



HARDCOPY

Autumn/Winter 2011

Welcome from Mark Gracey Chair of Council, ISPA UK

As the new chair of ISPA, it gives me great pleasure to welcome you to the Autumn/Winter 2011 edition of Hardcopy, the bi-annual publication of the Internet Services' Providers Association (ISPA). I look forward to working with members to drive ISPA's policy work as it continues to represent its members as the public policy voice of industry.

The next year looks to be a busy one for ISPA with the promise of a new Communications Act and continued discussions about blocking of internet content, protecting children online, data retention and the implementation of the Digital Economy Act (to name just a few!)

There is also work to be done on broadband provision across the UK and the regulation around that, so we will be keeping an eye on the Government's pledge to make the UK the best place in Europe for broadband by 2015 and its promised £530m of funds (administered by Broadband Delivery UK) that can be bid for by companies to build fibre links across the UK. Indeed in this edition of Hardcopy we get an update from Ed Vaizey on where Government is on its plans. We also take a look at other innovative ways ISPA members and others are working to bring superfast broadband to the UK, such as Geo's solution to bring a fibre network to LINX's data centres, Rutland Telecom and Gigaclear's plans for superfast broadband in Rutland and Arqiva's solution for rural broadband access in Wales.

I know that ISPA secretariat and Council will work with all its members to ensure the best operating environment for ISPs in the UK no matter what the issue.

I hope you find this edition of Hardcopy interesting and look forward to working with you all in the near future.



Update from Ed Vaizey on the Government's superfast broadband plans



We are nearly a year on from the publication of Britain's Superfast Broadband Future. Much has changed in that time, but what is clearer than ever to me and colleagues around Whitehall is that broadband is a key enabler for economic growth.

This Government remain passionately committed to delivering a good level of access for everybody, and where possible, delivering superfast broadband, including in rural areas. We remain focused on the objective of achieving the best superfast broadband network in Europe by the end of this Parliament, with 90% of households having access to superfast broadband, and a good level of access of at least 2Mbps for everyone else. This is an ambitious programme, with over half a billion pounds of investment from central government alone.

Rural communities key

We have placed rural communities at the heart of the strategy. One in five people in the UK lives in a rural community. And rural communities are home to over 1 million businesses. As we look to recover from recession we need every part of the country to flourish and contribute to growth and increased productivity.

Through Broadband Delivery UK – BDUK – the Government is working with local authorities and the Devolved Administrations to ensure delivery of broadband infrastructure in those areas that the market will not reach on its own. In August, the Government announced indicative funding allocations for each local authority area in England. If this can be matched with local funding, we believe this will make it possible to bring superfast broadband to 90% of properties, and standard broadband to all premises.

The Government is not dictating to each local authority how they should go about broadband installation in their areas. Local communities and local authorities are best placed to determine their own priorities. Each area has therefore been asked to produce a Local Broadband Plan from each area which sets out their approach, how they will deliver economic benefits from broadband, and how they will ensure local match funding.

Framework agreement

Given that we expect to have upwards of 40 local broadband projects across the country, BDUK is also putting in place a framework contract to speed up the procurement process. This will help local authorities to minimise the costs and time taken for procurement, and also help the suppliers to manage the

procurement process, reducing their costs and making it easier to ensure competition for each project. We are therefore keen that as many local projects as possible use the BDUK framework.

There will inevitably be a queue of projects to get through procurement. It will be important that BDUK is able to manage the procurement process so that we do not overload the suppliers with too many projects at once. However, this does not mean that local authorities will have to sit on their hands until they take their turn – aside from the other necessary work before procurement begins, it will be important that as much work as possible is undertaken with local communities to stimulate demand, as this is what will ultimately make the investments worthwhile to the private sector suppliers.

A key foundation of our strategy is private sector leadership. This Government firmly believes that the market and private industry is best placed to give consumers and business the infrastructure and services they want and need. The role of government is to provide the right sort of regulatory and investment framework that will encourage business to invest in providing superfast broadband. We have been working on a number of policy interventions since last December.

Reducing deployment costs

It is well known that the major cost of deployment of fibre-based networks comes in civil engineering. So we have been working with stakeholders to see if there are ways we can reduce the deployment costs. The March Budget placed the roll out of superfast broadband firmly at the heart of the growth agenda and announced a number of measures to reduce the cost of roll out:

- We will shortly be publishing a second consultation detailing our plans for the deployment of new overhead lines for the first time in decades, except where there are exceptional reasons not to.
- In November we will be issuing guidance on microtrenching and streetworks which we hope will dispel some myths and lead to a more consistent approach by local authorities and communications providers.
- Thirdly, we have commissioned a review of the Electronics Communications Code and how it applies to wayleaves and access to private land. Wayleave payments can be an important source of revenue to landowners and it will be important that any solution to this issue fairly balances the need to ensure that broadband rollout is not impeded with the rights of landowners. But we hope that any recommendations create more certainty for providers.

We have also made good progress on infrastructure sharing, an obvious way to avoid the costly digging I referred to earlier. Of course some of the most extensive existing infrastructure is BT's network of ducts and poles, and there has been a lot of welcome progress on this in the last year. BT submitted an initial reference offers to Ofcom in January for its ducts and poles and ran commercial trials with competitive providers. Following this, BT published revised reference offers at the beginning of October which brought the costs down by 60% in some cases. We welcome this progress.

We are also working hard with industry and the regulators to address the issues with sharing other utility infrastructure. I am particularly hopeful that utility infrastructure sharing can be a significant factor in helping broadband rollout to happen in rural areas. But in the meantime we hope that operators will continue to follow the example of Virgin Media and Western Power and just find ways to get on with sharing. Should this not happen, we are prepared to legislate.

Business rates

The issue of business rates has been particularly tricky issue with strongly held views on both sides of the argument – I can see the attraction for business of not having to pay a tax, but at the same time, that tax helps to pay for many local services. But I am pleased to say that we have made some progress. In summer 2010, the VOA published new guidance on the application of business rates. Continuing work led by the Broadband Stakeholder Group and industry is looking at providing more evidence to the VOA and ensure the rating is still current. We expect further revised guidance shortly.

The Government has also demonstrated its commitment to rural communities through the recent announcement by the Chancellor of an additional £150m to extend mobile coverage to up to 6 million people, many of whom will be in rural areas. My department is now working hard to ensure that these improved services are available as early as possible.

I hope that I have given a flavour of how we are trying to unblock some of the hurdles that we are facing as we look to fulfil our promise of the best superfast broadband network in Europe by 2015. I am confident that with a little help from the Government, and the ingenuity of our communities and our industry we can deliver this, and make sure that all of the country can enjoy the economic and social benefits of a good reliable broadband service.

Ed Vaizey MP, is the minister responsible for broadband at the DCMS.

Geo connects LINX's new data centres with fibre

Business Problem

Not-for-profit organisation London Internet Exchange (LINX) has grown over the years and now has seven buildings and one of the most bandwidth-intensive locations in the world. At peak times LINX carries over 460 Gbps of internet traffic over its LANs and a further 210 Gbps over private networks.

Pressure was on LINX to deal more effectively with increasing current and future demands on their exchange and any expansion needed to include new sites to make the exchange more resilient.

They had a tight deadline for this expansion project, which would have to be carried out with minimal disruption to their business and as cost effectively as possible.

“We went through a lengthy process of speaking to all the carriers we could in the London Metropolitan area. We had some clear criteria defining which providers we could work with, based on the composition of their network and whether they reached all three sites. Ideally we wanted only one supplier, whose route neither crossed nor shared the same path used by other carriers.”

John Souter, CEO, LINX

Ultimately LINX chose Geo, presenting us with the challenge of providing a resilient fibre ring connecting three new data centres to their existing sites in London Docklands.

They wanted a cost-effective network that would give them high bandwidth with minimum latency and maximum availability,

reliability and security. They also wanted ownership of the network so they could more easily scale bandwidth to users' requirements.

Solution

Working in full collaboration with LINX, we project managed the delivery of the fibre optic ring between LINX's existing Docklands site and three new sites in Brick Lane, Park Royal and Slough. Because our network connectivity covered only two of LINX's three sites, they leased fibre from another service provider to deliver the third.

We worked with a number of different stakeholders and coordinated the efforts of various suppliers to deliver this logistically complex project early. LINX were impressed by our dedication to achieving the best possible solution on time and within budget. We were able to do all this thanks to the hard work, expertise and commitment of our people and a couple of distinct advantages:

Firstly – we own the newest optical fibre on the market – giving LINX the technical edge they needed – something we're uniquely able to offer.

Secondly - our London fibre, several metres deep in the city's sewers, is far less vulnerable to damage than most others that lie just beneath the surface of the city's road system. All of this meant LINX had access to a far reaching network that's wholly resilient and secure – exactly what they were looking for.

The Benefits

As well as getting a completed fibre optic ring ahead of schedule, Geo met all of LINX's specific requirements, including:

- Access to the UK's most modern, advanced fibre optic infrastructure
- A more reliable, secure and diverse network with little risk of outage
- The ability to seamlessly connect to their third site
- Ownership of this network so they can more easily scale bandwidth to users' needs
- Their members can now easily increase or move capacity to new locations.

John Souter, CEO, LINX feeds back on Geo: "Expanding beyond our home of fifteen years in the Docklands was a huge project for LINX. This was by far the largest expansion we've ever undertaken, and adding three new sites to the exchange in the far reaches of

London – all within four months – was always going to be an enormous challenge. Thankfully, Geo was more than equal to this challenge, offering both the network and the collaborative mindset required to get the job done."



Chris Smedley is Chief Executive of Geo

An updated LINX case study can be found here - <http://www.geo-uk.net/clients/case-study-linx-2>

Rutland Telecom and Gigaclear's plans for superfast broadband in Rutland

Matthew Hare, CEO Gigaclear & Rutland Telecom Chairman at first day of fibre installation



In April this year, Rutland Telecom became a Gigaclear company following a substantial investment by Gigaclear into the business.

Gigaclear's investment supports Rutland Telecom to initially extend and expand their ADSL2+ and VDSL2 offerings across Rutland to provide superfast broadband to those communities which to date have been left out of the plans of the larger UK incumbent operators.

This is only the start, however, in putting Rutland at the forefront of communications in rural UK - the ultimate ambition for any broadband delivery, whether rural or urban, is fibre direct to the home or office – and Gigaclear has just taken the first step to fulfilling that ambition.

The village of Hambleton in Rutland, because of geography and low population, was one of the most poorly served areas in the county in terms of broadband speeds – too far from the exchange for a copper wired based solution – FTTC was not possible as the cabinet that could be utilised was closer to the exchange than the village, and a wireless solution was limited mainly because of topology.

Fibre is the solution

It became obvious that fibre was the only solution to answer the problem. However, a substantial investment needed to be raised to provide the infrastructure, but by working in partnership with the community, Gigaclear came up with a model that sees a long-term loan secured against the network so that the investors in the village reap a triple benefit: a financial return, a stronger sense of community, and an Ultrafast Internet experience.

Every customer will see the latest technology installed with fully-supported router capable of 1000 Mbps. Each router comprises:

- Gigabit fibre network interface
- 4 Gigabit Ethernet ports connecting home network devices
- Wireless BGN at up to 300 Mbps
- IPv4 and IPv6 Firewall

The network is built and managed by Gigaclear, with Rutland Telecom as the service provider, and delivers customer service and technical support locally with an initial offering of up to 50 Mbps internet access and IP telephony.

Future ambitions

Gigaclear and Rutland Telecom now plan to replicate this across the county. Rutland Telecom are engaged in discussions with some of the key business owners and stakeholders across the county to establish how best to deliver FTTH fibre connectivity. This will enable local businesses to take advantage of the higher bandwidth

that now can contribute towards increased efficiency by fully utilising, for example, cloud based applications and services. It will also encourage outside businesses that have previously ignored such counties as Rutland, because of poor communications infrastructure, to consider moving into the area, thus providing much needed investment into the local economy and boosting employment.

Gigaclear's ambitions spread beyond the borders of England's smallest county. They are gearing up to launch similar services in selected areas across the UK in the coming months as part of their target to build an extensive FTTH network across the country that clearly benefits residents and businesses.

Matthew Hare is CEO of Gigaclear and ISPA Council member

Analogue TV out, rural broadband in – wireless networks hold the key to the vision of broadband for all



The Preseli Mountains in Wales were home to the UK's first wireless broadband demonstration using LTE technology in 800 Mhz spectrum late last year, proving that a solution to the problem of fast broadband access in rural areas is within our grasp. Rob Hamlin, Enterprise Director at Arqiva, the communications infrastructure and media services company, explains.

Around 2 million homes and 250,000 SMEs in the UK, largely in rural communities, are in so-called broadband 'notspots'. For many people living in cities, it can still be hard to imagine why a remote farm might be so desperate for a decent internet connection. How wrong that perception is. Take the example of one Welsh farmer recently quoted in the Daily Telegraph: "When I'm waiting to find out the weights of lamb I send to the abattoir [which determines the price] it takes ages. Every calf has to have a passport now and you must do that online. And when I try to buy machinery online it takes 20 minutes to download a picture."

Combined with the fact that every business must now file VAT and PAYE online and the move towards making public services accessible "digital by default", the case for delivering universal fast broadband is the proverbial 'no-brainer'.

Broadband key

For residential properties, broadband access is becoming a key utility, facilitating basic communication needs and access to media, education, healthcare, employment and key public services. Broadband is no longer a discretionary service for early technology adopters, but is now key to the way we run our lives and arguably deserves to be a basic right for all citizens.

This makes huge economic sense for the UK - based on calculations from the World Bank we estimate that connecting 'notspots' could increase UK GDP by £15 billion.

Arqiva operates at the heart of the broadcast and mobile communications sectors, delivering critical national infrastructure projects. We believe that rural broadband is a project worthy of real focus. Our fixed wireless 4G broadband demonstration in the Preseli Mountains has proven that it is

possible to affordably deliver fast, reliable broadband to the rural broadband not spots in the UK.

Long Term Evolution (LTE) or 4G is perfect for delivering wireless broadband in rural areas. The Preseli Mountains were chosen for the pilot as the area combines low population density with highly dispersed communities, making it representative of UK locations that can't be economically reached with fixed broadband networks. The demonstration took advantage of the fact that digital TV switchover has already taken place in Wales and used the 800MHz spectrum, which is currently being cleared of analogue TV broadcasts by Arqiva. The pilot delivered the Government's universal service commitment target of a 2Mbps connection, as well as demonstrating peak download speeds in excess of 30 Mbps at a distance of 10 kilometres from the base station. This type of wireless network could be used to reach remote homes and premises where standard consumer equipment would then convert the 4G signal to standard WiFi.

So while the technology has proven itself, the question now becomes one of who is actually going to provide broadband services to consumers, and how much it is going to cost.

Consumer choice

The key here is creating choice. Rather than having residents being held to ransom by a single supplier, Arqiva's goal is to build a fast and robust wholesale wireless platform that service providers can share – so creating a cost efficient and competitive market.

So how far is this from becoming a reality? The 4G spectrum is shortly up for auction. The parliamentary Culture, Media and Sport Committee made an important announcement in early November 2011, stipulating their support for the role of 4G in reaching rural areas, arguing that the proposed 4G coverage obligation set by Ofcom of 95% of the population should be increased to at least 98%. This would be great news for rural areas, encouraging wider broadband rollout, not to mention also having the potential to provide better mobile coverage across the whole UK.

We believe that the CMS committee's findings should have gone a stage further if we are to ensure that rural areas are included in 'Broadband Britain'. If the 98% coverage obligation was made on a country by country basis, then the risk that the coverage obligation is achieved through the easier to reach rural areas of England, to the detriment of harder to reach rural communities in Scotland and Wales, would be reduced. This would ensure that the economic and societal benefits resulting from access to broadband are shared by the maximum number of consumers.

Government funds

The Government's commitment of £363 million of public funding, via Broadband Delivery UK, for rural broadband in England and Scotland is an important step in the right direction with funding. But there is a concern that local authorities will be limited in what they can achieve with the relatively small sums of money at their disposal. A collaborative approach to procurement and network build-out across administrative boundaries is one way to make this money work harder. There also needs to be a measured approach between superfast rollout and coverage – the money will only go so far, and we believe it should be a foundation of any deployment of public funds that all communities benefit from improved broadband provision.

What's clear is that a strategic not piecemeal approach is required if the full economic and social benefits of broadband are to be realised. The priority needs to be delivering broadband for all, not just 'Ferrari' broadband for some.

Rob Hamlin is Enterprise Director at Arqiva