Northern Isles Digital Forum: Event Report
17 September 2012

Introduction

The UK and Scottish governments have committed significant funds towards improving digital infrastructure in 'hard to reach' areas such as Orkney and Shetland. This has created an opportunity to attract much needed investment into mobile and internet services in the Northern Isles. To ensure that any investment is used in a way that brings the greatest possible benefits, it is essential that residents and businesses have their say and shape the plans that will determine how local digital services are developed.

The Northern Isles Digital Forum is intended to be a series of public meetings that allow residents and businesses to raise concerns with elected representatives, internet and mobile phone service providers, industry regulators and local officials. The overall aim is to give communities in Orkney and Shetland a platform to share their views on how local digital services should be improved and also to keep the public informed of developments in the industry.

The inaugural session of the digital forum occurred in February 2012, and featured representatives from Highlands and Islands Enterprise, Everything Everywhere, Ofcom and Shetland Telecom. The session was used give members of the public and business an opportunity to listen to and ask questions of industry experts. Meetings were held in both Orkney and Shetland, and attracted over 40 people each.

The second meeting of the Digital Forum occurred initially in Shetland, while an Orkney event is planned for later in the year. The first meeting had focused on mobile signal and the purpose of this second meeting was to discuss internet issues. In the months leading up to the meeting, there had been notable internet problems including disconnections and slow speeds. The representatives at the meeting were:

Tavish Scott, *MSP for Shetland* (Chair)
Brendan Dick, *Director of BT Scotland*
Kenny Malcolmson, *BT Manager in Shetland*
Guy Smith and Marvin Smith, *Shetland Telecom*

The main points which were highlighted in the meeting were:

1. BT are aiming to active a fibre link to Shetland by the end of 2012, which should see speeds and consistency of internet service increase
2. BT are looking at improving their fault reporting system
3. Scottish governments' £120m investment in Highlands and Islands network will include Shetland

This report will document what was said at the meeting by Mr Dick and the issues which the attendees raised.

The meeting consisted of a general update from Brendan Dick, which was followed by a question and answer session that included local BT manager Kenny Malcolmson. Shetland Telecom also delivered a brief update on their activities since the Forum last convened in February 2012.

Brendan Dick updated the attendees on three issues:

1. BT's investment programme
2. Changes to the network fault management system
3. Government and Highlands and Islands Enterprise investment

BT's investment programme

Mr Dick explained that BT's current investments were aiming to improve local connectivity across all of the UK, and that the Northern Isles were included in the investment plans. He explained that subsea fibre connectivity was the future for high-speed internet, and that a fibre link to the Northern Isles was the best option to ensure greater internet speeds and improved consistency.

He also used the meeting as an opportunity to announce an £8m investment by BT to light up existing fibre to Shetland by the turn of the year, aiming to be operational just after the Christmas period. Much of the work has already been carried out, he explained, and justified the delay by explaining that there were large design and logistical problems which hindered the project. The new activated fibre would be able to supply similar speeds that are received in Edinburgh. The fibre link would give improved copper speeds to Lerwick, with the potential for speeds up to 20mbps to those near the exchange.

With the new connection and improved speeds in Lerwick, an ethernet point-of-presence (POP) can be established. This is an access point from one place to the rest of the internet, in essence. Currently, Shetland connects to an ePOP in Aberdeen, but this is problematic as the charges for using these are distance related. Mr Dick cited an example of the NHS paying over £100,000 as they had to link to Aberdeen. By installing a POP in Lerwick and making Lerwick the Hub - rather than Aberdeen - distance-related costs would decrease for businesses and the public sector. The hub would also bring increased line resiliency.

After testing is complete and the fibre is live, users will be migrated away from the outdated Radio link and on to fibre. This shift will empower local engineers to improve and tackle problems at a more efficient rate, and improve the flexibility of the local work.

In summary of BT's investment, Mr Dick predicted that the new fibre will improve local internet services in the short term initially but will have a long-lasting improvement effect.

Fault reporting network

Mr Dick explained that the BT network management works by taking requests from all Communication Providers (CP) *[BT, Sky, Virgin, TalkTalk et al.]*, and that it is through these issue requests the BT network centre gets a better picture of the emerging problem. That is to say, the current system relies upon the actions of other companies which may not wish to incur financial costs to have an engineer involved. Often customers report that when dealing with some CPs they will be repeatedly told that the problem is not on the CPs end, but rather on the customers end (for example, a defective modem or faulty cables), but on many occasions it has emerged that the problem is not with the individual, but rather with the CP. This practise not only frustrates customers, it can delay the discovery of an actual problem at the exchange, leading to many customers being disconnected simply due to the CP unwilling to investigate.

It was confirmed by Mr Dick that a 'trigger system' exists on the exchange network, which notifies the BT network centre if a particular percentage of lines register as having faults. Mr Dick did concede that he felt this figure was currently set too high and that lowering it is an option which will be undertaken. He discussed lowering the limit to 10%, so that if 4 lines on a 40 line exchange were flagging as faulty, BT's network centre would be notified automatically.

An offer that Mr Dick presented to the meeting was for the development of community volunteers who would act as a point of call between members of the community in Shetland and the BT Wholesale Network Centres. These volunteers would have direct contact with the network centres (which are open 365 days a year and 24 hours a day) would be able to help resolve problems or identify issues at a much more rapid rate. This service would be particularly useful in small communities with very few lines on their local exchange, Mr Dick noted. He admitted that the current model - based on CPs and consumers reporting issues - was imperfect, and that this new offer would have the potential to improve the situation. The offer would require some work but BT would be happy to press ahead with it if it meant improve fault management for Shetland, according to Mr Dick.

Government and Highlands and Island Enterprise investment

BT remains the sole bidder for the £120m government investment towards developing high speed broadband in the Highlands and Islands region. Although discussions are still ongoing, Mr Dick was confident that the decision would be sorted out in a matter of weeks. As a tendering process is involved, BT Scotland were unable to make any official comments on proceedings. He did, however, state that some areas in Shetland would be involved in the spending.

The scheme will roll-out using a variety of services, but primarily will be fibre-based. He also urged for patience, highlighting that large-scale telecommunications infrastructure development like the one which he hoped BT would get the opportunity to undertake in this instance take a long time, but concluded that "it will get done."

Tavish Scott, chair, moved the discussion on to the question and answer session.

Question and Answer session

Tavish reiterated that the islands have pushed BT for many years on improved internet and welcomed the announcement that Mr Dick had made regarding the £8m investment in fibre activation. He opened up the floor for any attendees to ask questions to Mr Dick or local BT manager Kenny Malcolmson.

The questions covered a range of issues and came from by members of the public, voluntary organisations and business owners. Of some concern was the news that the fibre activation would primarily improve Lerwick, with those from outside the town arguing that speeds in Lerwick were already vastly better than areas of rural Shetland, like Walls.

Local businesswoman Suzy Jolly of Jolly Typing Services opened up the session by saying that she had experienced many problems with her business service from BT and that it has cost her customers. She expressed scepticism over the new announcement as BT has promised similar in the past (2008, to be specific). She challenged Mr Dick to explain why he should now be believed.

In response, Mr Dick said "we are doing it" and explained that the original 2008 announcement was somewhat premature, as BT had perhaps not taken onboard the full scope of the challenge – 1000km of fibre. The delay since 2008 was justified by Mr Dick, who explained that BT wanted to ensure it was done right. Local BT manager Kenny Malcolmson backed up Mr Dick and explained that the equipment has now been fitted in Lerwick and that testing is taking place. The testing period is expected to take 6-12, and is to ensure that there are no faults or glitches in the system. Mr Malcolmson reiterated that it will go ahead.

Tavish sought to get clarification on the extend of this improvement. He asked Mr Malcolmson how the new announcement and infrastructure will help areas outside of Lerwick.

Mr Malcolmson explained that the network would have more backhaul capability. In simple terms, a 'backhaul network' refers to the side of the network that communicates with the global Internet. This improved connection would result in more consistent and reliable

internet service across all of Shetland. It would also allow for a growing demand, and empowers the engineers with more flexibility. Mr Dick confirmed that connections would be more stable under the new system, but was quick to point out that the service which the individual or business have will not necessarily improve, as a CP's speed can depend on how they manage their network.

Another attendee asked Mr Dick if he could say when people in Shetland would be able to buy fibre-optic broadband packages. Mr Dick explained that the investment he announced today refers to the backhaul network, which will improve Lerwick's outgoing and incoming signals to the Internet, and does not necessarily mean fibre in the home at present. He also noted that it will depend on what is contained within the contact that BT will sign with HIE, which he was again not at liberties to divulge as it was a tender process. He did hint that although he could not reveal any details, Shetland would be involved in the process and with Lerwick being the largest town in Shetland; one might expect that Lerwick would be part of the £120m package.

Mr Dick did mention that in Spring 2013, BT will be launching a 'Fibre to the Premises On Demand" service which will see exchanges that have fibre leading into them – such as Lerwick will by that time – for a fee businesses and consumers can have fibre brought right into their premises, bringing potential download speeds of 300mbps. This investment would advance with technology, as Mr Dick highlighted that using the same technology, BT labs are currently testing 1gbps (gigabyte per second)

A West Burrafirth attendee, John White argued the case for those who live in the West side of Shetland and do not have anywhere near Lerwick's speed, let alone super-fast fibre. He stated that his usual speed was in the region of 0.3mbps. He simply asked Mr Dick to explain when he and others like him could expect a reasonable, fast broadband speed.

kbps? mbps? gbps?
Internet speeds explained

Computer information is transferred in 'bytes'. These figures tend to operate around '1024', like so:
- 1 Kilobyte (KB) is 1024 Bytes
- 1 Megabyte (MB) is 1024 Kilobytes
- 1 Gigabyte (GB) is 1024 Megabytes.

A typed letter may be around 12kb, a music track 4mb and a movie 700mb.

Often, Internet users will find that their advertised speed is not what they are receiving, and there are a number of reasons for this. It is not that your internet service provider limits your connection, but rather that websites cap download speeds to protect their own servers from overload. Popular websites which contain large files on them – such as YouTube – use such techniques.

Mr Dick explained that it was simply a case of economics, and that the as a private company, BT had to face commercial realities. He recognised that high speed internet is more involved and essential in our daily lives than it was even just 5 years ago and that the future of Scotland's economy – particularly rural areas – would depend on high speed

connections. He explained that over the course of the coming years BT was investing £2.5b on high speed broadband, targeting two-thirds of the UK population – with the Scotland figure closer to 50% reach here. Again, he reiterated that one can argue about the fairness of these developments, but equally so, BT had to ensure that as a private company they did the largest and most effective work with the funds available.

In response, Mr White stated that he could not envision a scenario wherein a company would invest in rural areas like West Burrafirth, and lamented that such areas would always be at the bottom of the list. The only solution, he suggested, was to turn the list upside down and start with the smallest areas first. Tavish suggested that this is where government can play an important role in identifying and acting on market failures.

In Shetland, there are 8 exchanges which are '0.5mbps capped', meaning at the internet speed will never be faster than 0.5mbps as it comes through these exchanges. An attendee asked Mr Dick if they were prioritising the ridding of these archaic connection boxes. Mr Dick once again was bound by the tender process and could not make an extensive comment, but stated that he believed they would be a relative priority.

Councillors Alaistair Cooper and Theo Smith were both in attendance and spoke on the matter. Cllr Cooper bemoaned the poor internet service that he experienced between around 4pm and 10pm – which he attributed to school children returning home and using it – and stated that he finds himself working from 10pm to 12pm regularly as it is the only time when his internet does not disconnect regularly. Cllr Smith spoke on the topic of faults. He was concerned that any fees which are applied to fixing a service (or at least investigating a service) would not be affordable by the poor or the elderly.

In the final question, an attendee challenged BT to reinvest some of the profits on improving the network. BT had posted an increase in profits and very recently announced the decision to increase broadband prices in January 2013. The attendee felt that she was seeing a declining service and increasing profits. Mr Dick responded by highlighting the investment that BT were making – over £2b over the coming years – and retorted that there are no other companies spending such vast amounts improving the internet service in the UK.