

East Midlands Rural Broadband Summit

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National & Regional Perspective

Agenda

- Our common Digital Future
- Why broadband is important
- RDAs response to Digital Britain
- The Rural Broadband problem
- The Government's Digital Britain [broadband] Strategy
- Speed, Technology Choices & Blimp
- Towards a rural broadband manifesto for the East Midlands

Normal

Anything that is in the world when you're born is normal and ordinary and is just a natural part of the way the world works.

Anything that's invented between when you're fifteen and thirty-five is new and exciting and revolutionary and you can probably get a career in it.

Anything invented after you're thirty-five is against the natural order of things.

(source: Douglas Adams, *The Salmon of Doubt*, 2002)

Our common Digital Future

(defining where Broadband ends & ICT starts)



Point 1: You cant run fast trains on slow lines

Our common Digital Future

(source: Viviane Reding, *The Future of the Internet and Europe's Digital Agenda* - Speech 09/446, 6th Oct 2009)

In less than 10 years, the internet has grown from being a novel technical gadget application into becoming central to the economic systems of the developed world. This is because of its horizontal nature, **it is everywhere**, used throughout industry, economy and society whether for business or for leisure. It has driven more than half of the productivity gains in both the EU and the USA. It is the medium through which Information and Communication technologies can be exploited leading to innovation in business and a wide range of economic and societal benefits to citizens and consumers.

Our common Digital Future

(source: Viviane Reding, *The Future of the Internet and Europe's Digital Agenda* - Speech 09/446, 6th Oct 2009)

- there is a **direct** link between investment in ICT and economic performance
- it raises the innovation capacities of all industrial sectors
- a key driver of efficiency and effectiveness of our public sector and is essential for raising the quality of life of our citizens.
- ICT provides us with unique solutions for more energy efficiency and precise environmental monitoring, for better health services and for improving the conditions of our ageing population.

East Midlands Regional Economic Strategy

(A Flourishing Region, 2006)

The provision and use of ICT infrastructure will be critical to improving the **productivity** of business and the future **competitiveness** of the region...to remain competitive the public and private sectors need to **plan for investment** in next generation technologies and infrastructure (p97).

Transport and ICT infrastructure provide the **links** which enable the region's economy to function effectively, and allow it to grow (p91).

Why Broadband is Important

The productivity effects of Information and Communications Technology (ICT) investment are consistent across large and small firms making statistically significant returns across all industry sectors.

A quarter of EU GDP growth and **40% of productivity growth is attributed to ICT** with its effects felt across all sectors with more than half of recent process innovations linked to ICT (p79).

(source: *A Flourishing Region*, 2006)

Point 2: If you are interested in productivity you should be interested in the role of ICT & the underlying Broadband connectivity.

We already live in a Digital Britain

We are connected at home and at work and increasingly on the move. As citizens, we shop online buying books and holidays, we bank, we pay our rates, we study our ancestry, we renew our passports and we buy our car tax. The public sector gives us telemedicine, mobile phone parking tickets and the Oyster card. As businesses we complete electronic tax returns, we trade online, we operate across continents, across time zones and along complex supply chains. ... We do all this and many more things beside in our digital world. We can confidently say we are already living in a Digital Britain.

(source: RDA response to Digital Britain, Mar09)

Point 3: We passed a rubicon when we got First Generation broadband – there is no going back.

RDA response to Digital Britain

RDAs jointly identified four key principles for delivering a Digital Britain:

- The internet is a *General Purpose Technology* which should be affordable, accessible and used by all.
- A 'two-speed' Next Generation Digital Britain would diminish UK competitiveness.
- Fibre should be pushed deeply into the network to future proof investment and UK competitiveness.
- Intelligent procurement across the public sector estate should be used to further demand for next generation broadband networks.

What is the rural broadband problem?

(rural broadband markets do not satisfy the prevailing commercial business model)

*This is a commercial market with quite a lot of players and it obeys normal economic drivers...[there]...are large pieces of geography, sparsely inhabited, where broadband roll out will not be achievable in economic terms **at least within 10 and possibly 20 years.***

(source: Sir Christopher Bland, BT Chairman, evidence to Select Committee on Culture, Media and Sport 5th Feb 2002)

Point 4: Prevailing commercial logic will likely disadvantage rural communities...but experience with First Gen suggests that markets can get it wrong.

Is the rural economy on the right Track?

NO...it's on the slow track

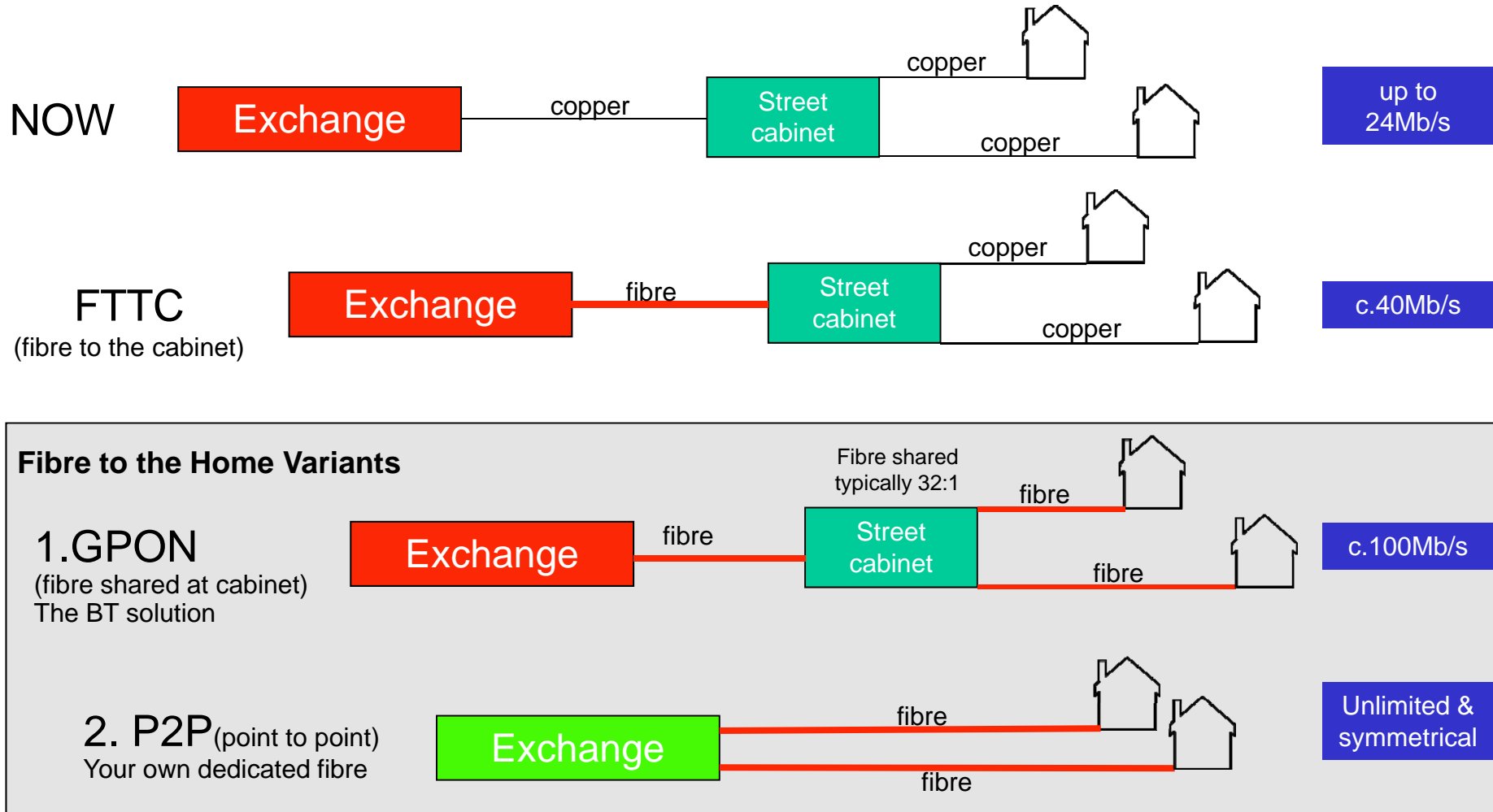
The Government's Digital Britain [broadband] Strategy

(how much money is there and is it enough?)

- The DB report identifies £200m (from BBC Digital Switchover underspend) to support the roll-out of the Government's 2Mb/s Universal Service Commitment (critics suggest this could actually cost upwards of £500m).
- The market will deliver Next Generation faster broadband to two thirds of population (**or is it half**) we await Defra broadband mapping which should help clarify the current position).
- There will remain a *Final Third* (or is it half) that will require public sector intervention.
- A 50p phone levy - raising c.£150m a year until 2017 will support the roll-out of Next Generation broadband (a national Fibre to the Cabinet (FTTC) strategy is estimated to cost c.£5bn with BT publicly committing £1.5bn).

Technology choices determine broadband speeds

(the big difference is that in rural locations you have limited if any technology choices)



Point 5: rural typically doesn't get a choice of technology

Speed

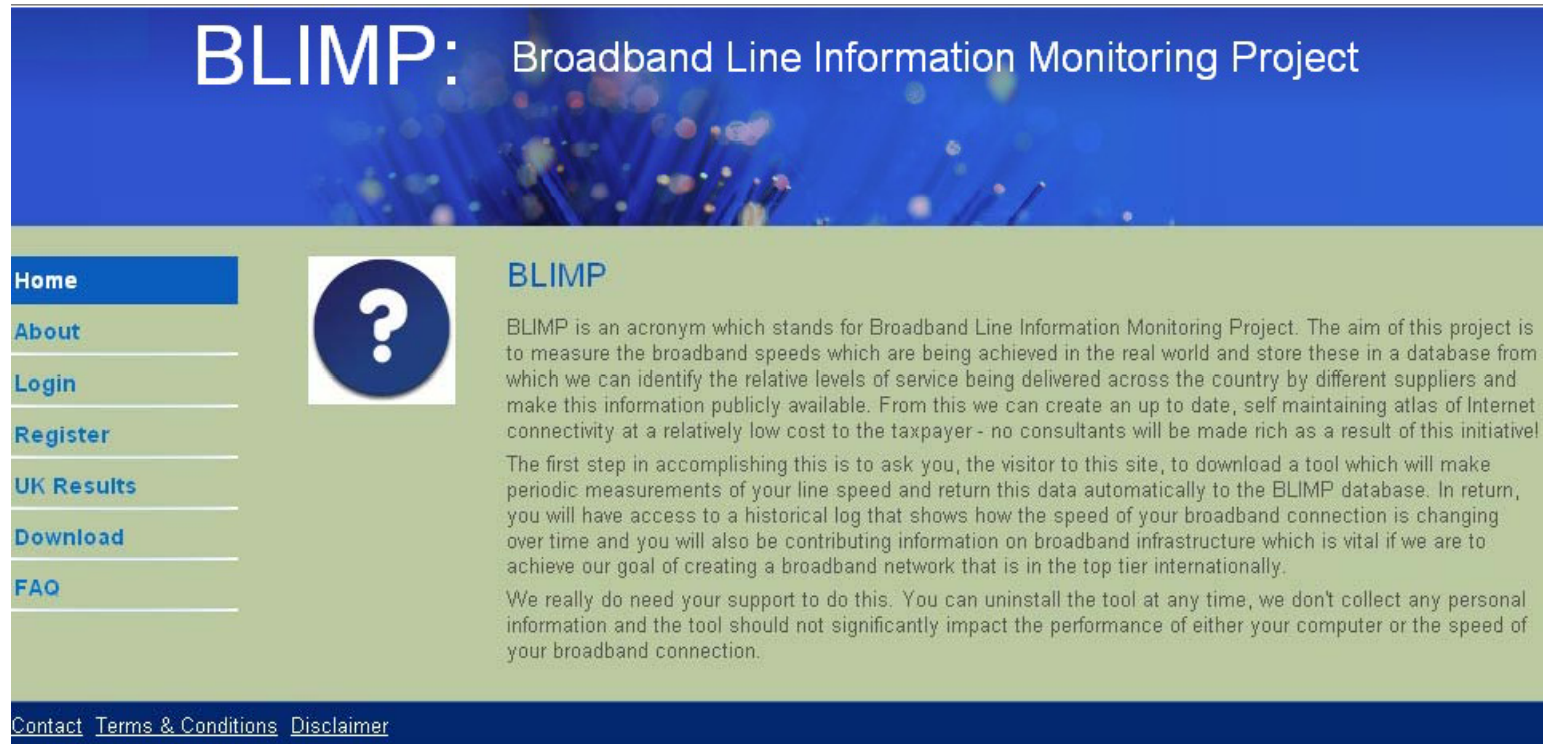
- Average broadband speeds in the UK were 4.1Mbit/s (57% of the average advertised headline speed) but only **3.7Mbit/s** between 8pm and 10pm (source: Ofcom, *UK broadband speeds 2009:8*).
- Fastest residential broadband offer in the OECD was **1Gbit/s** from Japanese operator K Opticom this was in October 2008 (source: *OECD Communications Outlook 2009:107*).

Question: who said this?

1. *We will create a regulatory framework to ensure the roll out of superfast broadband at speeds of up to 100mbps to the majority of homes across the UK by 2017.*
2. *By investing now in this digital revolution, we can bring to households and businesses all over the country internet speeds 50 times faster than most people experience today.*

1. Jeremy Hunt MP., Shadow Culture, Media & Sport spokesman, 4th Feb 2010
(www.shadowdcms.co.uk/newsshow.aspx?ref=215)
2. Gordon Brown., PM's article on super-fast broadband 8th Jan 2010
(<http://www.number10.gov.uk/Page22053>)

BLIMP: <http://www.blimpchecker.co.uk/>



The screenshot shows the homepage of the BLIMP website. At the top, there is a blue header with the text "BLIMP: Broadband Line Information Monitoring Project". Below this is a navigation menu with links for Home, About, Login, Register, UK Results, Download, and FAQ. The main content area features a large question mark icon and a section titled "BLIMP" which contains a detailed description of the project's purpose and goals. At the bottom of the page, there are links for Contact, Terms & Conditions, and Disclaimer.

BLIMP: Broadband Line Information Monitoring Project

- Home
- About
- Login
- Register
- UK Results
- Download
- FAQ

BLIMP

BLIMP is an acronym which stands for Broadband Line Information Monitoring Project. The aim of this project is to measure the broadband speeds which are being achieved in the real world and store these in a database from which we can identify the relative levels of service being delivered across the country by different suppliers and make this information publicly available. From this we can create an up to date, self maintaining atlas of Internet connectivity at a relatively low cost to the taxpayer - no consultants will be made rich as a result of this initiative!

The first step in accomplishing this is to ask you, the visitor to this site, to download a tool which will make periodic measurements of your line speed and return this data automatically to the BLIMP database. In return, you will have access to a historical log that shows how the speed of your broadband connection is changing over time and you will also be contributing information on broadband infrastructure which is vital if we are to achieve our goal of creating a broadband network that is in the top tier internationally.

We really do need your support to do this. You can uninstall the tool at any time, we don't collect any personal information and the tool should not significantly impact the performance of either your computer or the speed of your broadband connection.

[Contact](#) [Terms & Conditions](#) [Disclaimer](#)

But how much speed do you need?

(I suggest we don't have a clue...but fibre can deliver it...)

33yrs ago

- First commercial fibre optic connection deployed in April **1977** in Long Beach California – 6Mbit/s requiring 2 fibres one each way.
- There are systems commercially available that allow the usage of 160 colours on a single fibre, giving a total of 3.2Terabit/s on a single fibre. In laboratories speeds of up to 25Tbit/s have been reached (source: OECD, *Developments in fibre technologies & investment*, Apr08).

But caution...Do not focus on speed

Asking how much speed you need is the wrong question because it simply leads to an argument with the telcom industry. They, quite rightly, will ask that you explain what applications you are thinking about and demand that you define exactly how many Mb/s you need.

Point 6: I believe the question we should be asking is:

“how do we future proof our broadband investments?”

More is never enough (we can confidently predict we will need more bandwidth in the future - we just cannot say exactly how much or when... *The Laws of Disruption*, Larry Downes, (2009))

Policy Proposition

In a Digital Britain ICT is a critical infrastructure that provides the platform upon which a 21st Century Low Carbon Knowledge Economy will be built.

MOORE'S LAW

computing power doubles every year or so

METCALFE'S LAW

the power of a network increases exponentially with each new user

Towards a rural broadband manifesto for the East Midlands

In descending order of desirability:

- Fibre to the Premises – PTP
- Fibre to the Premises – GPON
- Fibre to the Cabinet
- ADSL and variants
- Long Range Wireless
- Satellite



Point 7: We need to embed the principle that rural communities should have the same opportunities to be found in urban areas.

In summary: Strategic problems...

The strategic analysis in Digital Britain (Two thirds/Final Third) is broadly right. This implies that regardless of which Government is in office there will be a persistent rural broadband issue.

The telcom industry business model for broadband investment has always left rural economies lagging – and without intervention will continue to do so.

That same commercial logic will mean that rural locations will likely never see widespread fibre deployment (because of expensive dig cost) so will potentially **always** lag behind urban.

End note...

- You have to address both Supply & Demand. Investment in First Generation broadband was accelerated by stimulating demand and giving industry confidence that a market exists.
- You have got to get fibre into rural locations or you will enshrine a two speed Britain (if not now in a few years time).
- Projects like the YF Digital Region provide an example of how smarter procurement across the public sector can accelerate investment in faster broadband (but it took 3yrs, was voluntary, and was given a hard time by Treasury. If you had a mandate you might be able to engineer a *Smarter Procurement* agenda aligned to a Total Place mandate to revolutionise Access to Services).

Thank you

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