

Community Broadband Initiatives

Despite claims by BDUK that Britain will enjoy the best broadband provision in Europe in the future, there are communities that are not fully benefitting from this technology. Many of these communities are in rural areas where it is uneconomical to provide fast broadband connections and this divide is growing as other areas, especially cities, are linked by improved fibre optic connections (Townsend et al. 2013).

Broadband is not the only infrastructure missing in these rural areas. A lack of public transportation and the dispersed population makes the need for broadband more important. With government services such as welfare, agricultural reporting, and tax returns all going online, and an aging population dependent on the shrinking resources of the NHS, residents in these areas are hit in more ways than one by the lack of infrastructure.

Bypassed by the big broadband providers, some of these communities have mobilised their own resources to set up broadband connections and a number of different models for doing so have emerged. In this study we look at three different communities who have set up community broadband initiatives, chosen because they used contrasting methods. Firstly, among the best known is that of Alston Moor in Cumbria, where a social enterprise was established and fibre cables dug using volunteer community labour and plant. "Cybermoor" as it became known became an example for other communities and is now extending its own broadband to other underserved areas. Secondly, Kinmuck, near to Aberdeen has recently introduced a community broadband initiative. Thirdly, Knoydart on the West Coast of Scotland is one of the most remote communities in the UK, but one with excellent broadband connections (also connecting up neighbouring islands). In each of these communities, social enterprises were set up to develop a community based broadband provision using at least some volunteer labour and "self help". In each case it required the mobilisation of community members for a common purpose and this often spawned further social innovations. The research takes the form of in-depth interviews with key informants and on-line surveys.

The aim of the research is to understand how and why these initiatives take place in certain communities and what are the implications for community development.

Alston Moor

For more than ten years, the Alston Moor region of Cumbria has been serviced by a series of community-based projects which were created to connect a geographically dispersed and isolated population with ICT infrastructure. The original project provided funding to purchase PCs and one year free dial-up access for each participating household and/or business. In addition, the group has funded courses and IT support for the area.

'Cybermoor' has now developed into four separate co-operative companies which supply a variety of services related to bringing faster broadband to rural communities (hence the ISP and physical network separate companies). From the beginning, they have worked in cooperation with the local Council and currently have their headquarters in the Alston town hall, while their servers are next

door in the former village toilets, taking advantage of the drainage infrastructure already in place to use as conduits.



Alston Moor is a small region in the Pennines consisting of the villages of Alston, Garagill and Nenthead, as well as a number of small hamlets. Employment on the moor, like many other rural areas, is restricted due to distance and lack of transportation links. Some households are dependent on one or more member commuting to the nearby towns of Carlisle. Other workers are able to work from home, either as distance workers, or with small businesses. There are also a number of small, or co-operative shops in the town of Alston, often in relation to the activity-based tourism, and arts/cultural communities in the area. Many interviewees have commented on how the enhanced broadband infrastructure provided by the social enterprise “Cybermoor” has either attracted them to, or kept them in, the region because it enables them to continue working.

Cybermoor works through setting up a social enterprise to which anyone can buy a subscription . Volunteers amongst local farmers were mobilised to dig ditches in order to lay fibre optic cable around the region providing the very best kind of connectivity.

Entrance to ‘public toilets’, now Cybermoor server room



Local artists' cooperative workspace and gallery

When conducting our website and Facebook analysis, using Alston Moor as our search term, this was the most visibly active community on both searches. There were 28 open Facebook pages about the community, and 18 websites relating to either the community or local business.

A particularly interesting site was that for the Cybermoor project. Not only does this website act as a central base for the

company, it is also used as a method of advertising local activities and groups. They have links to political activism, business news, transportation information, local schools as well as encouragement for current members of the co-op to join the team. This reflects high levels of social innovation in the area supporting a number of grass-roots initiatives, such as a community owned mini-bus.

We analysed an internet survey of the Cybermoor members from October of 2012. It appears to show an area with high life satisfaction score of 7.6, with high levels of general and online trust. This survey is being used as a pilot for a further survey on online/offline social quality later this autumn, which will be distributed to all of our case studies.

Cybermoor has been a pioneer in community broadband initiatives and the main social actor, Daniel Heery has set up an on-line network for others who may want to undertake these kinds of initiatives.

Kinmuck

In contrast to Alston Moor, Kinmuck is a commuter village in Aberdeenshire where the local broadband project was initiated mainly by one individual, though with support from other volunteers. It began less than 2 years ago, with a meeting in the local pub. The project is run as a not-for-profit organisation, from the home of the local social entrepreneur during his spare time. He raised funding from the EU (LEADER programme), the Scottish Government, Aberdeenshire Council and the not-for-profit company Caleycom.

A social enterprise was set up which provides the services through subscription by local members of the community. It is more expensive for subscribers than a standard companies but it provides far higher and faster levels of service. The technology is provided by licenced radio link from Aberdeen recycling a disused steel ex-telecoms tower. Within the locality, old telegraph poles and existing farm buildings are utilised to relay the connection. Members of the community also use their own homes.

While Cybermoor is dependent upon local people learning the technical skills and implementing the project along side professionals, much of the Kinmuck project is dependent upon outside labour sourcing. However, local consumers are very happy with the service:

"I can now video conference my wife and kids from offshore when I am off for 2-3 weeks, When I am onshore I don't have to go into the office, I can pick up my mail from home or video conference the office. My wife intends to start a home based internet business" **Offshore Oil Worker**

“it’s great. I had to drive my kids to Inverurie academy to do their computer based homework before. Now they can do it at home. No more driving backwards and forwards to Inverurie” **Single Mum, two kids of School Age**



Using the side of an agricultural

Barn for transmitters. Other transmitters on old telegraph poles

(photos and quotations courtesy of Simon James)

Knoydart

Knoydart was famous in the nineteenth Century for highland clearances which displaced the local communities and replaced them first with sheep and then with deer for hunting. A plaque remembers the efforts of some of the descendents to return and reclaim some land in the 1940s, only to be evicted a second time. In the 1990s the local community were pioneers in a community land buy out whereby the community (with help from various trusts and donors) and after some struggle, bought the land from the landowner to be used for the benefit of the community itself.

They are now represented by the Knoydart Foundation which also runs the campsite, a bunkhouse and owns some of the buildings. It is now most famous for hosting the most remote pub in the UK. The Knoydart Foundation is responsible for a number of community initiatives, including harnessing hydro energy and progressive land management such as reforestation.

One of their initiatives is to set up a fast broadband network called "HebNet" using a microwave link from the Gaelic College on the Isle of Skye Sabhal Mór Ostaig (part of the University of the Highlands and Islands) just across the sound which was connected through the University JANET system. Hebnet includes the small Hebridean islands of Eigg, Muck, Rum, Canna and South Knoydart. It is an extension of the rural broadband initiative in Loch Hourne to the North, initiated by Professor Peter Buneman of the University of Edinburgh with help from the Carnegie University Trust. The fast broadband link enables the community to advertise itself to tourists and the wider world and the members of the community to enjoy better broadband connections if they subscribe. Other sponsorship came from the European Commission LEADER project and the Scottish Government.



Radio wave transmitter mast near Knoydart (taken from the Tegola project website <http://www.tegola.org.uk/>)



The Knoydart Foundation office

These diverse examples could be seen as examples of capacity building by “increasing the ability of people and institutions to do what is required of them...in order to secure empowerment and reducing dependency on state intervention “ (Murray and Dunn 1996). In this respect it is an example of how the “Big Society” agenda might work in rural areas. However, all of these initiatives have certain features in common. The communities selected were all comparable in terms of size (less than 2000 people), demographics and economic development (relatively prosperous). The innovative aspect of this study is that we look at the impact that this has had on the community by considering what factors are important in developing these kinds of initiatives and whether or not they are sustainable.

First of all the initiatives are based upon a deficit in the provision of state utilities and services (notably, fast broadband), which have helped stimulate the communities to provide services for themselves. Secondly in each community significant actors or “social entrepreneurs” were important in taking initiatives and mobilising the community around creating broadband provision. Thirdly, all of these initiatives depended upon the presence of skilled class incomers who brought with them knowledge of how to mobilise resources, especially grants, to help sponsor these

activities, or held other kinds of expertise that could be used in the mobilisation of community broadband.

Although these could be seen as examples of positive community development around "Big Society" principles, there are questions around how sustainable these initiatives are and how transferable to other rural areas. Firstly, the importance of social entrepreneurs suggests that these communities are highly dependent upon the presence of a few personalities. What happens when these personalities are absent? Or they leave? Secondly, to what extent is the cohesion and additional community enhancement developed through electronic communications dependent upon a strong existing community and does it enhance or inhibit this community development (Hampton and Wellman 2003)? Thirdly, is this kind of community cohesion dependent upon having a particular demographic profile, including middle class people with skills in search of a better quality of life (often incomers) who are able to contribute to community development and its online associations (Jedrej and Nuttall 1996)? Finally, all the communities in question were relatively affluent and picturesque ones, even if they contained a mixed population. To what extent is this model transferable to less affluent and less privileged rural communities?

References

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