



**OFCOM'S NARROWBAND MARKET REVIEW – CONSULTATION ON POSSIBLE
APPROACHES TO COST MODELLING FOR THE NETWORK CHARGE CONTROL FOR THE
PERIOD 2013-2016
FURTHER RESPONSE BY BSKYB (“SKY”)**

INTRODUCTION

1. This is the second part of Sky's response to Ofcom's consultation on possible approaches to the next Network Charge Control (“NCC”)¹ should such a remedy be imposed upon BT as a result of the forthcoming narrowband market review. In this response Sky outlines its more detailed views on the technological assumptions that underpin Ofcom's proposed approach to modelling a “bottom up” NGN cost model with its implied technology, scale and topology assumptions.

SCALE ASSUMPTION

3. As stated in the first part of its response², Sky does not agree that the scale of the NGN in the model should be based upon a 25% wholesale market share. Instead Ofcom should base its model on BT's actual (significantly higher) wholesale market shares.
4. Ofcom's hypothetical model of competition (four players with equal market shares), is unlikely to reflect the future level of competition in fixed telecommunications markets. While, as Ofcom notes³, there are four communications providers – BT, Virgin Media, Sky and Talk Talk – who between them account for most directly connected residential consumers in the UK, that does not mean that the respective shares of these operators are similar or are likely to be at any point in the future.
5. It may have been considered appropriate to support such a 25% market share assumption for the Mobile Call Termination (“MCT”) cost modelling because competition in mobile markets currently is similar to this hypothetical model of competition. The same cannot be said of fixed telecommunications markets.

¹ *Narrowband Market Review – Consultation on possible approaches to cost modelling for the Network Charge Control for the period 2013-2016*, 28 September 2012, Ofcom. <http://stakeholders.ofcom.org.uk/binaries/consultations/narrow-band-market-review/summary/condoc.pdf>.

² §21(b), *Ofcom's Narrowband Market Review – Consultation on possible approaches to cost modelling for the Network Charge Control for the period 2013-2016 – Response by BSkyB (“Sky”)*, November 2012. <http://stakeholders.ofcom.org.uk/binaries/consultations/narrow-band-market-review/responses/bskyb.pdf>.

³ §5.15.3 *Ibid*

6. In particular, there are structural bottlenecks that will keep BT's wholesale market share persistently above those of its next three nearest competitors for the foreseeable future:
 - a) the decreasing economies of scale and scope in deploying competing infrastructure to less densely populated areas⁴ means that only BT will have a ubiquitous national network. In some areas only BT will be present and in many other areas there will be fewer than four operators present; and
 - b) even in "on net" areas, LLU operators like Sky and Talk Talk are often unable to connect directly their customers to their networks and instead rely on BT's direct connection product ("WLR")⁵.
7. In spite of these bottlenecks, competition in retail fixed lines and calls markets is strong and, as previously noted, there are four large players. Therefore, it is not clear what, if any, dynamic efficiencies will stem from basing the bottom up NGN cost model (and, hence, call termination prices) on Ofcom's hypothetical view of competition (which is neither close to today's reality nor a reasonable view of likely outcomes in the future).
8. If adopted, Ofcom's approach would deprive consumers of the benefits of the lower prices that would arise due to the scale economies inherent in an NGN of greater size such as the one that would be deployed by BT.

TREATMENT OF LEGACY TECHNOLOGY COSTS

9. Sky considers that once it is accepted that the Modern Equivalent Asset ("MEA") is a NGN, then no legacy costs from interworking between IP and TDM networks or the maintenance of SDH networks should be included within the NCC cost model. By definition, costs are based on the assumption that all networks are NGN based and, as such, legacy costs would not arise.
10. Moreover, to allow the recovery of these costs by BT (and, by extension, by other legacy network operators) could disincentivise it from ever fully migrating to a NGN because it may be able to earn more from continuing the legacy equipment and functions in its network than from not doing so⁶.
11. For these reasons, BT should not be able to recover legacy costs from NGN operators (either directly through the call termination charge or indirectly through any other charge) and should offer IP to IP interconnection at up to the c20 points of interconnection assumed in the modelling exercise. In the meantime, NGN operators continue to maintain their own legacy equipment solely for the purpose

⁴ Virgin Media's cable network has been largely built and now covers c.50% of the UK's premises. Talk Talk and Sky's LLU deployment does not cover all of the UK.

⁵ ✂.

⁶ This is especially true if those legacy charges continued to be based on Ofcom's anchor pricing approach whereby the legacy costs were modelled as if they were part of a hypothetical on-going network.

of interconnecting with legacy operators. In Sky's view, it should not bear these costs either.

MORE DETAILED COMMENTS ON THE CSMG MODEL DOCUMENTATION⁷

12. In terms of the more detailed aspects of the CSMG model that underpins the bottom up NGN cost model being proposed by Ofcom for the next NCC (should one be required), Sky offers the following brief observations in light of its own experience as an NGN operator which we would be happy to discuss further with Ofcom if that would be of assistance.

Network Architecture (Section 3)

General

13. ✂.
14. ISDN is a legacy service that is gradually being replaced over time by newer technologies. As such, it may be inappropriate to include the costs of supporting ISDN services within the NGN (MEA) cost model⁸.

Overview

15. CSMG should make clear whether "99.999%" availability relates to network or service availability⁹.
16. ✂.

Super Access Node

17. ✂.

Interconnect Node

18. There should be relatively few, larger points of interconnection ("Pols") supporting IP/MPLS-based converged services within the core network. IP-VPNs can be used to deliver telephony traffic between these Pols at little or no additional cost¹⁰.
19. This, in turn, suggests that it is more cost efficient to adopt a decomposed model of separate Border Gateway ("BGW") and Signalling Firewall ("SFW"). This is because the inherent Peer-to-Peer Network-to-Network Interface in this decomposed approach has a trust model akin to SS7 which effectively renders the protection

⁷ *Fixed Narrowband Market Review: NGN Cost Modelling – Model Documentation v1.0*, CSMG, 27 September 2012. <http://stakeholders.ofcom.org.uk/binaries/consultations/narrow-band-market-review/annexes/csmg.pdf>.

⁸ §2.5 *op cit*.

⁹ §3.4 *op cit*.

¹⁰ §3.40 *op cit*.

from untrusted points offered by the Session Border Control (“SBC”) proposed by CSMG unnecessary, unduly expensive and an inhibitor to scaling¹¹.

Service Node

20. ✂.

Model Implementation & Assumptions (Section 4)

Call Demand

21. CSMG intends to refine its assumption of 135 kbps in each direction for a voice call based upon the G.711 codec with encapsulation (including MPLS headers). Sky notes that the media rate is ✂¹².

Categorisation of exchanges & network deployment

22. ✂.

23. It is not clear whether voice switch equipment is included CSMG’s table of asset lifetimes¹³ but Sky recommends ✂ year asset lives for this class of equipment.

24. In relation to CSMG’s estimates of network equipment costs¹⁴:

- a) Call Server hardware costs are included but not software (i.e. per subscriber “rights to use” licenses);
- b) Voicemail software costs are included but not hardware costs;
- c) ✂;
- d) ✂; and
- e) There are missing components (“IMS MRP”).

25. Finally, in Sky’s experience an Energy Efficiency ratio of ✂ is more appropriate than CSMG’s suggested 0.80¹⁵.

Sky

December 2012

¹¹ §3.44 *op cit.*

¹² §4.6 *op cit.*

¹³ Figure 15, *op cit.*

¹⁴ Figure 18, *op cit.*

¹⁵ §4.31, *op cit.*