“Community Guidelines for the application of State Aid Rules in relation to the rapid deployment of Broadband Networks”

Response to the European Commission (“the Commission”) DG Comp Consultation

by Intellect UK

June 2009

1. EXECUTIVE SUMMARY

- Formed by an amalgamation in May 2002 but with roots going back to the 1930s, Intellect is a UK trade association which serves to represent its members from the UK technology industry which comprises the information and communications technologies (ICT), electronics manufacturing and design and consumer electronics (CE) sectors, including also defence and space-related IT. We have around 800 member companies from SME/Small-to-Medium-size Enterprises to major multinational companies. Further information on Intellect can be found at: http://www.intellectuk.org
- Possibly uniquely among European Industry Trade Associations, Intellect's members are active in virtually every aspect of the technologies involved in the delivery and operation of current and future broadband services, NGA and NGNs. This consultation response has embraced all such members who have desired to participate in it.
- Intellect's members have followed the development of the Commission's economic regeneration plan and its broadband strategy with interest, recognising that it will influence and affect the development of both the broadband market in the UK and indirectly other segments of the UK technology industry.
- Intellect's members wish to ensure that where State aid is utilised in the UK (inherently where such aid is shown to be essential), there is consistency and coherence in the design of the interventions, and to this end we welcome the guidelines. We wish the Commission to adopt certain additional recommendations within the body of this response.
- The best outcome from this consultation would include :
  - Recognition that the principle of technology neutrality, accepted in the draft in relation to basic broadband, be extended to the guidelines for Next Generation Access Networks ("NGAs").
  - Strengthening the emphasis on ensuring that maximising competition is an objective of all interventions (including the competition which can be created between wired and wireless broadband networks (WIMAX, Satellite, Mobile and, in the future, NGAs).
- Public intervention is appropriate in geographic areas where private investments will not be viable or timely. We welcome the guidelines and hope that with these additions, the development of current broadband networks and NGAs can be used to ensure a competitive market as well as meeting the Commission's objective of 100% high speed Internet coverage for all citizens by 2010.

2. BACKGROUND AND INTRODUCTORY COMMENTS

a) *Intellect is well positioned to contribute, in particular in respect of the development of NGA*

- As mentioned, Intellect's membership comes from all sections of the UK technology sector, including companies involved in the provision of technology solutions and those involved in the provision of broadband services to end users including wireline, wireless and satellite operators. In formulating this response we have directly canvassed opinion from this very broad reaching membership to provide a UK industry wide view of the issues we see as being important to the successful deployment of NGA broadband in under-served geographical areas.
- Since mid 2006 Intellect has processed more than 50 formal digital communications and convergence related consultations, received both from UK national bodies such as Ofcom and also from European ones, such as the European Commission itself.

b) *The development of NGA is vital to the future of the UK's technology industry and wider knowledge economy*

- Intellect notes the Commission's definition of 'Next Generation'. Some members of Intellect consider that definition to be rather modest in its scope, whilst others consider it to be broadly appropriate. We believe it is too early to be prescriptive about specific data-rates, also about the need to have symmetrical data-rates in both directions or otherwise.
- In the future, considerably higher speeds may become commercially viable to be offered widely. In the context of ensuring best value from public investment, the BB Aid Guidelines should therefore be kept under review by the Commission to ensure that the benefit delivered from any intervention can still be justified beyond the short-term.
- However, in determining the data speed requirement for NGA in any particular geographic area, consideration should be given to the consumer and business tendencies in that area and to the data rates required. The choice between (or precise mix of) fibre, wireless and satellite technologies needed to meet those requirements should then be assessed on a technology neutral basis.
- It is also important, in the context of deriving best value for money from public investment, that the networks created by intervention are compatible with 'Next Generation' requirements in order to ensure the longest lasting benefit possible.
- The absence of widespread availability of broadband services will be detrimental to key areas of demand as the Internet continues to transform distribution models in all areas of the economy, such as for:
    - o Home workers, particularly those generating significant data within sectors such as the creative and design industries

- o Entertainment distribution, including advanced interactive applications such as gaming, large downloads of movies, sharing of self-produced content among private and public user groups
- o Education, including distance learning
- o Interaction with increasingly common distribution channels for consumer information and online financial services and retail
- o Multiple services being run in a family environment at the same time

- Hence developing technologies, investment models (both private and public) and commercial solutions to ensure that the 100% coverage target can be delivered are of vital importance, and Intellect's members in the communications sector will play a vital role in that delivery.

c) *It's absence leads to social exclusion*

- As in other member states, the areas of the UK which are the most likely to be deprived of broadband services are those which have not benefitted from the private sector's investment in fixed and mobile broadband networks to deliver the benefits of competition. The continued absence of these NGA services in the future will perpetuate this deep social divide, depriving large numbers of the population of the benefits of services which will increasingly be found in the wealthier, largely urban locations.

d) *This consultation in relation to the UK's communications market*

- The UK's communications industry is highly competitive, with five mobile operators and numerous fixed line operators, competing on both infrastructure and service levels, whilst satellite operators compete at the service level as well (because their infrastructure is already in place).
- This competition has served to bring down prices and increase choice in most communications products and services.
- Where competition is absent or has failed and intervention is necessary (mainly in the "white spots" as defined by the Guidelines), it is possible for such interventions to be designed to ensure that the maximum level of competition is enabled at technology, infrastructure and service levels.
- Thus intervention, rather than distorting the market in a manner detrimental to the Commission's broader objectives, can be supportive of competition and consumer choice.

3. ESSENTIAL REQUIREMENTS TO ENABLING COMPETITION

- The guidelines contain, at paragraph 74, a range of requirements to be included in the design of any measure.

- We believe that these requirements must be applied to 'NGA white' areas. As we have explained previously, the introduction of competition enhancing features should be of substantial benefit in these areas.
- We also believe that there are different requirements for different technologies. Within this section we will review the available technologies for NGA and recommend appropriate requirements.
- It is important that investors are not able to 'shield' their networks from these requirements by allocating the aid to other assets or away from assets at all - thus any aid given to provide a service in a given coverage area should carry with it the obligation to meet the requirements across the coverage area.
- Emerging NGA will include multiple access technologies that drive service availability, a factor which we believe to be more critical than any single applied technology. Notably, the Australian government quite recently had to reconsider its approach when it realized that the cost of bringing FTTH/Fibre-to-the-Home to all citizens was not viable. Today, they have decided to include multiple technologies including wireline, terrestrial wireless and satellite to create the most cost effective solution.

a) *Optical Fibre Networks*

- Optical fibre can be deployed both in the core of any network or the access element, and have the ability to deliver high speeds and high capacity. The transparent nature of optical media combined with their long asset life also provides a high degree of future proofing of any public investment made.
- The leasing of 'dark' optical fibres is now a well-established trading model. Public sector intervention to fund new network deployments must, in Intellect's view, be done with the proviso that the resulting networks provide a straightforward open access model. Here, all service providers who wish to use the network can procure passive infrastructure components such as optical fibre and co-location as well as fully "lit" data services, on equal and transparent terms.
- We fully support the Commission's proposed requirements to enable facility-based competition wherever optical fibres are deployed using public funds.

b) *Wireless Networks*

- Although wireless solutions may have a lower total capacity (typically required to be shared between all users) than fixed network solutions, often this is not an issue in rural areas.
- Such networks can increasingly deliver services per user similar to current basic broadband services delivered over fixed networks, particularly where those services are provided over relatively long copper access routes.

- In the EU, 3G mobile telephony services reached 146 million users by end 2008, with a 66% increase year on year.
- 3G capabilities and performances are continuously evolving and the current road map is expected to deliver the following speeds which are comparable to those highlighted by the EC as NGA speeds:
  - HSPA+ Release 7 network already provides 21 Mbps;
  - HSPA + Release 8 will reach 42 Mbps peak data rate downlink and 11 Mbps uplink in a 5 MHz carrier;
  - HSPA+ Release 9 will reach 84 Mbps peak data rate downlink and 23 Mbps uplink in a 10 MHz carrier;
  - LTE will reach 73 -150 Mbps peak data rate downlink and 36 – 75 Mbps uplink for carriers of respectively 10 and 20 MHz;
  - Aggregating multiple carriers 20 MHz carriers LTE Advanced can reach peak data rates 300 Mbps.
- Fixed WiMAX is already available delivering speeds similar to fixed broadband alternatives and with mobile WiMAX capable of exceeding these speeds. Mobile WiMAX, IEEE 802.16e provides 40 Mbps for the downlink and 17 Mbps for the uplink (TDD, 10 MHz) while IEEE 802.16m will provide 300 Mbps in the downlink using 2 x 20 MHz. By aggregating multiple 20 MHz carriers WiMAX Advanced (IEEE 802.116m) can reach or even exceed 300 Mbps. Commercial services are already deployed in Korea, Japan, Netherlands, Malaysia, Russia, Taiwan, US, and in many other parts of the world.
- As with optical fibre, public sector intervention to fund new network deployments should lead to an open access obligation.

c) *Satellite Services*

- Satellite broadband has evolved greatly and now has the capability to contribute in the realisation of the Next Generation Networks ("NGN") as well, especially when we consider the most likely applications that may be demanded under Next Generation Access ("NGA").

  Satellite broadband closes two digital divides. First, the access to broadband gap (what might be termed the "old" divide) is addressed by the universal availability of connection, however remote the location. Second, the broadband speed gap (the "emerging" divide), is addressed immediately by delivering a 2Mb/s to 4Mb/s service to those who may currently have none at all.

- From a sustainability perspective, satellite broadband can be bundled with digital TV including HDTV to provide what are known as nPlay service bundles.

- Satellite based services have the particular attribute of being available to virtually every ground location from the sky, if within the satellite's footprint. Such infrastructure investments have been made by private operators already in relation to operational or already procured satellite systems, and state aid is not required at that level in regard to such existing satellite systems. However, to connect to existing satellite signals, all that is required is the purchase and installation of satellite dishes and terminals. This activity is a one-off task rather than an ongoing longer-term economic activity such as those previously mentioned. The State Aid Guidelines should reflect the fact that public financing should not be exclusively limited to infrastructure but should also include the related ground equipment necessary to access broadband, as is the case for 'broadband via satellite'. This could be reflected in the Guidelines to include not only "building, operating and/or managing a broadband infrastructure" but also "the purchase and installation of satellite dishes and terminals required to access it". This proposed text modification would clearly reflect that satellite broadband is eligible for State Aid.

- Finally, next generation satellites target higher broadband capacities which will allow satellite technology to deliver high speed broadband to areas which cannot be covered by terrestrial solutions, both in terms of addressing the *"digital divide"* and the emerging *"speed divide".*

d) *Competition and Long Term Benefits*

- Where an open tender process is being used to select a supplier to deliver NGA in areas of market failure, the procurement evaluation should be undertaken to deliver the best value approach in a timely manner. However in the design of the measure the procurement must ensure that the benefits of competition and technology are considered along with an appraisal of the time benefit of the intervention. It is important to balance long term benefits against short term upgrades to existing regional monopolies which perpetuate those monopolies and provide only short lived improvements.

- As recognised in the recent UK Government's 'Digital Britain – Final Report' (published on 16th June 2009) the availability of broadband has the two components of a)improving access of basic broadband today also b) of delivering NGA in the proportion that will not be reached by the market in the network of tomorrow. The principles of technology neutrality should apply equally to the provision of both elements of broadband.

The design of the measure should include the requirements noted in relation to wireless and satellite in sections (b) and (c) above.

4. COMMENTS ON THE GUIDELINES

a) General Comments on the proposed guidelines

(3) In relation to the investments being proposed by Member States which support both rural and NGA over large areas, it should be made clear that all of the provisions of these guidelines should apply to all interventions, not just those directly falling under the 'economic stimulus programme'. This is essential to ensure consistent application of state aid.

(4) In terms of the digital divide, as well as the divide caused by the availability and non-availability of services, we believe that there is also a significant divide caused by the price of services where those services are available from only one operator. We believe that well designed intervention can play a significant role in improving the pricing and choice by the encouragement of competition.

(40) In relation to the effective network access not being offered, we would also propose that effective network access should include a statement similar to those elsewhere in the consultation document that this access must include passive duct and fibre access, as well as satellite dishes and terminals. Not to include these would result in a measure not conducive to effective competition.

(45) We welcome the statement on wholesale access and that this should ensure that regional service monopolies are not created, or in some cases, perpetuated. Again we feel that it could again be clarified that this wholesale access is also applicable to passive duct and fibre assets. In relation to the period of time over which wholesale services should be offered we would like to make the following observations.

- The duration should be determined in relation to the nature of the assets subsidised and the duration of any measure. For passive assets we would not consider that either 7 years or, as contained in point (74), half the amortisation period of the assets, to be an adequate period of time for open access to be mandated
- In the case of a fast deployment of broadband using satellite for white spots, the wholesale access principal may not apply in the same way. This is because in this case, competition happens between the numerous satellite operators and service providers on a service level, and the question of access to infrastructure does not arise (as satellites are already in place and providing service to a number of providers).

b) Regarding the establishment of 'Grey, White and Black' areas for NGA

(70) The availability and capability of wireless and satellite broadband in an area needs to be taken into account when performing the assessment.

5. CONCLUSIONS AND RECOMMENDATIONS

- A vibrant and thriving competitive market for broadband and in particular NGA can be furthered by the adoption of consistent and clear requirements setting out how public sector investment can be used to further competition and therefore increase broadband and NGA penetration.
- Where an open tender process is being used to select a supplier to deliver NGA in areas of market failure, the measure designed should introduce the long term benefits of competition and technology balanced against the quick fix of upgrading regional monopolies.
- In order to be technology neutral, particular requirements will be needed for each technology; we have made recommendations accordingly.
- Without such clear and consistent requirements unnecessary distortion of the market will occur. In particular, regional service monopolies may result.
- Public sector intervention to fund new network deployments should lead to an open access obligation.

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