

PRACTICAL PROPOSALS FOR A DIGITAL BRITAIN

Introduction

The ultimate goal must be for a fibre cable service to be connected to every building whether it be for commercial, industrial or residential usage.

Mobile 2G spectrum must be resolved now to allow 3.5G (in future 4G (LTE)) to be implemented.

Most of the existing 2G coverage is in rural areas and thus provides an opportunity for government assistance as outlined in the Prime Minister's "plans for investment in super-fast broadband" (January 2009).

A Broadband universal service obligation (USO) should be at least 4 Mb/s for all Telephony and Mobile Operators.

Background details are included in the appendix to these comments.

Proposed Alternative Interim Strategy

I propose that the rural areas of the UK be first to have a scheme installed that employs direct fibre cables to multi-tenancy offices and residential flats and fibre to the cabinet (FTTC). The latter to have ADSL Max or ADSL2+ units installed. The DSL equipment will provide a USO of at least 4Mb/s service over copper cables to businesses and homes. In the small number of outlying premises that cannot achieve this USO standard, then VDSL units can be employed. The street cabinet already being served by fibre cables (routed through some form of ducting) will make the introduction of NGA less costly to implement.

Fibre Cable Service

The concept is generally known as fibre to the home (FTTH). I have extended the term to mean fibre to all premises whether it be flats, factories, hotels, houses, or offices, etc.

To achieve FTTH it will be necessary to amend Planning Regulations to include a statutory obligation on all developers to install containment system within the premises and in the streets and footpaths associated with the development.

I would propose that this measure be implemented within the current session of parliament.

In addition, the Building Research Establishment (BRE) should be commissioned to produce "Best Practice Guides" for developers of buildings. The Guides should be produced in association with telecommunication, component and containment suppliers. These statutory BRE Guides will deal with the system within the building, the connection point to the building, the associated streets and footpaths of the development and the interconnecting nodes serving the development.

The issue of cable routes within the footpaths and streets may best be considered as an owned National Asset rather than introducing regulation on the problematic sharing of cable ducts with BT, especially where new cable routes have to be installed.

The Digital Britain Interim report indicated that BT have announced £1.5 B investment over 5 years in a mix of FTTC and FTTH implementation. Initially, the facility will service 10 Million premises by 2010.

To implement Fibre services throughout the UK will involve enormous capital expenditure. The works involved will take a long time to implement and historically will see the urban areas upgraded first at the disadvantage of the rural communities.

In my opinion, it is important to consider an alternative interim strategy to achieve a shorter timescale.

Because of this disadvantage, my proposal to install FTTC and FTTH in rural areas first will have the following advantages:

- a) ensure SMEs' survive and expand as we come out of recession.
- b) more likely to achieve a USO of 4 Mb/s in a shorter timeframe.
- c) make it less expensive to upgrade to NGA at a later date.
- d) be able to utilise local labour (and plant/machinery) from Building contractors who have reduced their manpower as a result of the cut-backs in the housing markets.

Mobile Coverage

Large areas of Scotland, Wales and Northern Ireland have only mobile 2G coverage. The population coverage (at least 98%) was only achieved after funding from EU and regional authorities.

The main Mobile Network Operators (MNO) are currently introducing the upgraded 3.5G on their 3G areas to provide mobile broadband services. At the moment it is difficult to obtain a precise measure of mobile broadband coverage.

The 3UK MNO was the last main operator to gain a UK license and thus provides the greater 3G coverage area in the UK. Comment based on comparison of MNO coverage maps on GSM web site.

The historical government and EU funding in this sector gives me no confidence in MNOs' willingness to provide coverage in rural areas in the short term. I consider that they would opt to invest in extending their urban areas so that the mobile broadband user gains a greater, and possibly a more continuous, roaming experience thus enhancing sales potential. The downside of this would be a much longer timescale for achieving a mobile USO of 4 Mb/s throughout the UK and especially in rural areas, *unless there is some form of government funding.*

Broadband Universal Service Obligation

I welcome the commitment to a broadband USO as outlined in the Digital Britain interim report.

I would propose that 4 Mb/s should be the standard initially, for all Telephony and Mobile Operators. The coverage to be at least 98% of the land area of the UK.

The USO can be increased when the UK is fully compliant with NGA over fibre services.

The 4 Mb/s standard is based on the fact that it is achievable with mobile broadband 3.5G services and from FTTC with ADSL Max or ADSL2+ equipment at the street cabinet.

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APPENDIX

Proposed Alternative Interim Strategy

The Digital Britain Interim report in section 2 page 16 shows a diagram of the existing method of providing broadband services. My proposal requires the street cabinet to contain more electronic equipment.

Mobile Coverage

Coverage across the UK

2G mobile - Eng - 100%; Scot - 99%; Wales - 98%; NI - 100%:

3G mobile - Eng - 90%; Scot - 72%; Wales - 68%; NI - 44%:

3G connections per 100 population - 20. 9:

All mobile connections per 100 population - 122. 6:

Total 3G connections - 12. 5 Million (includes mobile broadband)

Coverage maps for the five main MNO can be seen at:

www.gsmworld.com/roaming/gsminfo/cou_gb.shtml

Fibre Cable Service

The proposed BRE Guides indicated four (4) areas to be specified.

The aim of the Planning amendment and BRE guides are to make telecommunication services a statutory fourth utility in the same manner as electricity, gas and water services. Specific components are needed for fibre terminations. Containment tubes require bends to a designed radius to suit the type of fibre cable. Interconnecting node units are necessary to allow different suppliers to “cross connect to the cable serving the home”. They will also include active electronics. The number of these node units will be determined on the size of the development. The cable ducts in the footpaths, within the development, may not need to be 450mm underground - a suitable shallow flat type could be suitable.

Broadband USO

Broadband speeds for 3. 5G mobile networks are up to 7 Mb/s. For DSL copper based services anything from less than 2 Mb/s to 18 Mb/s depending on distance from BT exchange. The exchange housing the DSLAM and DSL equipment. BT estimates these “line length” characteristics will result in 25% of customers able to receive 6. 5 Mb/s (closest to exch) to 93% of customers able to receive 2. 0 Mb/s (furthest from exch).

By locating the DSLAM and DSL units remotely at the street cabinet, most customers will be able to receive a 4 Mb/s broadband service.