



Broadband Innovations in south, west & mid Wales

“Solutions to a problem nobody wants to own..?”

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TFL – brief outline

- Established 1983
- Initially serving the radio communications needs of ports, LNG/oil terminals, public sector & businesses in south & west Wales
- Fully-owned & developed tower/site infrastructure
- Unique ability to deliver wireless services to rural Wales
- Delivering wireless broadband services since 2002

TFL – brief outline

- Recognised opportunity to exploit tower infrastructure
- Now offering 30mb SDSL capability to 66% of Wales
- 66% - geographical, NOT population
- Thousands of wireless broadband subscribers throughout Wales – access through fixed wireless & WiFi/Wimax





Broadband landscape – Issues faced by Welsh Assembly & BT

- Notspots: approx 30,000 subscribers unable to receive broadband throughout Wales
- Reluctance to embrace/exploit alternatives to fixed line technology
- Perceived reluctance to invest in small business
- Assembly has spent money, but politics continues to complicate the issue



Spotlight - Red Ridge Activity Centre – Welshpool, Powys

- Unable to access BT broadband, despite £2m BT investment in local infrastructure
- Currently using satellite broadband service
- Restrained by high usage cost & punitive SLAs
- Now accept that wireless is the only viable option
- “too much talk – not enough action!”

The need for creative solutions to rural issues..

- Realistic view – *“if you cannot already receive conventional broadband in Wales, that situation is unlikely to change in the foreseeable future.”*
- Original Welsh Assembly plans for 'innovative' solutions to rural broadband delivery have not progressed satisfactorily.
- RIBS = 'Regional **Innovative** Broadband Support' – where is the innovation..??
- Apparent resistance to 'non-wired' technologies – RIBS' original scope was much wider
- 'Digital Britain' report did not adequately address any of these rural issues. 2mb by 2012..? Barely adequate now....
- Five years on, very little has changed...



The need for creative solutions to rural issues..

- At a political level – much promised, little delivered
- From TFL's point of view:
 - Co-operated with Broadband Taskforce
 - Continued to develop network, technology & service, at our own cost
- National Botanical Garden
 - Initially provided with 2mb wireless service
 - Now upgraded to 6mb SDSL at no extra cost
- Caldey Island Monastery
 - Previously on BT 54kb dial-up
 - Now using wireless SDSL service from mainland



Connecting the British Army in Pembrokeshire

- Cawdor Barracks, formerly RAF Brawdy - near St Davids
- Home to 14th Signal Regiment (EW), Royal Corps of Signals
- One of the British Army's most 'high-tech' regiments
- 65 miles (104km) from Swansea, 100 miles (160km) from Cardiff – the Army's most remote regimental HQ
- 350 soldiers, plus families, MoD & civilian support staff



14 Signal Regiment – meeting their needs

- Remote base – some distance from nearest population centre
- '*Operation Tangible Change*' – CO's initiative designed to improve quality of life on base
- Included requirement to provide modern, high-speed communications services for soldiers' private use
- Despite requests, BT were unable to extend their conventional broadband coverage to reach barracks
- Ironically, troops could access broadband while on deployment in Iraq or Afghanistan - but not at their home base in rural Wales(!)



TFL's solution...

- Site survey established that barracks had line-of-sight connectivity to local TFL communications tower
- 30mbps signal from NTL's Swansea node delivered via TFL's tower infrastructure
- Signal carried over five TFL towers to reach Cawdor Barracks
- Wireless receiver on site distributes signal to multiple transceivers on base
- All equipment mounted on existing base infrastructure – no need for civil engineering/excavation work
- First connections delivered within 10 days of contract award. Entire base connected after just six days on site.



How this meets 14SR(EW)'s operational and leisure needs

- Soldiers can now keep in touch with family, friends via internet & email at the same communications speeds enjoyed by (most of) the rest of the UK
- Improved morale
- Quick, cost-effective solution to a major communications issue, with minimal disruption
- Delivering on RIBS' 'innovative' ideology – but without RIBS support



Wireless broadband - the *only* alternative..??

- No other alternatives to wireless delivery in rural areas not addressed by BT
- Wireless broadband – ideal for low cost, low impact delivery of high speed services into rural areas
- TFL's wireless tower infrastructure can reach 90% of all remaining 'notspots' in Wales
- Investment / ownership / co-operation

Summary

- 15 years worth of investment and development in TFL's wireless infrastructure – entirely self-funded
- We need support to extend coverage to 100%
- Wireless broadband can meet/exceed fibre performance for a fraction of the infrastructure cost
- Realistically – are we *seriously* going to dig up rural Wales to lay FTTC..?
 - Certainly not practical
 - Definitely not cost-effective



Thanks for listening!