CABLE&WIRELESS RESPONSE TO ERG DRAFT COMMON POSITOIN ON NGN FUTURE CHARGING MECHANISMS/ LONG TERM TERMINATION ISSUES

Cable&Wireless

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EXECUTIVE SUMMARY

At first glance it may be seen that fixed operators (and Cable&Wireless is predominantly a fixed operator) have much to gain from a move to BaK but in practice there are many costs and disadvantages associated with such a change

- Termination rates are already reducing. The EU Recommendation on termination rates and the use of LRMC should remove the excess recovery of common costs and reduce termination rates to the point where any distortion between operators today is reduced or eliminated. Any benefit of BaK can only be judged against this future position and not against the situation today that is already changing.

- End user disruption. It is not the case that the removal of wholesale termination revenues can be funded simply through higher prices, or less price erosion, at the retail level. Use of telephony services is not uniform, some lines are used just for incoming calls (for example in call centres) and in such cases Communication Providers will be forced into making an explicit charge to the end users for receiving calls. There will be winners and losers. There will be many new opportunities for arbitrage. The confusion and disruption from these changes will drive costs for end users and Communications Providers;

- SPIT - the telephony equivalent of SPAM. Today the cost of making calls provides a constraint to the level of SPIT that will be further eroded by BaK to the point where end users will end up paying to receive these unwanted calls. The knock-on impact is that end users are likely to develop the habit of not answering calls where they don't know the caller;

- Reduced efficiency. The underlying cost of routing any call will only be minimized if the routing decisions are taken on the basis of the end to end solution. Breaking the link between the origination and termination making different parties responsible will reduce efficiency;

- Reduced control over quality. When the caller is no longer paying for call termination it will be harder for them to control quality and leave greater incentives for the terminating operator to discriminate between traffic types in ways that it will be very hard for regulators to address; and

- Subsidising non-BaK domains. Where BaK is implemented in some domains but not others it will result in a subsidy from the BaK domain to the other.

Conversely we do not believe the benefits of BaK are anything like as significant as may be expected at first glance:

- The need for expensive wholesale billing systems remains. In practice different charging mechanisms exist today for different traffic types and they will continue, some types of calls will still be CPNP (e.g. premium rate or calls to international destinations) and others paid by the recipient (e.g. freephone). It will still be necessary to wholesale bill calls not handed

to the correct node, or sent via a transit operator. Therefore we do not see a material saving in terms of reduced systems costs;

- Regulatory bottlenecks will remain. Regulators may see the opportunity to avoid the difficult debates over setting termination rates but in practice the bottleneck just moves elsewhere and network cost models will still have to be maintained. Termination rates will still have to be set for WLR lines (otherwise incoming-only lines get a free ride) and origination charges set for CPS and other call origination based services. New disputes between operators will arise; and

In this response we set out the above and other observations in more detail. Cable&Wireless does not believe that the proposed ERG Common Position in favour of a move to BaK can be justified. There are many disadvantages associated with moving to BaK which have not yet been fully assessed and the real benefits are not at all clear. However moving to BaK is not a small change; it requires massive investment to design and implement both the regulatory and practical solutions, and however well it is done it will result in years of disruption to Communications Providers and end users. The case must be clear to justify these impacts and it is far from that.

INTRODUCTION

Cable&Wireless is one of the world's leading international communications companies. It operates through two standalone business units – Worldwide and CWI.

The Worldwide business, with main activities in Europe, Asia, India, the US, Middle East and Africa provides enterprise and carrier solutions to the largest users of telecom services across the UK and the globe. With experience of delivering connectivity to 153 countries – and an intention to be the first customer-defined communications service business – the focus is on delivering customers a service experience that is second to none. More information on Cable&Wireless can be found at: http://www.cw.com/

Today Cable&Wireless has the necessary scale to meet the needs of UK enterprise customers and we are a strategic provider of voice services to both the UK public and private sectors, offering a range of innovative and market leading voice products. Our customers include most of the UK's top companies and public sector organisations, each of whom has placed its trust in Cable&Wireless to deliver an array of business critical services.

Outside of the UK our customers are truly Multinational Enterprises and other telecommunications operators. C&W delivers international connectivity for voice, Internet and company private data networks, everywhere.

The debate on the future regulation of termination rates is of fundamental importance to our business. C&W has direct interconnect agreements with each of the 5 UK MNOs and each year spends a significant amount of money on mobile termination rates. In addition to providing retail fixed line voice services to the business market, C&W also provides a range of wholesale voice services including end to end fixed line voice to resellers operating in the residential and small business markets. We also supply voice transit to fixed and mobile destinations, international

incoming and outgoing voice services of which a large proportion of incoming international voice terminates on mobile. We also sell various services, both voice and data to the mobile network operators (MNOs) directly. The range of services which we provide and the international reach of our services means that C&W is well placed to comment on the ERG's Common Position on the future regulation of termination rates.

In September 2008 C&W added to its portfolio of voice services in the UK by the launch of its new and innovative FMC service. This is a telephony service that combines the benefits of fixed and mobile telephony. The customer can use a single mobile handset that will operate over the fixed network whilst in their office location, but then seamlessly switches to a mobile network when the customer is away from their office location. In the office the service works using pico cells, operating over C&W's GSM Guardband spectrum, and connected back into the customers' fixed line network. Away from the office the connectivity is provided over one of the existing mobile networks under a roaming agreement established between C&W and its partner operator.

GENERAL COMMENTS

In addition to answering the specific questions raised by the ERG consultation C&W has a number of general comments on the Common Position which we set out below.

- **TIMING**

C&W is surprised by the timing of the ERG Common Position given that many National Regulatory Authorities (NRAs) are still grappling with the practicalities of implementing the Commission's Recommendation to apply LRMC as a cost methodology for setting termination rates. The Commission only made its Recommendation on Termination Rates in May 2009 and even before the impact of that recommendation has been felt within Member States a replacement for that cost methodology is being debated.

The true implications of LRMC as a cost setting tool have yet to be fully understood, for example it is not yet clear how lower mobile termination rates will impact retail charges although it is anticipated that operators will seek to recover costs that have previously been recoverable from termination rates via other retail charges. The impact that this will have on consumer welfare and usage levels will not be known until sometime after implementation. This makes it very difficult to assess the benefits of a move to BaK as the relevant benchmark is not today's market and competitive conditions but rather the position post implementation of LRMC that we do not yet properly understand.

Accordingly the ERG's timing in seeking to assess views on an alternative cost methodology to follow LRMC appears premature. In Cable&Wireless' view this consultation would have been better issued a few years further down the line when Communications Providers (CPs) and NRAs have more experience of the outcome of the Commission's recommendation on LRMC. Thus while we understand the need to give consideration to long term regulatory issues we nevertheless consider that requesting evaluation of an alternative cost methodology to LRMC at this stage is too soon and

the ERG should be mindful that its timing will undoubtedly impact the views that it will receive from respondents.

- **PROVISION OF SERVICE BELOW COST**

Irrespective of the timing of this consultation C&W is concerned that as a matter of principle BaK imposes a pricing mechanism on operators which forces them to provide services below the cost that an efficient operator would incur for providing that service. Except with regards to public policy issues such as in relation to 112/999 we are not aware of other examples where pricing below cost has been mandated.

It could be argued that BaK doesn't mandate pricing at below cost, instead just changes the situation so that the cost of terminating calls are borne by the recipient of the call. However, the paper is built on the premise that it is unlikely that the cost of such calls will result in a direct charge, rather the outcome will be that call origination costs will cover the cost of terminating calls. In this case, a BaK solution requires that one market (call origination) subsidise another (receipt of calls) which is an economically inefficient approach.

Moreover, it is unclear how the imposition of BaK and an obligation to provide services below cost can equate with Article 13 Access Directive and the obligations on NRAs when setting charge controls to take account of the investment made by the operator and to allow a reasonable rate of return on adequate capital employed, allowing for the risks involved. In C&W's view BaK appears diametrically opposed to this obligation and the ERG paper does not attempt to reconcile that inconsistency. Rather the ERG paper puts forward the view that BaK would be consistent with Article 8 Framework Directive to promote competition and in so doing to encourage efficient investment in infrastructure and ensuring that users derive maximum benefits in terms of choice, price and quality of service as well as promoting the internal market. C&W does not believe that BaK is consistent with this obligation either as it is inevitable that forcing operators to provide service below cost will result in cost recovery elsewhere in the value chain. The ERG's reliance that competitive retail markets will prevent retail charges from becoming too high is untested but it is clear that if costs that have previously been recovered are no longer recoverable this will seriously impact overall margins for operators unless they are recovered elsewhere. Failure to recover these costs will result in some CPs struggling to stay in business - this may result in fewer market players and less choice for consumers in the long term.

- **COST OF RUNNING ACCOUNTING SYSTEMS**

C&W notes that as part of its evaluation of BaK the ERG paper does not give any consideration to the cost of running accounting systems to support a BaK regime, or the costs of transitioning from the CPNP regime. An evaluation of these costs is necessary unless the cost of running such systems becomes immaterial versus the monies being exchanged between the CPs. However, this is not the situation here. With BaK as proposed, there will be an ongoing need for accounting systems and the costs associated with these for example to deal with the situation where calls are not delivered to the correct node, calls from outside BaK zone, micropayment/revenue-share

replacement, and IDA/CPS. Accordingly there will be little operational cost saving in a move to BaK and the need to recover costs of operating accounting systems will remain. In C&W's view the ERG needs to take this into account as part of its overall impact assessment of a change to BaK.

- **HOT POTATO ROUTEING**

It is true that BaK combined with mandated delivery to the correct node will mean that hot potato routeing won't occur. However to achieve this it is still necessary to maintain all of the accounting systems to cope with incorrectly delivered calls, hence negating much of the benefit from a CP standpoint.

- **REGULATORY SAVINGS**

C&W recognises that there would be a regulatory saving in not having to maintain a network cost model to set termination rates. However, network cost models will still be required for IDA/CPS and NTS origination, and by the time BaK is introduced the cost of termination rate models will in any case represent a sunk cost as they will have been created to support the Commission LRMC approach. Since the real cost is incurred in building and agreeing the model rather than its ongoing maintenance thereafter, C&W believes much of the regulatory cost saving is illusory.

Although there would be a shift away from the regulatory burden of network cost modelling, the focus would instead shift to other issues such as preventing SPIT (Spam over Internet Telephony) and maintaining compliance with non- discrimination obligations, as realistically if one traffic stream is paid for and another is not, then CPs are bound to favour the former. It is also possible that as revenue streams move away from wholesale termination to retail charges, that greater regulatory scrutiny of retail pricing will be required thus reducing the level of any regulatory savings.

- **DEFINITION OF BaK**

The definition of BaK as provided on pages 17 and 18 of the paper states :

"*..under BaK the terminating access network operator does not receive payments at the wholesale level for the termination provided. Instead, it recovers its net costs incurred for termination –- and any payments for upstream connectivity – in other ways, e.g. by billing them to its end customers."*

There are a number of assumptions that underpin the definition of BaK upon which the ERG need to provide further clarity. For example it is unclear what competitive conditions will be assumed to be appropriate for the imposition of BaK both at the retail and wholesale level. It may be appropriate for regulation at the wholesale level to be maintained where necessary to ensure that there is sufficient competition at the retail level. The ERG paper is silent on how it will deal with any failures in competition at different levels of the supply chain. In addition it is necessary to more accurately define the services to which BaK will apply – for example it is not appropriate that BaK should apply

to all voice service as this would include services such as CPS and NTS. The definition needs to be more tightly stated to provide clarity over the exact services which will be covered by BaK as failure to do so could give rise to regulatory uncertainty.

- **EMPIRICAL EVIDENCE AND THE MAXIMISATION OF SOCIAL WELFARE**

The ERG paper refers to penetration levels as being one of the measures to evaluate the welfare effect of the BaK regime. The penetration data show that there are differences between the US, with lower adoption, compared to Europe. However, the analysis also indicates that BaK is driving higher welfare compared to CPNP, as the minutes of use per capita (MoU) are higher.

At first glance the outcome of the analysis is not surprising given that price will be set to incentivise adoption (penetration) and usage (minutes). If the participation in a service is bought by a monthly flat fee, then there are no budgetary limitations on the user to make phone calls and this will of course drive usage. However, the analysis ignores the limiting effect on penetration e.g. the impact on potential users who will not participate in the service either because they cannot afford a monthly spend according to the flat fee, or because they do not value the service enough to justify the payment. Accordingly while BaK may seem advantageous for welfare as it is seen to drive usage, it also risks excluding customer groups with a different valuation of the service or limited budget, resulting in a trend for lower penetration and thereby reducing consumer welfare for this group.

The ERG paper notes that in the US there is less ownership of mobile handsets than in the EU CPNP countries. This could be due to the fact that retail offerings in the US differ to those in the EU to the extent that within the US larger bundles of "free" minutes are included, while in the EU MNOs include a "free" handset on top of the "free" minutes. As such the difference in the MoU is not necessarily related to the CPNP regime itself but rather to the way the retail offerings are proposed and the higher termination rates charged by the MNOs to cover the subsidised handsets. The introduction of LRMC will address the higher termination rate issue which may in turn impact the type of bundled offerings that emerge on the retail market including whether "free "minutes are offered in place of "free" handsets.

"In the US the mobile usage per capita is about three times the European average and average price per minute is half the European average, even when adjustments in the data for reasons of comparison are taken into account." C&W believes that this comparison of an adjusted BaK model with European market factors under CPNP might be misleading. While current MTRs in Europe are reflective of different approaches of national regulatory authorities to apply cost analysis rather than an aim to drive usage, it is overall anticipated that further reductions in MTR in Europe will have the expected effect of increasing traffic under CPNP.

The ERG refutes concerns about lower penetration levels on page 41, 3rd paragraph of the document :

"An example of this is the change from BaK to CPNP in France in 2005. If BaK would be detrimental to low usage offers or penetration, a structural break in the market trends for France should be expected. In other words, the theory that BaK leads to lower penetration would - after the move from BaK to CPNP - predict a stronger growth of penetration."

This view of penetration levels is limited. Stronger increases in penetration levels in France may not have occurred for a number of reasons including the price of packages for low usage customers - if these were set higher than the willingness to pay then this may have resulted in slower growth in penetration. Overall it may be necessary to look at the trend in penetration levels before and after a move from BaK to CPNP over a much longer period in order to more properly evaluate the impact on penetration levels – such an approach would be more reliable and thus preferable to drawing conclusions about welfare neutral effects from a snap shot view as the ERG appears to have done.

In addition the paper states at page 28, 2nd para

"*Assessing whether BaK with cost recovery on retail is more efficient than a possibly non zero first best solution, should therefore also be based on making an empiric comparison between the market result (in terms of average usage and retail price) in BaK countries and CPNP countries. Therefore, it is more appropriate to compare the results of a zero wholesale termination rate to the actual termination rate, rather than comparing the zero wholesale termination rate to the theoretical first best wholesale termination rate."*

In assessing the welfare impact of a move to BaK the ERG is comparing BaK countries with CPNP countries where the termination rate that exists today may not be creating the optimum competitive conditions in which to analyse consumer welfare. A more appropriate comparison may be made once LRMC has been implemented and cost recovery has moved away from wholesale to retail services. Comparing the impact that this will have on consumer welfare with countries that have BaK would be more appropriate and would result in more reliable analysis. Accordingly to better understand the impact of BaK from a welfare perspective further analysis is required when LRMC has been established. Any decision to move to BaK should not take place unless it can be demonstrated that the welfare benefits under BaK are higher than those achieved in a CPNP environment using LRMC.

- **MOVING COST RECOVERY TO COMPETITIVE MARKETS**

The ERG paper states in paragraph 5.1.2:

"If a provider has to bill termination cost to its own end-users in a competitive market he has no incentive to charge excessive prices to his customers, because he may risk losing them. It is likely to increase incentives for cost minimization as more cost are subjected to competitive cost recovery."

This assumes fully competitive retail markets, where end-users can readily change suppliers. It is unclear what criteria will be used to judge that retail markets are fully competitive or whether it is anticipated that regulation will be maintained at the wholesale level to ensure that retail markets remain competitive once BaK is introduced. However, in simple terms BaK just means that pricing at the wholesale level is set at zero it does not remove the need for regulation to ensure that access to services is maintained.

- **TRANSIT MARKETS**

Cable&Wireless is one of the largest providers of international voice connectivity to European national carriers. This market can be referred to international voice transit. The prices that are attached to the various services for national termination are to a large extent based on the costs that are attached to the termination of the traffic into national markets. Therefore, a change from CPNP to BaK is expected to have a major effect on the way international connectivity will be priced, how it will be technically exchanged and marketed. There are concerns, that the power of terminating operators over their end-users will be used towards the transit segment to exchange international traffic. There is a risk that once BaK is established, networks hosting big parts of the national numbering ranges (fixed network residential service providers and mobile operators) will follow incentives to vertically integrate into markets downstream. These are markets, which over the last years have been served by operators under highly competitive conditions, such as the international voice transit market. The incentive to bundle may be linked with different options to achieve additional margin on their SMP position in the end-user markets. Overall, the BaK model may risk, once implemented, placing the incumbent operators and mobile operators at an advantage in the transit market, as they can leverage their end customer relationship and buy termination/transit without extra costs (given this can be covered under existing capacity), excluding operators who could transit but have no leverage on end-user numbering ranges.

- **QUALITY OF SERVICE**

C&W agrees with the claim that terminating CPs will have an incentive to maintain QoS otherwise they will risk upsetting their customers. However, a large CP has a greater incentive to provide impaired QoS and blame it on the new entrant, thus encourage the new entrant's customers to move and off-net calls become on-net. C&W believes that prevention and detection of such practises will be very difficult.

- **WLR, IDA AND CPS**

In the UK wholesale remedies providing Wholesale Line Rental (WLR), Indirect Access (IDA) and Carrier Pre-Select (CPS) are fundamental to the competitiveness of the retail market for voice services. We expect that to continue for some considerable period, at least in areas where LLU is not commercially viable.

It will be necessary to determine how the rates for these services are set and how the cost of call termination will be recovered. We see two options:

1) Higher charges for the line rental and/or call origination to ensure recovery of the average cost of call termination. However, the variability of usage and the fact that such lines are sometimes used for termination only makes this problematic and open to abuse;

2) Explicit charges for receiving calls. However in the case of WLR the customer is a CP and there is no effective competition to restrain charges leading to the requirement for them to be set by the NRA.

In either of these cases there will still be a clear requirement for NRAs to maintain cost models, determine appropriate charges and resolve disputes. The regulatory burden will not be removed.

- **OTHER VOICE SERVICES**

Other voice services such as Premium rate, Number translation and information services are not suitable for BaK and must remain on a CPNP (or recipient network pays in the case of freephone). In the UK, regulated call origination rates have been fundamental to the success of such services and would have to be adjusted to ensure recovery of call termination costs. Again NRAs will have to maintain network cost models to set charges and resolve disputes.

- **NETWORK ACCESS**

Under CPNP, particularly based upon LRMC, where a CP requests interconnection from another CP both parties have an incentive to negotiate this in a timely manner. Where BaK applies, however, the terminating CP will have little incentive to provide interconnection : they are being requested to provide a facility for zero revenue, recovering the costs from their own users. It is therefore inevitable that BaK will result in a higher number of regulatory disputes where CPs are being refused access to interconnect facilities.

QUESTIONS RAISED BY THE ERG PAPER

Below we set out our answers to the questions raised by the ERG Common Position paper.

QUESTION 1 (SECTION 1): DO YOU AGREE THAT IN A MULTI-SERVICE NGN ENVIRONMENT, IN WHICH DIFFERENT SERVICES USE A SHARED TRANSPORT LAYER, DIFFERENT INTERCONNECTION REGIMES FOR DIFFERENT SERVICES COULD CREATE ARBITRAGE PROBLEMS? IF YES, COULD YOU DESCRIBE THE PROBLEMS THAT YOU FORESEE OR THAT HAVE ALREADY OCCURRED. IF NO, WHAT PREVENTS THESE ARBITRAGE PROBLEMS IN YOUR VIEW?

C&W disagrees that in a multi-service NGN environment, in which different services use a shared transport layer, that different interconnect regimes for different services would create arbitrage problems. Services on an NGN are heterogeneous – for example voice has quality metrics associated with it, and encompasses call control to terminate a specific E.164 number to a specific network termination point. Other traffic streams do not have this, accordingly it is erroneous to

believe that voice traffic could readily be handed over a data interconnect any more than it could today.

In reality NGN application streams are no more mixed than they are in traditional networks. In traditional networks different service types use a common transmission network and are kept separate in transmission channels (e.g. separate STM-1s or STM-4s on common transmission network). In NGNs it is exactly the same, albeit the separation is accomplished via usage of different SVLANs or MPLS tags. Accordingly there is no more scope for arbitrage than there is today, for example using ENUM a data/broadband termination for an E.164 number could be determined and the termination rate avoided, but in reality this hasn't proven worthwhile.

QUESTION 2 (SECTION 1 & 2.2): WHAT IS THE INFLUENCE OF THE SEPARATION OF TRANSPORT AND SERVICE FOR THE INTERCONNECTION REGIME AND IN PARTICULAR THE CHARGING MECHANISM AND IN WHAT WAY ARE NGNS AND BAK RELATED?

C&W does not believe that NGNs provide a driver for BaK in any way, other than representing a technology change that affords the opportunity to review commercial arrangements. However, even in this context it is notable that NGNs are not appearing overnight, rather are being phased in over a prolonged period of time (perhaps a decade), implying a simplistic change of accounting regime will not be possible.

Contrary to assertions in the paper, the NGN transport layer *is* "service aware" insofar as it has to be. For example the NGN transport layer does not know the application using a media stream is voice, but it does know that the quality of the media path has to be compliant with a set of parameters which will support voice (e.g. for UK, 35ms delay per CP network is allowed for voice media streams). It's therefore erroneous to suggest that voice isn't treated any differently to any other transmission stream because one of the key characteristics of an NGN is that there is differentiation - if voice wasn't treated differently, the network would be the internet, rather than an NGN.

The importance of separation of application from transmission in NGNs relates to the ability to more closely link costs to causes. Taking a voice call by way of example, rather than the costs being wrapped up in a crude ppm fee, the call server costs are specifically related to establishing/ tearing down a call, whereas the NGN transmission/media-stream path costs are related to the duration of the call. This allows for a more finely honed termination regime, with per call set up prices being driven by the callserver costs (optimised to minimise callservers involved) and per minute prices driven by transmission (optimised to deliver to nearest handover point to termination). An efficient operator would seek to minimise both, but a partially-efficient operator could e.g. minimise their media costs but still incur excess call control charges. BaK removes any incentive on an originating operator to minimise costs incurred by the terminating operator and thus will result in poor network efficiency.

C&W is offering products and services outside of the UK, which rely on a separation of transport and service. One example of this is GVI (Global VoIP Interconnet). This product provides international interconnection on a wholesale basis.. Global VoIP Interconnect offers termination of VoIP traffic to international destinations, whereas carriers interconnect with C&W via the public internet and submit traffic for termination into the PSTN. In our example, NGN Interconnection for international connectivity is already working and does not require a regulatory imposed model of BaK. From this point of view, NGN and BaK are unrelated.

QUESTION 3 (SECTION 3.2): HOW WOULD YOU DEFINE THE BOUNDARY FOR THE APPLICATION OF BAK AND WHERE SHOULD IT BE LOCATED (I.E. POINTS OF INTERCONNECTION WHERE BAK IS APPLICABLE)?

For BaK to apply CPs should not only have connectivity to an agreed number of nodes but must also deliver calls to the correct node. Within the UK agreement has been reached with the incumbent on 27 media-handovers for interconnection, based upon architecture of their network and geography of the UK. We see no need to review this.

The ERG paper sets out the risk of defining too many PoIs, resulting in “raising rival's (own network) costs” and resulting in SMP on the downstream retail market for access. It also sets out risks of defining not enough PoIs, which would result in either a lack of incentives for alternative networks to invest in their own infrastructure, or the situation where an originating network is forced to use the terminating network’s facilities, even where they have their own network in that location. However, C&W believes that it is necessary to look more closely at the assumptions underlying the concept of defining a boundary for BaK, which are based on a fully efficient transit market and its ability to adjust from day one to the different pricing regime and to the regulatory imposed borders for BaK. In reality there are different levels of efficiency in terms on numbers of PoIs depending on the particular interconnect scenario. For example for international traffic, the efficient number of PoIs is expected to be small, typically 1-2, whereas for the exchange of national and local traffic, the efficient number of PoIs is expected to be higher as in the UK example above. The definition of BaK assumes fully efficient and transparent national and international transit markets with the ability to adjust without frictions. However, C&W believes that further analysis is required to develop a view on how this can be achieved and in particular whether the assumption of fully competitive markets needs further evaluation.

Again, the concept of BaK seems to assume that effective competition will prevail at the level of the retail access markets, including the access market for business customers. It is unclear what mechanisms allow for such a strong assumption with regards to business customer access needs and further clarity is sought on this issue from the ERG.

QUESTION 4 (SECTION 4.2): WHAT IS YOUR CONCLUSION ON THE RELATIONSHIP BETWEEN THE CHARGING MECHANISM AND PENETRATION, USAGE AND PRICE LEVEL?

C&W does not support the analysis that has been put forward by the ERG paper as a basis for the imposition of BaK. The Merrill Lynch (ML) data is unreliable because it double counts many calls and although the adjustments made seek to address this they are nevertheless imperfect. Given the flaws with the ML data and the high value of the termination market across the EU, it is surprising that more reliable data has not been commissioned by the ERG to evaluate this important issue.

The ERG paper refers to penetration levels as being one of the measures to evaluate the welfare effect of the BaK regime. The penetration data show that there are differences between the US, with lower adoption, compared to Europe. However, the analysis also indicates that BaK is driving higher welfare compared to CPNP, as the minutes of use per capita (MoU) are higher. However this analysis is perhaps too simplistic.

While the analysis demonstrates a correlation between a very limited set of BaK regimes and higher call levels it makes no attempt to assert a cause & effect relationship between the two. For example if we were talking about a large pool of data subjects, where it could be clear that they fell into B&K versus CPNP regimes, correlation could be sufficient to make a presumption of cause and effect. However, with only a handful of example regimes examined it is not at all clear whether other environmental factors could be at the root of the discrepancy in call volumes. For example for many UK users sms is used in preference to voice calling, and this is a behavioural tendency / youth culture rather than driven by economics because in many cases a voice call could convey more information at a lower price.

Of greater relevance in our view than establishing a correlation between usage and BaK, is the fact that demand for mobile services is following the standard model of a demand curve: the lower the usage fee the higher the volumes generated on the service. From today's average level of MTR in Europe, C&W believes that there exists a potential for a further reduction of termination rates to the level of LRIC. C&W would expect this to have a similar effect, namely an increase in usage and increase in welfare.

C&W is concerned that the analysis put forward by the ERG is somewhat one dimensional in that it fails to evaluate the other welfare outcomes of the different charging models ie. BaK compared to CPNP. C&W suggests that other factors that should be further analysed are:

- the potential welfare effect of lower penetration as a result of the pricing scheme, monthly fee compared to per usage fee (this will always leave some users out of the market)
- the welfare effect of lower termination fees reflecting more the level of costs compared to existing level of MTRs.

QUESTION 5 (SECTION 5.1.3): HOW DOES BAK AFFECT REGULATORY CERTAINTY AND THE RISK OF LEGAL DISPUTES?

C&W acknowledges that the introduction of BaK regime would remove the regulatory uncertainty that has been associated with termination rates based on LRIC+ to the extent that it removes the necessity for assessments of network cost and thus the likelihood of legal challenge if those costs are not set at the right level. However, in reality it is highly likely that the actual outcome of BaK will simply result in a displacement of uncertainty from one area – termination rates – to other areas such as the impact on retail markets and ensuing no undue discrimination in the treatment of traffic.

In C&W's view the current ERG position relies too heavily on a comparison of an idealistic concept of BaK- where no analysis of network cost is undertaken- against the current "real world" of termination rate regulation based on LRIC+/LRMC. However in the "ideal BaK world" there are too many untested assumptions which give rise to a number of risks. BaK assumes fully competitive retail markets which have not been analysed or tested. In addition there are inherent risks that the BaK border could be wrongly set – i.e. defining it too narrowly, or too near to / far from the end-customer. It is conceivable that the obstacles of defining the efficient border for BaK may turn out to be as complex as the analysis of termination rates. Additionally the impact of BaK on related markets has not been assessed and this could equally give rise to legal disputes or the need for regulatory intervention thereby reducing regulatory certainty.

Accordingly although to some extent regulatory certainty may be achieved by BaK, the underlying objective has to be to ensure that the correct solution is applied to the market. If the solution is wrong because it negatively impacts the market then regulatory certainty is of little benefit. While there may be some merits with BaK from a theoretical perspective, it is clear that far greater analysis is required to understand the likely impact that such a charging regime will have on related markets such as local/national/international voice transit, wholesale market for business customer access, PRS and CPS.

QUESTION 6 (SECTION 5.2.1.3)

HOW DO DIFFERENT WHOLESALE CHARGING MECHANISMS IMPACT ON THE NUMBER OF UNWANTED CALLS? DO YOU EXCEPT (OTHER) EFFECTS ON CONSUMERS/CONSUMER GROUPS? WHERE POSSIBLE, PROVIDE A QUANTITATIVE ASSESSMENT OF THE EXPECTED EFFECTS.

In C&W 's view the analysis presented by the ERG paper is flawed as it assumes that the network costs of originator and terminator are balanced. However this is incorrect because BaK is being structured to apply only for the case of far-end-handover, similarly it does not address the situation where either the originator or terminator is a mobile. By necessity, if each party is meeting their own costs, this implies that a user with a mobile handset derives proportionately more utility from an inbound call than one with a fixed line - this cannot be right because while the recipient may derive extra benefit by being reachable on the move, the originator also derives more benefit by being able to contact them regardless of location.

Moreover, if BaK were to be introduced, a replacement for micropayments would be required, which would disrupt the market and probably result in higher industry implementation costs than retaining CPNP.

The ERG paper does nothing to address the issue of SPIT. This is largely because there is no solution. If the marginal cost of sending an unwanted call is zero, there is no disincentive to making such calls – this can be compared to the effect of SPAM in the email world where only a small minority of emails are valid, versus many which are unwanted.

Frequently unwanted marketing calls have no CLI or spoofed CLIs so the called party cannot make judgements of whether to accept or reject the calls. Under the logic of the paper, the recipient of SPIT calls are deriving utility from them, as they're being asked to pay towards the cost of terminating them : this cannot be justified by any objective analysis. There is a real danger that customers will simply not answer calls unless they bear a trusted/known CLI : this will impact upon call volumes as both valid and SPIT calls will be rejected.

A high level of unwanted calls may be a particular problem in relation to automated calling from computers based outside the European Union, in countries where the use of such machines is permitted (or indeed where they're not permitted but finding the source of such calls is a problem).

The extent of the problem of unwanted calls needs to be assessed based on the experience of countries with BaK such as the US, in addition to exploring the approach taken to dealing with it those countries and whether there are similar approaches that could be taken if BaK is adopted in the EU.

QUESTION 7 (SECTION 5.2): HOW DO YOU ASSESS THE QUANTITATIVE RELEVANCE OF CALL AND NETWORK EXTERNALITIES?

If termination rates under CPNP are set at LRMC (which they will be under the Commission Recommendation), then there will be no subsidy between users because the pricing of call termination will cover the costs incurred and nothing else. As such by 2012 there will be no theoretical subsidising of low-usage customers – the analysis in the paper appears to be predicated on there being a surcharge in a CPNP scenario, which should not be the case. Conversely, if termination rates are set at below cost and the deficiency has to be recovered from outbound call revenues, it becomes apparent that those customers who make few calls relative to the volume they receive will become less attractive to CPs. At the extreme, CPs either won't provide service, or will seek to recover their losses by charging higher outbound rates for customers receiving an excess level of terminating calls.

QUESTION 8 (SECTION 5.3.5)
HOW WOULD YOUR BUSINESS BE AFFECTED BY A MOVE FROM CPNP TO BAK? PLEASE EXPLAIN THE EXPECTED IMPACT ON PRICES, VOLUME OF SUPPLIED SERVICES AND PROFIT.

It is true that there has historically been differential off-/on-net pricing being offered. However, this only occurs where termination rates were way in excess of cost, and such tariff packages have mostly disappeared in the UK market. With regards to CPNP where the termination rate is set at marginal cost, there is no difference in the cost of an off-net/on-net call - whereas the on-net is an internal cost and the off-net is an external cost, these are in theory identical. Indeed, given CPNP rates are set at the level of an efficient operator, arguably the cost of an on-net call is actually higher than an off-net one if the CP in question can't meet these efficiency goals.

Whereas variable CPNP termination rates introduce a risk when offering "all you can eat" packages, in the B&K environment a different risk is introduced - if the customer concerned generates an excess of inbound calls, the "own network" costs won't be covered by the retail package.

The analysis around BaK appears to regard inbound and outbound service as inseparable. The logic is that revenues currently recovered from inbound service (i.e. call termination revenues) can be recovered from outbound service. However, it is rare for an individual customer to have balanced inbound & outbound call profiles (e.g. a call-centre could be predominately inbound with little outbound), and consequently it is common for CPs to have asymmetric traffic profiles. The provider of connectivity to the example call-centre has no way of recouping the lost termination revenues without passing the costs onto the call-centre owner. This will drive business away from telephony to alternate models of customer care such as the internet. Alternatively, CPs could arbitrage the situation : e.g. CP1 could host their customers by putting their inbound lines onto CP2's network using a re-sold service (hence leaving them with the issue of how to recoup lost call revenues), while keeping the outgoing lines on their own network. Given CP1 would not need to be recovering the cost of inbound calls (as CP2 is bearing this cost), then they could undercut CP2 on outbound service. This is particularly the case where CP2 has a regulatory obligation to provide a lines service (e.g. is the incumbent fixed operator).

From the perspective of an international transit operator there are a number of outcomes which we are concerned would have a negative impact on our business. There are concerns that the power of terminating operators over their end-users will be used towards operators connecting different networks (compared to operators that own the end-customer relationship). There might be incentives to vertically integrate into markets that so far have been served by operators under highly competitive conditions -particularly for international voice traffic. Operators, that can bundle end-customer number hosting with transit services are likely to take over the market to the detriment of current transit operators, who cannot "bring in value in terms of number of terminating calls" as they do not have the end customer relationship.

Overall, the BaK model appears to place the old incumbent operators within the transit market at an advantage, as they can leverage their end customer relationship and can buy termination and effectively transit for nothing, excluding operators who could transit but have no leverage on end-user numbering ranges.

There is also an inherent risks that the BaK border may not be defined in a way that an effective transit market can develop for traffic to be conveyed "between" BaK points and for international connections. Such a development would have a very negative impact on C&W.

QUESTION 9 (SECTION 6.1)
DO YOU AGREE WITH THE CONCLUSION THAT OPERATORS/USERS IN THE BAK DOMAIN WILL SUBSIDISE TRAFFIC COMING FROM OUTSIDE THE DOMAIN (REGARDLESS OF THE LEGAL ASPECT)? ARE THERE ANY MECHANISMS TO PREVENT THIS AND HOW WILL THEY WORK IN YOUR VIEW, IN PARTICULAR TO AVOID ARBITRAGE?

Cable&Wireless agrees that customers within BaK domain will subsidise those outside of it. The only way to avoid such a subsidy would be to charge for termination of calls from outside the BaK domain, but this is impracticable and would lead to issues of arbitrage.

The issue of subsidy causes particular concern in economies such as the UK that have experienced substantial off-shoring of call centres. Call-centres in the BaK domain will face outgoing call charges which are reflective of having to fund the cost of networks providing call termination free of charge to the originating network. Conversely, outbound call-centres based off-shore beyond the BaK domain will benefit from lower costs of placing calls into the BaK domain, but experience none of the overhead of funding call termination. This could accelerate the migration of outbound call centres to off-shore locations, which as well as the national economic issues, places them beyond the immediate reach of regulatory authorities.

QUESTION 10 (SECTION 6.3)
DO YOU SEE ANY IMPLEMENTATION PROBLEMS FOR A MIGRATION PERIOD TOWARDS B&K? HOW COULD SUCH PROBLEMS BE ADDRESSED.?

In C&W's view discussions around implementation are too premature given that there are still many issues to be further evaluated and tested.

CONCLUSION

It is clear that there are a number of issues which need further analysis and consideration to understand the full implications of any move to BaK. It is essential that the ERG carries out this analysis and that it is not swayed by what at first glance looks like a simple approach to termination rate regulation. There is sufficient time to first evaluate the outcome of the Commission's Recommendation on the use of LRMC as a cost setting tool and to debate the impact of a move from this regime to BaK. What is key is that any changes to the cost setting regime are not rushed through and that the correct mechanism is used to bring about the best results in the market. At the moment the case for BaK has not been adequately made.

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