

STUDY

April 2005

PUBLIC INTERVENTION in BROADBAND MARKETS

**UNITED KINGDOM
North East of England**

*Study conducted by the research firm Cabinet Analysys
on behalf of l'Autorité de régulation des télécommunications
and Caisse des Dépôts et Consignations*



NOTICE

Autorité de régulation des télécommunications (ART) and *Caisse des Dépôts et Consignations* (CDC) have called on the firm Cabinet Analysys to conduct a study on the North East of England.

The study will be made public in a concern for transparency and information.

The study's conclusions are the sole responsibility of the firm and do not reflect in any way the opinions of ART or of CDC

North East of England

The North East of England is one of the most economically and socially deprived regions of the UK. Population is approximately 2.5 million, approximately 4.3% of UK population) Its gross value added (GVA) per capita was estimated at GBP11 000 in 2001, compared to GBP14 800 for the UK average. Approximately 34.7% of the adult population in the North East does not have any qualifications compared to the national UK average of 28.9%. There are approximately 70 000 SMEs in the region.

The RDA in the North East of England, One NorthEast has been involved in a range of projects in the area of broadband, covering both the development of infrastructure as well as of content and services for businesses. In terms of infrastructure it sponsored the exchange activation programme which provided grants to the private sector to deliver broadband services in areas which had not been hitherto broadband-enabled by BT.

In addition to the RDA, Durham County Council has been very active in the development of a broadband network that provides services to other public sector organisations.

The following analysis focuses on these two projects.

Exchange Activation Programme

Background information

► *Strategic rationale*

The main objective of the exchange activation programme was to address broadband in rural areas where the market did not reach. There was a clear market failure in this area and the RDA felt it was necessary to take action in partnership with the local authorities.

► *Strategic objectives*

The strategic objective of the exchange activation programme was to provide broadband to all areas of the region that had not been enabled by BT. Broadband activation was expected to have a positive impact on social inclusion and on economic development.

► *Project framework*

The exchange activation programme was set up as a tender asking the private sector to provide broadband services in the areas covered by 130 local exchanges that had not been broadband-enabled. The tender was technology neutral and followed all standard public sector procurement procedures.

Description of selected solution

► *Private sector role*

For the exchange activation programme, the private sector was involved through a tender for services. Two companies were short listed during the tender process: BT and Swedia Networks. BT was eventually selected as the preferred bidder for this project. The company was required to enable all exchanges with a DSLAM and install fibre for backhaul. It is expected the project will be completed by March 2005.

► *Business model*

The total cost of the exchange activation programme was GBP9.6 million. When take-up of broadband reaches a population penetration of 63% in the region, BT is required to make reverse contributions to the region to pay back the investment.

► *Role of government agencies*

One NorthEast manages the exchange activation programme in partnership with the local authorities.

► *Financial requirements*

Access to European funds for the exchange activation programme was achieved through central government, which applied to the EC for structural funds under a national plan. Because the North East has the highest index of deprivation in the UK, it has good access to European funds. The national plan was agreed with Brussels two years ago and lasts for ten years.

► *Economic and technical specifications*

DSL services provided by BT under the exchange activation programme are similar in prices and capabilities to those provided nationally by the company. BT has to comply with the same regulations imposed on it nationally.

► *Project design*

For business locations too far away from the local exchanges to be serviced by DSL, the RDA is funding satellite connectivity. A total of 186 businesses in 37 locations are affected by this. Hughes Satellite is providing the service. Because of the amount of funds involved in this project, the programme was tendered using RDA tendering procedures rather than through OJEC. Feedback on the satellite services, is that the service is good, but the organisations involved usually request more bandwidth.

► *Regulatory and legal issues*

One NorthEast has been satisfied that the exchange activation programme satisfied all legal requirements under UK and European regulations.

Impacts and feedback on implementation

The next steps for One NorthEast are more to do with take-up and stimulating demand rather than on development of infrastructure. It is looking at programmes to increase the economic impact of broadband and in particular productivity. E-learning is also on top of its agenda.

DurhamNet

Background information

▶ *Strategic rationale*

The origins of DurhamNet lay in the development of a community network for Derwentside to deal with economic development issues, to stimulate a diversified economic-base in the district and promote inward investment, but also indigenous growth. The network is also currently used as an aggregator of demand from the public sector in the county.

▶ *Strategic objectives*

In its early stages the primary objective of the DurhamNet network was to provide a community network for Derwentside. Later on, the network also aimed to support demand for connectivity by the public sector in areas where the private sector did not provide suitable services.

▶ *Project framework*

The development of DurhamNet has been opportunistic in nature and no defined framework has been followed during the development of the network. When it has required to involve the private sector, it has done so following all standard public sector procurement procedures.

Description of selected solution

▶ *Private sector role*

DurhamNet operates a wireless network which it also owns. In Derwentside, DurhamNet provide services over a fibre network, leasing dark-fibre from Telewest.

▶ *Business model*

DurhamNet is currently a self-sufficient organisation with annual revenues of approximately GBP3 million and operating costs of GBP2.8 million. Funding for capital investments is provided by Durham County Council, including an initial investment of GBP1 million to build the wireless network.

► *Role of government agencies*

Durham County Council is planning on making DurhamNet a limited liability company owned 50% by Durham County Council and 50% by Derwentside District Council.

► *Financial requirements*

DurhamNet's approach to funding has been very pragmatic and opportunistic. However, the project no longer depends on funding, as it is self-sufficient. Capital costs for expansion are usually provided by the County Council using its own budget.

► *Economic and technical specifications*

DurhamNet provides connectivity in addition to ISP-like services, including email, hosted websites etc. Prices for the service are usually set according to the amount of bandwidth required. Different types of contracts are in place. In Gateshead, for example there is just one contract with the local authority which then in turn charges the local schools for the provision of services. In Durham, in contrast, DurhamNet charges schools directly. In general, secondary schools are subsidising connections to primary schools by paying higher prices.

► *Project design*

For DurhamNet, the backbone network in Derwentside is all fibre (using dark fibre from Telewest). It interconnects with WorldCom (now MCI) which provides the link to the Internet.

For the wireless backbone network outside of Derwentside, DurhamNet uses point to point STM links of 155kbit/s. It uses unlicensed radio spectrum in the 2.4Ghz band (and more recently on the 5.8Ghz band), and operates 13 main nodes across the largest population centres. It interconnects with the fibre infrastructure in Derwentside and with local fibre from BT.

The network tends to use friendly public sector sites to locate the masts. For last mile connectivity the network uses a star architecture based on the nodes located in public sector sites. The technology for the last mile connectivity is usually with radio but in some cases it uses terrestrial technology, reselling a leased line or BT's ADSL.

► *Regulatory and legal issues*

Local authorities in the UK have far reaching powers for the promotion of economic development and employment stimulation. When their activities can be linked to these objectives, they should not have legal difficulties with projects like DurhamNet.

Impacts and feedback on implementation

DurhamNet, expects to continue expanding services to the public sector in the region.