Introduction

Good broadband Internet access is essential for modern business. Applications such as Cloud Storage and backup, E-Commerce, Video conferencing and increased use of online media and video on demand services drive the bandwidth required from modern businesses to higher and higher levels – both into and out of the premises.

The telecommunications network providers have traditionally built their networks on the demands of the residential community, building their infrastructure to capture the greatest number of subscribers.

Local Government Regeneration schemes and Private Developers are building Business Parks on reclaimed 'Brownfield' land and on the fringes of towns and cities. This has the advantages of providing a pleasant, semi-rural environment in which businesses can grow and ensures that vehicle traffic flow through residential and inner city areas is reduced. Unfortunately, in a lot of cases, the telecommunications infrastructure does not exist to support these business parks / out of town businesses.

The traditional telecommunications companies are slowly building their networks out to support these business communities, as well as providing faster links into rural communities, but there is a lot of ground to cover. Building a traditional, copper and fibre based network is expensive, with high manpower, plant and material costs, so networks are built on the basis of greatest economic gain, so in some cases this higher speed connectivity may never arrive.

All of this means that if you want to connect a location ahead of the telecommunications companies' plans, you will have to contribute to the costs of the connection. This can be a very expensive option for the small to medium businesses typically located in these areas and with finance departments looking to do more with less, it is often the businesses communications that are hit hardest.

The British Government's Department for Culture, Media and Sport (DCMS) launched a Connection Voucher Scheme to 50 cities and outlying communities across the UK with a fund of £40 million to try to address this issue. It has been incredibly successful – with the funding expected to be used up before the 31st March 2016 deadline. This is fine for businesses in superfast broadband enabled areas, but the £3,000 per business grants often fall short of covering the installation costs in rural or town and city fringe areas.

There is a solution….

A collaborative approach can eliminate this problem, allowing multiple users to share the same expensive Internet Connection. This ensures that high speed, low or zero contention, symmetrical Internet (unlike conventional broadband) access can be available to all stakeholders. How?

- Costs are shared across the businesses, allowing multiple voucher applications to be combined to fund the installation costs if a sufficient number of businesses are in the catchment area.
- The model can be expanded to cover additional areas as other businesses (even distant) show interest.
- The financial models are very flexible. Installations can be 'owned' by local government bodies, business park owners or even community organisations and co-operatives.
- Revenues generated from the network can be re-invested into the network, as well as funding additional services such as community CCTV Schemes, electronic access control, public/guest Wi-Fi access or outdoor help points.

These initiatives help promote the Business Area as a friendly, safe, well connected, efficient and green place to work and grow a business, adding to the value of the area and positively affecting the welfare of the inhabitants.

How Can Rapier Help?

Rapier Systems design high speed, rapidly deployed, radio systems based on Telecommunications Grade wireless hardware. We can work with you to take control of the communications costs and share the expensive Internet Connection across multiple businesses.
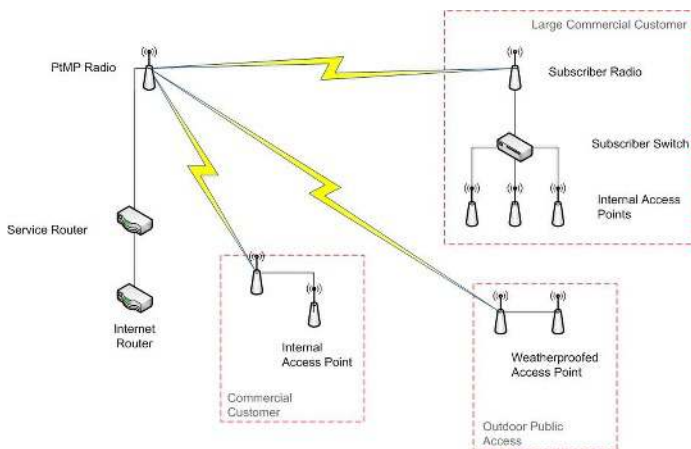
One structure in the area (usually the tallest) is nominated the 'Point Of Presence' or 'POP Site'. This needs a good field of view of the subscriber buildings. We then arrange for an Internet Connection to be installed at this location. If correctly publicised and dimensioned, the combined value of the Broadband Connection Vouchers will often cover the cost of this installation.

A Point to Multipoint (PtMP) transmitter is installed onto the POP, typically providing a service over a 90 degree sector, with distances up to 2 kilometres. Subscribers in this sector can receive a symmetrical data service of 30Mbps or more. Multiple transmitters can be deployed for different areas or if subscriber density exceeds the capacity of the transmitter.

If higher speeds are required, they can be provided by Point to Point (PtP) links with speeds of up to 2Gigabits (Gbps). These are usually deployed for private business to business connections.

Wireless links can be built quickly and with minimal fuss and disruption to normal business operations. The subscriber units are small and discrete, and usually require no planning permission to install. Once the POP site is operational, new subscribers can be added within days.

Once established, the network is expandable and flexible. Connections can be upgraded, downgraded and relocated with ease and speed. As new customers come online, the network can expand in size and reach, growing organically with local demand.

Other applications such as CCTV can be added, providing safety and security to residents, without high communications costs and "socially aware" Guest Wi-Fi can be provided, providing local businesses with valuable marketing and presence information.
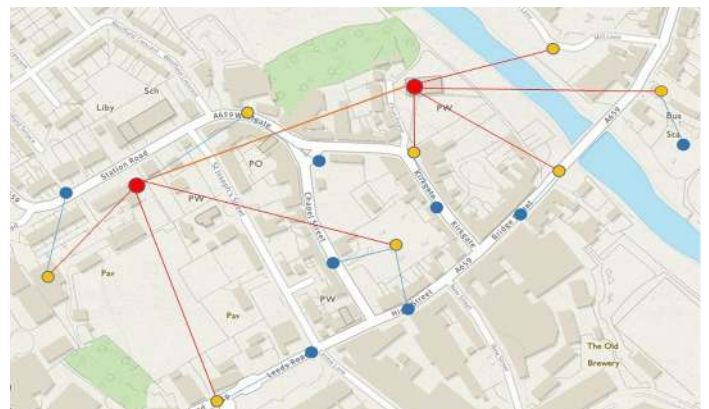
In Summary

- Lower Cost than Traditional Telecoms
- Tailored Service
- Rapid Installation Time
- Fast Issue Resolution
- Greater Flexibility
- The Ability to Own (not lease) Your Network
- Simple to Upgrade (as little as 24 hours)
- Available Now – Not when someone else feels like it!

For more information on all of these applications and to arrange a feasibility study, please call Rapier Systems on 0845 299 6171

For further information about the solutions Rapier can provide please visit
www.rapiersystems.com or call 0845 299 6171

About Rapier Systems

Formed in 2003 Rapier has unrivalled expertise in the design, delivery and support of wireless (including WiFi) networks and systems; the company is a value added integrator of best-in-class wireless products.

Whether within or between buildings, upgrading or replacing existing networks, or designing and installing new wireless systems, Rapier's experience in environmental analysis and network design ensures complete coverage and optimal performance.

Rapier works with world leading wireless system vendors, including Ruckus, Alvarion, Airtight, Cambium/Motorola, Ceragon, SAF Technika and several more. The company has reached the highest level of accreditation with each of its partners and understands which vendor and product is best suited for each environment.

Rapier has grown dramatically on the back of a surge in demand for wireless networks, which it has designed and installed in a wide variety of challenging environments from colleges and oil rigs to business parks and theatres.

Rapier maintains Scotland's largest Wireless Network, covering Dundee City, Angus and Perth & Kinross Councils, which comprises around 250 sites.

The company has designed and delivered some of the most innovative wireless solutions in the UK, including the largest metropolitan area wireless network in Scotland and one of the largest county-wide wireless networks in England. Rapier delivered the 1st fully licensed Gigabit wireless link in the UK.

The company's headquarters is located in Fife, Scotland and it has offices in St Neots, Cambridgeshire, England.

Rapier has a UK wide customer base in sectors that include Local Government; Transport, Renewables, Oil and Gas, Retail and Leisure.

For further information please visit **www.rapiersystems.com**

Rapier Systems Limited
Ore Valley Business Centre, 93 Main Street, Lochgelly, Fife, KY5 9AF
Tel: 0845 299 6171   E: info@rapiersystems.com   W: www.rapiersystems.com

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