# Broadband Strategy

**Office of the e-Envoy**
**3rd December 2001**

# Contents

## Broadband

'Broadband' is the term used for 'always on', higher speed access to the Internet. This additional bandwidth, over and above the typical 56kbps provided by a standard dial-up modem, allows new value-added services to be delivered to consumers and businesses. Consumers will benefit from video and audio streaming, new forms of interactive entertainment and new ways of learning over the Internet. Businesses stand to benefit from productivity improvements; for example, improved low transaction cost communications with customers and suppliers. Broadband also enables application service provision that permits the outsourcing of IT functions and enables companies to focus on their core business.

The Government believes that rapid roll-out and adoption of broadband across the UK is important to both its social and economic objectives. In February 2001, the Government published *UK online: the broadband future*,[1] which set a new target – "*for the UK to have the most extensive and competitive broadband market in the G7 by 2005"*. The report also committed the Government to establish a Broadband Stakeholder Group to develop a detailed strategy for meeting that target. This section sets out:

- where the UK stands on broadband; and
- the Government's strategy.

### Broadband: where does the UK stand?

In July we awarded a contract to Analysys Consulting for a rolling programme of research into the broadband markets in the UK and the rest of the G7. The objective is to fulfil our commitment to publish research on a six-monthly basis of the UK's standing in the G7. Since July, Analysys have been working closely with the Broadband Stakeholder Group to identify the market performance metrics that really matter as we track progress over the next four years. Consensus has emerged around a dashboard of six indicators:

- **broadband service price:** a weighted average price for broadband services at purchasing power parity. Prices are weighted by population coverage for the service.
- **broadband take-up:** broadband take-up as a percentage of the population.
- **broadband choice:** a composite measure with three elements: the market concentration index as a measure of retail and technology competition; the number of broadband retailers with a market share greater than 5% as a measure of retail competition; and the total broadband infrastructure coverage as a measure of technology competition, e.g. cable vs Digital Subscriber Line (DSL).
- **broadband service availability:** the percentage of the population covered by at least one affordable broadband technology.

[1] www.e-envoy.gov.uk/publications/reports/broadband/index.htm

- **broadband market regulation:** an index formed from a generic bundle of actions taken by the regulator on broadband, including local loop unbundling, line-sharing, spectrum licensing, satellite licensing, wholesale DSL, wholesale cable, and separation of incumbent networks.
- **broadband addressable market/market context:** a measure of the size of the consumer market that is already 'half-way' towards adopting broadband and that would rapidly substitute given reduced price differentials or the development of compelling content. This composite measure includes the percentage of the population with flat-rate Internet access, ISDN and digital television (DTV) services.

We can combine these dashboard performance measures to define competitiveness and extensiveness indices – the two components of our 2005 broadband target. We define **competitiveness** as a composite measure of market regulation (a leading indicator), market choice, and service price (a lagging indicator). We define **extensiveness** as a composite measure of addressable market (a leading indicator) and service availability. Our 2005 target for extensiveness and competitiveness is therefore about getting the broadband market conditions right. **Take-up** is a lagging indicator of meeting this target. We will now review performance against each of these three indicators.

***Broadband market extensiveness***

Broadband services in the UK have continued to develop over the past year and 60–65% of the population is now covered by an affordable broadband technology, e.g. cable service or Asymmetric Digital Subscriber Line (ADSL) – see Figure 1. This is comparable with the rest of the G7; ahead of France, but behind Canada and Germany.

UK coverage is forecast to continue to increase. However, early roll-out has concentrated in urban areas, where terrestrial services can be delivered more economically. Terrestrial service roll-out to rural areas has been much slower. Satellite services and leased lines are universally available and offer a potential solution to current gaps in rural provision, but they are priced well above cable and ADSL and are presently more suited to business, rather than residential, applications.

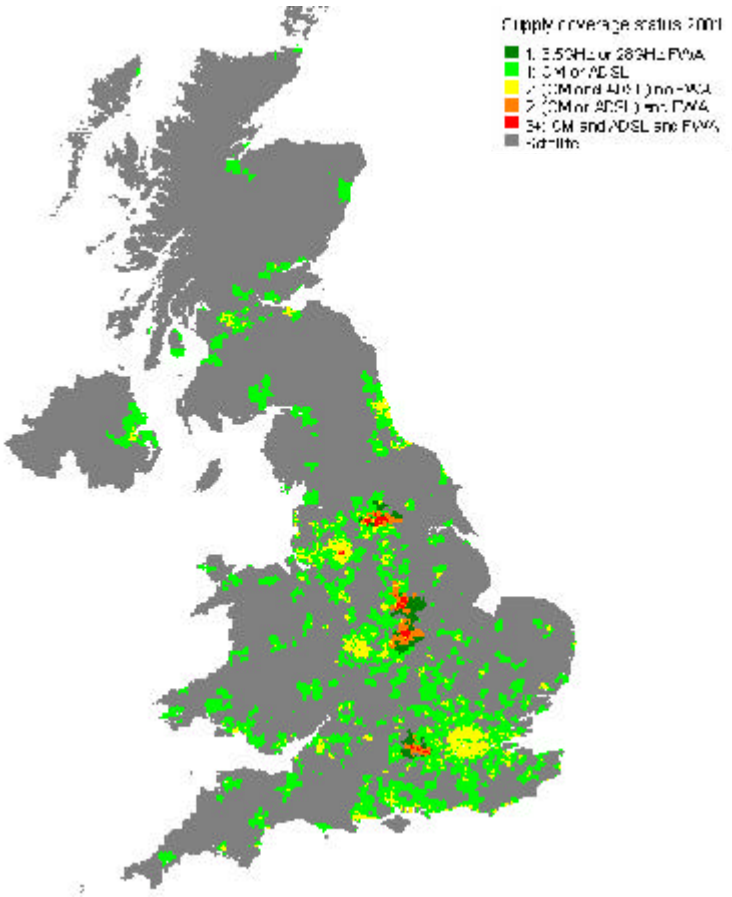

**Figure 1: Broadband coverage in the UK, August 2001**

Those consumers who are currently on flat-rate Internet access packages (flat rate is a key feature of broadband), higher speed digital packages, e.g. ISDN (speed is a key feature of broadband) and consumers with interactive digital television (iDTVs) (a platform for broadband service delivery) represent an addressable market for broadband service providers. These consumers are 'half-way' to adopting broadband and the size of this consumer group is a leading indicator of the future extensiveness of the UK's broadband market.

Against the extensiveness indicator, a combination of availability and addressable market, the UK currently lies in fifth place in the G7. However, it is expected that the UK's position will improve with increased broadband roll-out and continued growth in the take-up of Internet and iDTV services.

***Broadband market competitiveness***

Many consumers now have a choice between packages. Infrastructure competition is provided between cable and DSL technologies, with over 75% of households in urban centres,[2] representing about 37% of the population, having a choice between the two. There is also competition to British Telecom (BT) for DSL services; for example, from Internet Service Providers (ISPs) Freeserve and Iomart. By August 2001, around 180 customers, including operators and service providers, had signed up to

[2] Defined as having a population density of >2079 houses per square kilometre.

BT's wholesale services, which allow them to provide services to end-users over BT's upgraded network.

Competition in the upgrade of the local loop is also being facilitated through the Local Loop Unbundling (LLU) process. This provides operators with access to BT's local loop in order to allow them to decide when, where and how to offer high-bandwidth services direct to end-users. Since September 2000, operators have been able to order co-location space in BT's local exchanges to access local loops. Trials began in April and the UK's first unbundled loops are now operational. There are signs that competition is impacting on price, with reductions in cable prices announced early in the year and BT's recent announcements of a reduction in wholesale DSL prices, installation costs, and of its plans to roll out lower cost self-install DSL services from December.

The UK arguably already has one of the most competitive broadband markets in Europe, ahead of those countries with less infrastructure competition or lower retail competition in the absence of wholesale DSL services. Based on our competitiveness index, we are currently in fourth place in the G7, ahead of France, Italy and Germany. With continued infrastructure and retail competition putting downward pressure on prices, we expect to climb up the competitiveness rankings.

***Broadband service take-up***

As at September 2001, around 180,000 broadband cable and DSL lines had been rented, representing less than 1% of households[3] (see Figure 2). We expect the high availability, infrastructure and retail competition and recent price reductions to feed through to increased take-up. As we get the market framework right and move closer to achieving our 2005 target, we can expect our international position on take-up to improve.

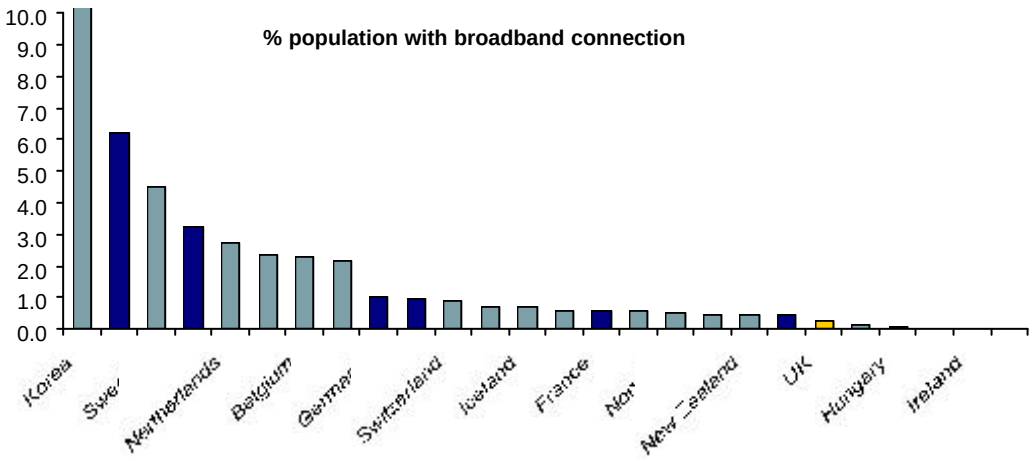


**Figure 2: Population with broadband connection, OECD, June 2001**

[3] Oftel's broadband brief – Issue 3 09/08/2001.

**Broadband: the Government's strategy**

Following publication of *UK online: the broadband future*, the Government has been working with the Broadband Stakeholder Group – which brings together broadband infrastructure, service and content companies, broadband users in the public and private sectors, and consumer representatives – to develop a detailed strategy to meet its broadband goals. The Stakeholder Group recommendations and the Government's detailed response to them are being published alongside this report.

The Group's broad analysis was that there is no 'magic bullet' which will deliver a step change in broadband roll-out and use in the UK. Instead, we need to stimulate a virtuous circle in which demand and supply grow in parallel, each reinforcing each other. Market players will be the main drivers of this, but Government can influence the pace of change.

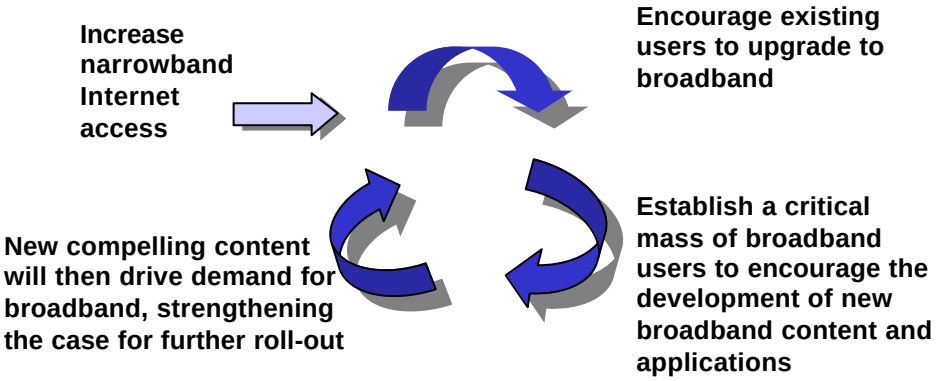


**Figure 3: Building the broadband virtuous circle**

To help set this virtuous circle in motion, we need first to stimulate adoption of narrowband Internet, as a key first step on the ladder. In addition we need to:

- continue to ensure that the regulatory framework for the broadband market promotes competition;
- take action to stimulate demand for broadband; and
- take action to stimulate investment in the supply of broadband.

***Maximising competition in the broadband market***

The best way to drive down prices and encourage innovative service offerings, which match consumer needs, is through competition. As discussed in the previous section, the UK already has one of the most competitive broadband market places in Europe:

- **Infrastructure competition**: most broadband consumers in the UK can choose between competing access technologies (ADSL, cable modem and, shortly, Broadband Fixed Wireless Access). This choice does not exist in many other countries.
- **Wholesale competition over BT's network**: following the Office of Telecommunications Regulation's insistence that BT launch a wholesale product, there are now over 100 competitive providers of

ADSL. No such competition exists in Germany or France, for example.

- **LLU**: for the first time, operators can invest directly to upgrade BT's network to broadband, rather than purchase wholesale capacity from BT. The LLU regime is now fully in place; uptake, however, has been disappointing.

The Government's aim is to maximise competition at all parts of the broadband value chain, from infrastructure (both over physical networks and using radio spectrum, including delivery of broadband services throughDTV) to service delivery.

**Oftel will:**

- continue to drive forward competitive access to BT's local loop via LLU by: close monitoring of take-up of LLU and the details of implementation, and acting swiftly to resolve new and existing disputes relating to any aspect of LLU;
- continue to promote competition in retail DSL by ensuring BT's wholesale DSL services are available on fair and non-discriminatory terms;
- work to increase competition in DSL by requiring BT to provide interconnection services to enable operators to offer competing DSL services; and
- work to increase competition in leased lines used by larger businesses for Internet access, by requiring BT to provide partial private circuits (PPCs) at wholesale prices.

**The Radiocommunications Agency (RA) will:**

- make more radio spectrum available, opening up the potential for more wireless broadband services, by:
  – auctioning the remaining franchises[4] for Broadband Fixed Wireless Access at 28 GHz (which allows high-speed data connections using radio links between an aerial located on the user's premises and a base station, rather than using a telephone line or cable);
  – making further spectrum available, at 3.4 GHz, throughout the UK for Broadband Wireless Access (BWA) services in 2002;
  – considering allocation of spectrum for BWA at 40 GHz, where there is even more bandwidth available that could make even higher speed access possible; and
  – reviewing the scope for further changes, including the use of spectrum management tools such as spectrum valuation, pricing and trading, in the light of the independent review of radio spectrum management which will report to the Chancellor and

[4] The RA auctioned spectrum for BWA at 28 GHz in December 2000. As a result, licences were allocated covering about 60% of the UK's population. The remaining 28 GHz licences will be made available by the RA in the latter half of 2001 for allocation at the original reserve prices. In the event of competition for the remaining licences, an auction will be held.

the Secretary of State for Trade and Industry by the end of 2001.[5]

***Stimulating demand for broadband***

Broadband take-up stands at less than 1% of households, even though it is currently available to over 60% of households. Lower prices and greater consumer choice in access services will be key drivers of take-up, and the pro-competitive strategy outlined above will help deliver these. But additional measures are also needed. We will therefore take the following measures to stimulate demand for broadband services, thereby:

- making it easier to access broadband services;
- stimulating demand for current broadband content and applications; and
- stimulating production of new broadband content and applications by the public and private sectors.

**To facilitate easy access to broadband services, the Government will**:

- pilot teleworking facilities in UK online Centres, exploring different commercial models for engaging the private sector in provision of teleworking space;
- consider how regional and local portals can best provide a focal point for public sector broadband content; and
- consult with the building industry and broadband service providers to identify the best approach to ensure cable ducting is installed in all new buildings (i.e. via self-regulatory commitments or via changes to Building Regulations).

**To stimulate demand for current broadband content and applications, the Government will:**

- use fiscal measures to stimulate demand for broadband by:
  – more intensive marketing of the existing measure which allows businesses to offset 100% of Information and Communication Technology (ICT) investment, including investment in broadband access equipment, against tax in the first year;
  – encouraging teleworking at home by employees whose employers want to provide them with broadband connectivity, through relaxation of personal benefit taxation;[6]
- work with the broadband supply industry to facilitate an industry-wide collaborative campaign to promote the benefits of broadband and give impartial advice on the different technological options available; and
- provide more encouragement to small and medium enterprises (SMEs) to adopt e-commerce solutions. The Department for Trade

[5] The review published a consultation paper on 18 June 2001 (see www.spectrumreview.radio.gov.uk).

[6] The Finance Act 2000 introduced a benefits tax exemtion for assets and services provided by employers for employees solely in order to work at home, but where there is also some private use. This would cover broadband connectivity and running costs, where it is not possible to identify a private use element and the availability of private use does not increase those costs.

and Industry (DTI) are now expanding the £66 million *UK online for business* programme to:
– provide more effective advice to businesses on the introduction and setting up of e-business solutions, with particular emphasis on the benefits of broadband; and
– introduce a web-based guide to broadband availability for SMEs and a network of demonstrators of practical applications.

**To stimulate production of new broadband content and applications in the public sector, the Government will:**

- stimulate the market for online content for teaching and learning and enable schools to have access to rich materials, including broadband content as part of taking forward the Government's proposals for *Curriculum Online*;
- develop Culture Online to offer children and adults tailored access to the nation's arts and cultural resources through the Internet and other digital channels. This will enable millions more people to engage in cultural activities and will open new opportunities for participation, learning and enhancing skills;
- introduce broadband support services for health professionals, including development of the National Electronic Library for Health; and
- develop an infrastructure to promote blue-skies in public sector broadband applications. As a first step, we will establish in partnership with the National Endowment for Science, Technology and the Arts (NESTA) a centre of excellence in broadband learning, based at Futurelab in Bristol, and an Industry Placement Scheme to enable small digital content firms to participate in Futurelab.

**To stimulate production of new broadband content and applications in the private sector, the Government will**

- as part of DTI's current review of all its business support activities, ensure that where applicable, they meet the needs of the digital content sector and identify the scope for improved marketing of existing support to the sector;
- work with the Digital Content Forum to raise the content industry's awareness of the R&D tax credit and how it works, and to intensify marketing of the tax credit as a driver for R&D in the content sector; and
- work in partnership with the digital content sector and other interested parties to stimulate pilots which test different commercial models around broadband content (such as secure micro-billing platforms) and which facilitate the smooth flow of innovative ideas through to the market where the market is not yet mature enough to do so itself.

***Stimulating broadband supply***

The measures set out above should help accelerate the growth of demand for broadband services in those parts of the country where they are available

(covering two-thirds of the population). But they may not make a strong enough business case for broadband investment in the remaining rural and remote areas. The primary barrier to broadband roll-out in rural areas is the high cost of capital. The investments needed are large and attract a high-risk premium. Roll-out to rural areas is therefore likely to be very slow and patchy, even under benign market conditions.

Our strategy to stimulate rural broadband supply is threefold:

- encourage infrastructure-sharing by telecommunications companies to reduce the cost of roll-out;
- cut red tape which may be holding back deployment of satellite broadband services (potentially a major contributor to rural broadband access); and
- aggregate broadband procurement by the public sector in order to provide guaranteed levels of demand in rural areas.

**To encourage broadband infrastructure-sharing, the Government will:**

- encourage the telecommunications industry to come forward with specific proposals. These will, of course, need to reviewed by Oftel, to ensure that they are within the bounds of competition law. But Oftel believes there is scope for collaboration within those bounds, although no specific proposals have been received from industry. Oftel would also be happy to issue guidance on the approach it would take on specific forms of infrastructure-sharing, such as pole-sharing.

**To facilitate satellite broadband deployment, the Government will:**

- introduce a fast-track, light-touch licensing regime for small transmitting satellite earth stations and a quick online clearance system for new satellite sites; and
- review planning regulations pertaining to satellite terminals to determine how current rules restricting a residential property to a single antenna could be relaxed, while continuing to minimise the environmental/visual impact of residential satellite terminals.

The public sector currently spends around £1.7 billion on communications, a figure likely to rise as we move towards electronic government. Yet this expenditure is piecemeal and unco-ordinated. Research undertaken for the Office of the e-Envoy by Analysys and Rothschilds suggests that significant benefits could be achieved by moving towards a nationally co-ordinated set of regional procurements, each guaranteeing a given number of public sector sites and given levels of demand for broadband at each site.

**The Government will:**

- task the Office of Government Commerce (OGC) to consider what more they can do to help Government departments procure broadband more effectively, including acting as a source of constant guidance on broadband procurement;

- draw up detailed departmental communication and IT expenditure plans, as part of the 2002 Spending Review, in order that activity in this area is co-ordinated; and
- establish on a pilot basis in one region initially a Broadband Brokerage Service. This will allow companies, public sector organisations, communities and individuals to register their interest in pursuing broadband, and then broker aggregated solutions once a pattern of demand for a particular area has reached critical mass.

**Annex A**

## GOVERNMENT RESPONSE TO RECOMMENDATIONS OF THE FIRST REPORT OF THE BROADBAND STAKEHOLDER GROUP

### Introduction

The Broadband Stakeholders Group (BSG) was established to recommend to Government how it should take forward its strategy for broadband in the UK. The first full report of the BSG is at www.e-envoy.gov.uk. The Government fully supports the strategic approach adopted by the BSG and has drawn heavily on their recommendations in the formation of its broadband strategy. This paper describes in more detail the Government's response to each of the specific recommendations of the BSG. Where the recommendations necessitate action on the part of the regulator, Oftel has agreed the response. In respect of the devolved administrations, some of the proposed actions will need to be taken forward in a way which meets local circumstances. The devolved administrations will take account of the Broadband Stakeholders Group's recommendations in driving forward their own plans for broadband.[7]

### The BSG's recommendations

*"Based on the analysis of the current state of play and the UK's relative strengths and weaknesses the BSG has developed a framework of 16 strategic recommendations to meet these objectives. These recommendations aim to accelerate market and public sector driven deployment and use and include demand, supply and regulatory measures."*

### 1. Implement supply-side infrastructure support to reduce the cost of capital

**Government response:** The Government is committed to creating a conducive market environment for broadband investment. It aims to do this by:

- Providing a stable macro-economic environment, and flexible and efficient labour and capital markets;
- Ensuring a stable and predictable regulatory environment for communications providers, which promotes competition wherever possible and effective regulation where not;
- Leveraging European regional development funding to assist broadband development in Objective 1 and 2 areas; and by

[7] As set out in: the National Assembly's Information Age Strategic Framework, *Cymru Ar-lein – Online for a Better Wales (* www.cymruarlein.wales.gov.uk); the Information Age Initiative (IAI) for Northern Ireland's Strategic Framework and Action Plan, *Leapfrog to the Information Age (*www.leapfrog.gov.uk/framesets/flash/publications.html ); the Scottish Executive's broadband strategy, *Connecting Scotland – our broadband future* (www.scotland.gov.uk/digitalscotland/csbc/csbc-00.asp)

- More effective procurement of the public sector's broadband requirements to improve value for money and have a significant impact on availability of broadband (see response to Recommendation 10)

However the Government does not believe there is a case for fiscal incentives to stimulate infrastructure investment as proposed by the BSG. The Government believes that the use of the tax system to support particular types of investment should be limited to cases where there is clear evidence of market failure, sufficient to justify the costs of intervention, and the tax system is judged the most effective instrument for achieving policy goals. The Government does not believe that the criteria apply in this case.

## 2. Encourage infrastructure sharing to reduce the need for capital

**Government response:** Government agrees that infrastructure-sharing has a potentially important role to play in reducing the cost of broadband roll-out, and will encourage the telecommunications industry to come forward with specific proposals. The DTI, Radiocommunications Agency and Oftel have already jointly produced guidance on the question of infrastructure sharing for 3G mobile services. That guidance makes clear that, provided the proposal is compliant with competition law and that the benefits (for example in terms of wider choice, faster rollout or lower prices) outweigh any negative effects on competition any proposal would be approved. Oftel would approach any proposal from fixed operators to share broadband infrastructure from similar principles. To date, no specific proposals have been received from industry and Oftel would welcome views on specific areas (such as pole-sharing) where industry would find it helpful for Oftel to publish guidance on the approach it would take to potential competition issues.

## 3. Promote increased competition in the BT local loop

**Government response:** Oftel will continue to drive forward competitive access to BT's local loop via Local Loop Unbundling (LLU). It will closely monitor take-up of LLU and the details of implementation, and act swiftly to resolve new and existing disputes relating to any aspect of LLU. DTI and Oftel are currently evaluating the implementation of LLU across the EU being undertaken by the European Commission, and as recommended by the BSG, will consider any further steps needed.

In addition, Oftel is already implementing the two other specific suggestions of the BSG in this area:

- It has moved swiftly to introduce line sharing as an alternative to full unbundling, and has recently determined the price for shared lines. This puts the UK at the forefront of Europe in delivering an appropriate framework for shared access.

- It plans to increase its work benchmarking LLU progress in the UK against EU and G8 countries, as part of a broader benchmarking study of broadband access technologies.

**4. Promote broadband interconnection**

**Government response:** The Government accepts in principle the need for the regulatory framework to develop broadband interconnection models, subject to current rules on access to networks. Oftel set out in its April 2001 statement *Open access: Delivering effective competition in communications markets* the principles that it would apply to questions of access to networks. These principles are applied to broadband services to promote effective competition in the provision of these services. In future, the principles and rules for broadband interconnection will be determined by the implementation of the draft Access Directive.

**5. Stimulate the supply of broadband content, applications and services**

**Government response:** The Government agrees that with the emergence of more and richer broadband content, applications and services will be a key driver of demand. The main responsibility for this lies with private sector, but there is also a role for Government. The Government will therefore:

- Launch a major strategic dialogue with industry on how to capitalise on the UK's strengths in broadband and digital content, including through:
  - A UK Broadband Content Summit in December 2001 bringing together Ministers and senior players from the sector.
  - Develop an Innovation and Growth Team in partnership with industry, to identify actions needed to improve the competitiveness of the converging software, digital content and related services business opportunities. (This Innovation and Growth Team, which will look at broadband as one element of multi-channel access to content and services, implements a commitment in the *Opportunity for All* White Paper.)
- As part of the DTI's current review of all its business support activities, ensure that where applicable they meet the needs of the digital content sector, and identify the scope for improved marketing of this support to the sector. (The Government believes this is a more powerful and effective way forward than the Content Development Fund suggested by the BSG, which may well in any case have constituted an illegal state aid in the form recommended.)
- Work with the DCF to raise the digital content sector's awareness of the R&D Tax Credit and how it works.
- Work in partnership with the sector and other interested partners to stimulate pilots which test different commercial models around broadband content (such as secure micro-billing platforms and skills – see response to recommendation 6 below) and which facilitate the smooth flow of

innovative, exciting ideas through to market, where the market itself is not yet mature enough to do so itself.[8]
- While ensuring that it gets maximum value for money, use its own procurement of broadband content services and applications to stimulate the development sector (see response to Recommendation 12 for more detail)

**6. Tackle skill needs of the broadband content, applications and services sector**

**Government response:** The Government will continue to work with the Digital Content Forum to address the skill needs of the content sector, including addressing the specific points raised by the BSG:

- Ensuring that the skills needed for commercially successful broadband content development are addressed as an integral part of the Broadband Content Pilots outlined above and of the new Software Innovation and Growth Team in CII
- Working with DCF and the Sector Skills Councils to create a skills map for broadband production, building where appropriate on existing work such as the Skills Framework for the Information Age.

**7. Introduce quality of service measures**

**Government response:** Oftel has proposed that following adoption of the draft directive on universal service which will remove the minimum data speed requirement there should be a review of how the Directive's final provisions will be implemented. In the meantime, Oftel continues to monitor complaints. In addition, Government encourages the industry to work together, as it has done on mobile quality of service, to provide comparative information on data speeds.

**8. Raise awareness and promote the benefits of broadband to consumers and SMEs**

**Government response:** Government strongly agrees with the need for collaborative elements by suppliers to improve marketing of broadband and that greater effort is needed to promote the business benefits of broadband to SMEs. This is primarily a responsibility of industry and the Government welcomes the BSG's recognition of the need for greater cross-industry work in this area.

For its part, the Government will:

- Work with the BSG to develop an action plan to drive forward such collaboration.

[8] This could act as a valuable tool for introducing concepts and products developed in the FutureLab or elsewhere to a wider commercial audience – see response to recommendation 12.

- Continue to develop awareness raising, advice and other support for businesses through the £66m programme *UK online for business*, with a greater emphasis on new e-enabled ways of working. The *UK online for Business* programme, which delivers e-business support online, through telephone and face-to-face services, will give greater prominence to the benefits of broadband, building on a recently published guide to broadband for small businesses.

- Introduce a web-based guide to broadband availability and a network of demonstrators of practical applications.

- In consultation with industry, press for EU 'place of taxation' rules to achieve a level playing field between EU and non-EU businesses in respect of digitised products, thereby removing the distortion of competition caused by the present rules, and put in place a system that is simple and cost-effective for authorities to administer and enforce and for suppliers of digitised products to operate and comply with, as part of a viable, long term system for the taxation of e-commerce supplies both within the EU and internationally.

In addition, Oftel will examine how it could improve awareness of the broadband choices available to consumers on an ongoing basis through its consumer awareness programme e.g. through encouraging the development by industry of the telecommunications advice website and other sources of information.

The Government does not agree with the specific BSG suggestion that it should give grants to SMEs to cover the cost of acquiring broadband content and applications. Our analysis suggests that where SMEs have access to broadband networks, the principal barrier to SME uptake of broadband content is a lack of perceived business benefit, not cost. The Government therefore believes it will be more effective to focus on raising awareness of those benefits, through the expansion of *UK online for Business* outlined above.

**9. Introduce demand-side fiscal incentives to accelerate take-up**

The Government has already introduced a range of fiscal incentives to promote uptake of ICT, and is assessing reported low awareness of these and of their applicability to broadband access equipment and broadband services. The Government will therefore work with the BSG to intensify marketing of the tax measures which could stimulate broadband demand by:

- Allowing small enterprises to offset 100% of ICT investment – including investment in broadband access equipment – against taxable income of the period during which the investment is made.

- Encouraging teleworking at home by employees whose employers want to provide them with broadband connectivity, through relaxation of personal benefit taxation.[9]

## 10. Aggregate public sector demand for Broadband

**Government response:** We agree that managing the public sector's role as purchaser better can improve value for money and have a significant impact on the availability of broadband.

The Government is already investing heavily in broadband. We are committed to world class broadband links for schools and have invested nearly £80 million from the Standards Fund over 2000-02. Additional funding of £70m has been made available to Regional Broadband Consortia and LEAs for 2002-03. All Higher Education Institutions, and almost all Further Education and 6th Form Colleges, have been connected to the high-speed SuperJANET network.

Building on the £30m broadband fund we are seeking to spread best practice and innovation in public sector approaches to encouraging wider provision of broadband connectivity, and will be holding events for sharing ideas across the English regions and with the devolved administrations.

In addition we also note the Group's comments about the scale of the challenge to Government to achieve aggregation. The Government will therefore:

- Task the Office of Government Commerce with looking at whether there is more that can be done to help Government departments and others buy broadband effectively, including acting as a source of guidance on broadband procurement
- Ensure that it has detailed information on departmental communications and IT expenditure plans as part of the 2002 Spending Review, in order that its activity in this area is co-ordinated
- Establish, on a pilot basis in one region initially, a Broadband Brokerage service. This will allow companies, public sector organisations, communities and individuals to register their interest in using broadband, and then broker aggregated solutions once a pattern of demand for a particular area has reached critical mass. Government funding, from the £30m RDA fund, will support this.

## 11. Facilitate public access to Broadband facilities

**Government response:** We agree that we should aim to facilitate public access to broadband services. This should be in the context of the existing UK online initiative, rather than the new "BroadPlace" branding recommended

[9] Finance Act 2000 introduced a benefits tax exemption for assets and services provided by employers for employees solely in order to work at home, but where there is also some private use. This would cover broadband connectivity and running costs, where it is not possible to identify private use element and availability of private use does not increase those costs .

by the BSG. As part of the Government's commitment to universal access, we are spending over £300 million (including £100million from NOF) setting up 6000 UK online centres by the end of 2002. 3800 of these centres across the UK will have broadband connectivity.

In the light of the BSG's recommendations in this area, we will appraise the costs and benefits of extending the broadband connectivity of the UK online centre network, using evidence from existing centres. As part of this, we will also pilot teleworking facilities in UK online centres in one of the English regions, exploring different commercial models for engaging the private sector in provision of teleworking space.

### 12. Maximise efficiency and productivity gains in public services

**Government response:** We agree that broadband offers an exciting opportunity to improve the user experience and efficiency of public services. This will be a key focus for departments as they drive forward their e-business strategies. In particular, we will take action in the specific areas recommended by the BSG:

- Stimulate the market for online content for teaching and learning and enable schools to have access to rich materials, including broadband content as part of the follow up to the consultation on *Curriculum Online.*
- Develop Culture Online which will offer children and adults tailored access to the nation's art and cultural resources through the Internet.
- Introducing broadband support services for health professionals, including development of the National Electronic Library for Health.
- Developing an infrastructure to promote blue-skies research in public sector broadband applications, and to encourage the private sector to commercialise that research. As a first step, we will establish in partnership with NESTA:
  - a centre of excellence in broadband learning, based at Futurelab in Bristol
  - an Industry Placement Scheme to enable small digital content firms in the UK to participate in Futurelab.

### 13. Facilitating access to Broadband public services

**Government response:** Agree. The government will ensure that central government agencies work closely with RDAs and local authorities to maximise the level and coherence of public sector broadband content available to the general public and to businesses. We also strongly support the proposal for the development of a common framework for broadband-related contracts and we will work to pursue this wherever possible. The Government will also investigate whether establishing regional Broadband Steering Boards represents the best means to promote access to broadband services, while noting that structures for taking this forward may already exist in the devolved administrations.

## 14. Enable a stable and predictable regulatory framework

**Government Response**: The Government agrees that a stable and predictable regulatory framework is essential, in particular to promote a climate of confidence among investors to facilitate broadband roll-out. It will have this need very much in mind in putting forward its proposals for the future regulatory framework in the draft Communications Bill to be published next year. On the BSG's more detailed recommendations in this area, the Government agrees that:

- Ofcom should have a duty to promote the interests of consumers, and that its regulatory strategy should seek to promote sustainable competition policies that will underpin an open and internationally competitive market;
- Careful management will be essential during the transition from the current five regulators to the single Ofcom. The Government has published the report of consultants Towers Perrin on how this process can best be managed;
- Ofcom should keep all communication markets, including broadband markets, under regular review, and should have a duty to remove obsolete, unnecessary or otherwise inappropriate regulation falling within its direct responsibilities. And while the Government wishes Ofcom to make appropriate use of self-regulation, as outlined in the White Paper, it should equally take account of potential limitations on self-regulation including those cited by the BSG.

The Government agrees with the BSG on the importance of consistent application of EU rules, and that the Commission has a key role to play in this. It is for this reason that the Council of Ministers endorsed new requirements for national regulatory authorities to consult the Commission on relevant proposals, and to provide justifications for actions contrary to the Commission's opinion in such cases. These steps will introduce a new level of transparency and discipline. However, it does not endorse the recommendation that the Commission should be able to veto individual decisions of national regulators. Regulatory action in the electronic-communications sector needs to be taken quickly, and with a degree of local knowledge that can only reside at the national level. Decisions of the national authorities will of course remain subject to appeal in national and, ultimately, European courts and the Commission will retain its powers to take infraction proceedings where necessary to address faulty implementation of the new regulatory framework.

## 15. Remove and prevent regulatory barriers to investment

**Government response:**

- *Planning issues - radio infrastructure*

The Government supports the recommendations as they apply in England, and recently amended the prior approval procedures for masts under 15 metres in height. The new procedures set a deadline of eight weeks for local planing authorities to decide whether prior approval should be granted. For infrastructure, which requires an application for planning permission, the target for local planning authorities is for 80% of planning applications to be dealt with within eight weeks. Targets for performance in Scotland, Wales and Northern Ireland are, of course, matters for the Devolved Administrations.

- *Planning issues - satellite infrastructure*

Government will launch a review of the current planning regulations in England, in consultation with the devolved administrations, to determine whether the requirements for satellite antennae on residential property could be relaxed while continuing to minimise the environmental/visual impact. Proposals emerging from the review would need to be the subject of full public consultation.

- *Levies on street works*

Government agrees that in addressing this problem we obviously need to ensure that utilities are not discouraged from carrying out necessary works. At the same time, however, it is clear that there is room for improvement in the manner and speed at which these works are carried out. This was why DTLR has given powers to highway authorities to impose charges on utilities through the New Road and Street Works Act 1991 and the Transport Act 2000. These should provide a strong incentive on utilities to complete works as quickly as possible. However, whilst we want to test what contribution these powers could make to reducing disruption to road users, we also need to assess the costs imposed on utility companies.

- *Satellite licensing requirements*

The Government agrees that more appropriate methods of licensing and regulation are needed given technological and market changes. The Radiocommunications Agency is currently developing new initiatives that will allow for a more appropriate licensing method for small transmitting satellite earth stations. These include:

- Light touch licensing: RA is planning a form of Network Licence which would actually be held by the service provider.
- Site clearance regime: RA is considering a quick on-line site clearance system. This will be targeted at the users of small transmitting satellite earth stations that operate within the exclusive FSS earth to space bands using an enhanced version of the Agency's electronic satellite clearance system e-FLATCO (www.tes-clearance.radio.gov.uk).
- These policies are being developed in co-operation with industry through RA's consultative committees, and have the strong support of the satellite industry - both operators and providers of terminals.

- *Building regulations – to mandate cable ducting*

Government agrees it should consult with both the building industry and broadband service providers in order to identify the best approach to ensure cable ducting is installed in all new buildings, including the potential for requiring this through Building Regulations. Any such amendments to the building regulations would of course be subject to consultation with the Building Regulations Advisory committee, and all other interested parties.

- *MPT 1570*

The Government agrees that regulation on emission limits from DSL equipment should avoid placing undue constraints on the rollout of DSL services, consistent with protecting users of radio spectrum and that action should also be harmonised at European level. We believe that the levels in MPT1570 strike an appropriate balance between regulating emissions and expediting rollout. In practice, except where there are safety of life implications, the operators of DSL systems which cause interference problems will be given a reasonable opportunity to take appropriate steps to resolve the problem before recourse is taken to enforce the limits in MPT1570. The Government has already committed itself to review the limits contained within MPT 1570 once it has been in place for two years. The present limits cover up to 1.6MHz. Further work is under way with industry to consider the likely effects of VDSL and similar technologies in the band 1.6-30MHz and to derive appropriate limits in this band. The Government would like to see European bodies work towards developing a single set of standards for interference limits where appropriate and as such the Radiocommunciations Agency is contributing to the relevant forums. However, government felt that it needed to move earlier to remove uncertainty by putting in place limits that it felt were appropriate to the UK situation.

- *Internet regulation*

The Government does not anticipate any extension of statutory regulation into Internet content. We will continue to encourage and support the valuable and widely admired work of self-regulatory bodies such as the Internet Watch Foundation. In this context, Ofcom would for example be well placed to promote greater awareness of the work of the IWF and similar bodies and of the availability and use by individuals of rating and filtering devices, which can give users greater confidence in their, and especially their children's, use of the Internet. This is education instead of regulation. We have made our position clear and propose a scheme to give effect to our policy, by excluding from the regulatory regime any system of regulating the Internet.

- *Data retention and data protection*

The Government agrees timely and extensive consultation with Communications Service Providers is needed regarding specific data

retention requirements and related liabilities. The Government welcomes the constructive dialogue that has taken place since September 11 on how more certainty can be given to law enforcement agencies on what communications data is in fact retained by the industry. It will consult industry fully on a voluntary code of practice on data retention as provided for in the Anti-Terrorism, Crime and Security Bill. The government has made clear that no requirements for data retention beyond that which is needed for commercial purposes will be introduced.

- *Cross-border data protection issues*

The Government agrees that full implementation of the revised Communications Data Protection Directive will be needed, and will encourage other Member States not to hinder the development and provision of broadband services cross border. The Communications Data Protection Directive is currently under negotiation with adoption expected during the first half of 2002, for implementation in 2003. The Directive will update the existing rules in the light of new technology and clarify some grey areas in the current version of the Directive, which was implemented in the UK in 1999.