markets. We also observe that there is only one Mobile Network Operator who is UK owned, and even in that case its direction is increasingly being determined elsewhere. We are not sure what the long-term impact of this will be, but again that is another unique

facet of the UK market structure and it may influence the ability of the industry, and indeed Ofcom itself, to determine its own destiny. A major concern here is that the corporations involved may choose to invest more heavily as a priority elsewhere in Europe, since the returns are more favourable.

Ofcom and the UK government need to do more than they have done in the recent past to encourage and drive investment i.e. not just efficient investment through competition and regulatory certainty, but Ofcom and UK Government need to change the pace of investment by providing legislative support to facilitate 3G and 4G Radio network rollout, particularly in light of any enforcement of Universal Service Commitments.

Ofcom needs to consider the response we make to Q4.2 and the leveraging of fixed telecom service providers and the appropriate investment they could make to the mobile sector.

A key component of future market dynamics will be the rate of 2G to 3G migration (or even possibly the migration directly from 2G to 4G). Unlike 1G to 2G migration which was driven by the operators themselves, 2G-3G migration is expected to be market led because of the economic barriers.

A slower than planned rate of 2G to 3G migration or the 4G service offer prospects and slower 3G take up, can mean investment slowing down.

Question 6.1: Ofcom considers that regulatory intervention to protect and empower consumers continues to be needed in the mobile sector and that competition alone is not necessarily sufficient to secure this. Do you agree?:

Yes

Question 6.2: We believe that the approach we take to consumer protection and empowerment in the mobile sector strikes the right balance between taking timely action when necessary, and the need to apply regulation only when effective and proportionate. Do you agree?:

Yes

Question 6.3: Are there any areas relating to mobile services that Ofcom is not currently addressing but which it needs to address in order to achieve its consumer policy objectives? Are there other areas where regulation could be scaled back? :

The Mobile Network Operators' transition away from per call billing towards price bundles of minutes, messages and data linked to handset purchase, has several advantages to consumers.

Bundled pricing has been seen as an example of Price Innovation that is undoubtedly true if you interpret innovation as the 'introduction of something new'. From an operator point of view, bundled pricing enables lower rates of change in Billing and OSS IT systems that reduces costs, and facilitates faster rollout of more products and services which has overall market benefits. But this has to be balanced with protecting the consumer.

Bundled pricing also has problems from a consumer point of view. A key question a consumer might ask is 'Am I being overcharged?'

From a consumer point of view this is fundamentally different to fixed line as the service offer pricing essentially asks the consumer to 'bet' what the usage would be and what the best package would be, although we acknowledge that this is a growing trend in Fixed too.

A current advert on TV offers the tremendous package of unlimited calls and unlimited texts for £15 per month. For certain users, call charges would be miniscule, whereas for a low user who does not text, the charges per minute could exceed £1

However per call and per message billing provided a far greater degree of transparency to the user when the bill was examined and also provided the basis for easy comparison with existing offers.

Ofcom may need to consider collecting market data for analysis for creation of more appropriate market key Performance indicators to ensure more transparency, that consumer pricing is factually based and to verify claims of continued cost reduction and market efficiency and competitiveness.

We believe that Ofcom has a key role as consumer champion in telecoms, and needs to provide normalized KPIs akin to (but better than) the % AER measure in interest rates ? e.g. Annual Per Call Average, Annual Per Message Average, Annual Data Transport Average

Question 8.1: Do you agree that our proposed facilitation role around mobile not-spot issues is a realistic and sensible thing to do?:

From a user's perspective, the requirements seem quite straightforward i.e. provision of services which transcend different access types (and possibly device types too) in a seemingly seamless way, yet the pathway to the provision of these services seems far from clear. For some significant sectors of the population, they are excluded from access to cellular services, certainly 3G, and for a significant minority 2G is not even available.

This is acknowledged in the Ofcom report, yet the industry seems destined to fail to overcome these challenges for a 'Universal Service Commitment?', unless there are some fundamental changes to the way in which Mobile Operators address these challenges. It is no longer possible for Mobile Operators to confine themselves to service delivery over licensed spectrum, especially for high speed data streaming services, where on most occasions the user is indoors and stationary, so mobility management is not a requirement. Voice quality is also an emerging issue for indoor use, where 3G is likely to increase the number of users who experience 'not-so-good-spots' or 'not-spots'.

We agree with the points made under section 8.99 and the ability for mobile to offer advantages in rolling out broadband in areas not served by fixed lines. We can also envisage the reverse situation where current mobile service is not available but fixed line assets are. A national coordinated approach based on national infrastructure audits may be of benefit, undertaken by industry and coordinated by industry groups led by Ofcom.

Improving coverage for Not Spots would strongly benefit from liberalisation of spectrum below 1GHz.

Not Spots for 3G may emerge when 3G traffic capacity increases because of WCDMA ?cell breathing?

See previous comments on facilitation by Ofcom of cell site rollout

Question 8.2: Do you agree with our general approach set out in the table above? Are there any other actions we should take and why?:

The actions listed in the table may need to be less passive in style; a stronger leadership stance and approach is required.

As mentioned elsewhere in our response the pace of rollout is key. Ofcom may choose to consider KPIs in its CMRs for comparative build rate data per technology in terms of Population coverage, Geographic coverage, and In Door Coverage.

Question 9.1: Are there any additional issues about mobile content and accessing content via mobile that should be considered?:

Transitioning from a UK network centric service and application delivery, consumer protection data protection, general network operations and IT operations best practices provide an adequate safety net for UK mobile consumers.

The emerging IT trend of cloud computing and the transition away from UK network centric service delivery, to Internet Application driven service delivery may erode many of the traditional protection and security UK consumers have previously enjoyed.

Ofcom may choose to review whether additional technical structures and designs and implementations are needed to preserve UK consumer based service data e.g. messaging physically residing in the UK, to ensure ongoing UK consumer protection and security.

Question 9.2: We have set out some differences between accessing content via the fixed internet and via mobile. Are there any further differences?:

Service availability may undermine Universal Service Commitments. While HSDPA and HSUPA 3G based access to the mobile internet has dramatically improved bandwidth performance, some limitations still exist in that a single user could in theory utilise all of the available capacity in one area of coverage. No such issue exists in fixed broadband.

Thus ?Internet Tethering? where say a 3G mobile acts as a modem to a connected PC could be barred by the Mobile Operator to ensure continued service availability to other users.