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# Final Report

Creative Lewisham Broadband Network Delivery Project

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Date: 14<sup>th</sup> June 2003

Version: 2.0

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## Introduction

This report follows the structure of the Interim Report delivered on 3<sup>rd</sup> July 2002. The initial findings of that report and the priority areas it recommended have not changed significantly in that time, no additional research has been possible other than meetings with members of the project team itself in the interim. In only one significant area, namely take up of wireless broadband services, has the market developed in a significant direction. Otherwise, the main change in conditions since the Interim Report has been in the take-up of broadband internet connections themselves.

According to the interim report, there were four aspects which comprised the issues addressed by the project.

- 1) The provision of very high speed bandwidth at the metropolitan area network level
- 2) Local broadband access provision to individual users/organisations
- 3) The provision of appropriate content, applications and services
- 4) An appropriate management structure for the network

A combination of these aspects is required to ensure a successful future for the project, including the successful outcome of any bids for funding.

### **A) High speed metropolitan area network**

In addition to local broadband access, it is essential that users of the network are able to utilise a high speed backbone connection between sites.

Lewisham BC has been working on a high speed metropolitan loop project. Discussions with members of the Lewisham project team made clear that whilst there were some issues to be addressed in the precise definition of the services which could be provided, there were no significant technical barriers to the sharing of very high bandwidth connections with some users from the creative sectors.

In practice, however, demand for this kind of connection did not seem to be high at the current time. Naturally, demand for bandwidth increases with the sophistication of uses to which that bandwidth is put, meaning that there is a need for a clear upgrade strategy regarding future bandwidth requirements. However, grassroots demand does not seem to require large (ie 100Mbps plus) connections at this time.

Currently, the major demand is for increased access to broadband access at speeds allowing the transparent use of media and communications technologies which allow for significant (ie 10-1000 times current speeds, ie 512kbps to 11Mbps (or even 54Mbps)) improvements in access. At the bottom end of this scale lie domestic broadband services such as ADSL

services offered by BT and cable services from NTL and Telewest. Significantly higher bandwidth, both within and between sites, has traditionally been the preserve of leased line technologies and even ISDN. These have no on-going place in the current plan for a broadband network of the kind envisaged by this project. Higher bandwidth requirements can be supplied by a combination of these commercially available technologies (DSL services are available up to 8Mbps) and use of the unregulated spectrum using so-called Wi-Fi products complying with the 802.11 standards (from 11Mbps for 802.11b to 54Mbps for 802.11g).

A patchwork of these technologies is likely to be adequate to demand for the next 18-24 months. However, some users will begin to stretch the capability of this level of bandwidth very quickly. If the network becomes successful, it will be necessary to consider the fact that demand for bandwidth is likely to increase considerably and continually as users become aware of the possibilities of large scale file sharing and collaborative working. At this point, it is highly unlikely that domestic broadband products or Wi-Fi will provide the solution without either a) considerable additional investment in lines or b) increasing density of the network. By this stage, access to fibre may become the only valid option for the delivery of very significant bandwidth to high demand users. Naturally, it is entirely possible that new technologies and compression techniques will continue to allow more to be done with each Megabit of bandwidth. However, it is equally likely that the demands placed on the available bandwidth will also continue to escalate at similar if not greater speeds.

## **Recommendation**

- 1) The group should set in train a project to plan for the demands of a very high bandwidth environment. Whilst the immediate demand for this level of bandwidth is low, the group should not be caught out by likely future demand levels. This project should include working with existing local authority and educational networks to open up access and procure bandwidth. This is in line with government policy on bandwidth aggregation as evidenced in the work of the DTI Broadband Policy Unit and the RDAs, through guidance issued by the Office of Government Commerce. This group should set a target for bandwidth availability (meaning bandwidth both inside the network and interconnecting it and the outside world). This high bandwidth should be provided to key organisations and locations within the network group on condition that they act as "repeaters" who then pass this bandwidth availability to other members of the BND group itself.

## **B) Local broadband access provision**

Clearly, it is a priority of the project that creative sector companies begin to take advantage of broadband in both the business and creative elements of their work. Creative Lewisham has recently been successful in obtaining a number of sponsored broadband connections from BT. This is an excellent start to raising the profile and usage of broadband amongst

creative companies in the locality. However, it is not a complete solution to the questions involved. The issues will now be considered below. There are four major issues to consider in this area.

- a. Customers may not know what broadband is and how it could benefit their work and lives
- b. They may not be able to afford access – or may not prioritise it
- c. They may not have the technological skills to implement and maintain it
- d. In some areas there may be no way to gain broadband access from market providers

The resolution of problems arising from these issues is at least as important as the provision of broadband services themselves. Even with over 2 million broadband connections now in place in the UK, research is showing that growth in the access market is likely to slow unless users begin to recognise compelling reasons why they or their businesses will benefit from broadband. It is essential that The Broadband Network Delivery Group should not subscribe to what might be called “technology push”; namely, the assumption that because we think that broadband is something everyone should have and a great technology, everybody else should automatically assume the same thing. Technology push is a common problem. Some would say it may even be the norm when new technologies arrive on the market. Sometimes people are too immersed in their everyday lives to be thinking about new technologies and how they could benefit them. This is perfectly reasonable behaviour.

To combat this problem, the project should therefore include in its planning a programme to promote broadband and explain its benefits. The campaign should be honest and practical – ie not a sales campaign. It may also be important, for instance, to point out some of the drawbacks of broadband connectivity (for instance the need for improved network security, firewalls and the like on “always-on” connections).

## **Recommendations**

It is recommended that the group consider the following responses to these issues

- 2) Create and produce material (paper-based and on the Creative Lewisham site) to explain both the benefits and the drawbacks of broadband access. Circulate this widely.
- 3) Establish a Broadband Roadshow to reinforce the message – an excellent model for this would be [www.broadbandshow.org](http://www.broadbandshow.org) an initiative backed by the South West Regional Development Agency which has been both promoting the benefits of broadband and creating proof of concept projects to highlight innovative work in the fields of tourism and aerospace. It may be possible to take advantage of some of the work of this project directly as the organisers may be open to working with partners in other regions.

- 4) Identify a target group of SMEs (say 100 in number) and negotiate discounted broadband access for them from a commercial provider (this has been done by Creative Lewisham).
- 5) Bid for funds to directly subsidise access costs for businesses over and above the above (a similar scheme exists in the SEEDA area relating to satellite broadband access in Hastings and the surrounding area). Rather than focus on technology, it is recommended that the creative business sector, particularly that affected by digital divide issues, should be the focus of this effort. This recommendation should be time limited however. If businesses benefit from broadband they should be able to quantify this and maintain the necessary funds as part of their business plan.
- 6) Research and establish a "broadband skills for creatives" programme which covers both hardware and software skills (including security) and, perhaps more importantly, reinforces and develops basic IT skills for companies and individuals. It is important that this programme should be practical and realistic in its approach rather than a theoretical or arts-based model. The first step to the establishment of this programme could be to set up a small scoping project alongside key HE and FE providers in the area to assess the gaps in current provision. Industry members should be a part of this process as early as possible to ensure relevance to current and predicted market demands.
- 7) The project has included a small-scale wireless networking component. It is important that this project is not allowed to fail. Using the relative cheapness and other strengths of 802.11 standard wireless LAN technology to provide access to users are mobile, located in areas where wired broadband coverage is impossible or inappropriate (or just plain expensive) should be a key component in the delivery of broadband services. Wireless technologies can also be used as a mechanism for linking up sites which may be wired internally but have no way of accessing the backbone themselves. In the short term, and particularly amongst groups such as teams working on creative projects from a variety of locations, Wi-Fi technologies provide perhaps the only way of providing "higher" bandwidth (ie better than DSL levels of 512kbps – 8Mbps) at a sensible cost relative to the budgets of the organisations involved. In addition, the access equipment required to access Wi-Fi is cheap and readily available. The group should therefore consider revising and expanding its use of Wi-Fi and establishing a formal "Community Network" based on the technology. This would formalise existing work conducted by James Stevens and would require a more structured approach to providing access than has perhaps obtained in the past. It is recommended that a secure, membership-based community network be formally established as part of Creative Lewisham and/or between the various bodies involved in this project. This project would be closely linked to the recommendations in section 3 below concerning content, applications and services. The network would be intended to enable creative industries professionals and companies to:
  - a. Use 802.11 technologies for site to site broadband

- b. Use 802.11 technologies and appropriate routing equipment to create “hubs” or NANs (Neighbourhood area networks) to allow a number of small companies/individual users to share connections

### **3. Content, Applications and Services**

It is essential that the project does more than simply implement access technology. From the start, it should include the provision of a community-based website and set of online collaboration tools. As the broadband market matures, leading players are already seeing that compelling content and applications will have an increasingly significant role to play in the development of the market. An understanding of this is important to the current project for two reasons. Firstly, and most importantly, the aims of the network itself will not be achieved unless the group provides more than simply technology. A community of like-minded users will not form around a project with a purely technological focus. Secondly, the creative businesses which the Group is seeking to support should be looking to provide content, applications and services into the broadband market. In order for them to do this, it is essential that they have the tools available to allow them to work together to succeed.

### **Recommendations**

- 8) Establish a central web presence – not as part of a current government/institution-oriented project in order to maximise the feeling of ownership which is required to support a community of practice. The web presence should include a “showcase” area into which companies and individuals can upload their work – with the facility for them to create their own front-end to this site. It should also include discussion boards and, ideally, the facility for members to set up their own “broadband-focussed” weblogs. The site should be:-
  - a) Built around database technology (and with a content management system) access to which is widely distributed around network members so that they can upload information freely
  - b) Supported by a skilled moderator/mentor
  - c) All of this technology should be built in open internet standards and accessed via web browsers to ensure maximum compatibility
  - d) The temptation should be avoided to build everything in house in cheap/free software unless it can be demonstrated that sufficient skills exist to actually deliver what could be a complex project

This project will require a budget allocation and ongoing management expenditure on site maintenance and facilitation as well as on marketing and communications. These should not be overlooked.

It would be possible for this site to become an online “venue” in its own right, able to bid for funding and to collaborate with existing venues, events and festivals such as Deptford X. Whilst this may well be the

medium to long-term aim of the project, it is unlikely that the leap to this position will be made immediately.

- 9) Seek/identify funding for broadband specific arts projects either as part of an existing project or with separate finance. The website recommended in (8) above will be a major outlet for this work. The event should have the effect of both energising creative companies and individuals to use the site and, secondly, raising the profile of the whole project.

#### **4. Management of the Network**

This project has become protracted partly as a result of changes in direction and differences of emphasis within the Group itself. It seems clear that whilst all members of the group have a shared desire to bring about increased awareness and use of broadband amongst creative industries organisations in the two boroughs, there is no easily identified single agenda to which all members of the group have been able to subscribe and to commit significant and comparable levels of resourcing to date.

Initially, it was my view that the appropriate way forward was for the project to establish a formal consortium of members. This will probably need to be legally constituted if it is to be successful in bidding for funding. Alternatively, I believed that a single agency (eg Creative Lewisham or another partner) might take the lead in developing the network and then offer it out to members.

It has become apparent from the development of these recommendations that the very broadness of the agenda is partially responsible for the issues which the group has encountered. It is suggested, however, that these issues of priority, structure and focus are not necessarily a major problem. Indeed, it is suggested that they may not need to be tackled at all.

Many, if not all, of the recommendations in the above can be seen as standalone projects. Whilst they will undoubtedly work better in relationship to each other, it does not necessarily follow that they are component parts of a single project which must be managed by a single body. A better approach might be to establish a model, along the lines of an industry body such as the Digital Content Forum ([www.dcf.org.uk](http://www.dcf.org.uk)) where a lead body or individual manages each strand of the overall plan reporting back to a loose Network Group such as exists at the moment. This Group would be a central clearing house for the discussion of strategy, the development of future projects and partnerships and the creation of synergy between projects rather than a formal "holding company" type of body. In this way, small-scale projects could be delivered rapidly and effectively without the difficulties necessarily involved in the coming together of a large group of people from organisations with often differing agendas.

## Recommendation

- 10) No formal body is constituted from the existing Broadband Network Delivery Group at this time. The recommendations in this report are adopted as appropriate by members of the group. Individuals and organisations take on responsibility for the delivery of particular aspects of the programme with the inform Network Group meeting once a quarter to discuss ongoing plans and making the most of the relationships between the projects themselves. Clearly, certain parts of the project (for instance the awareness campaign, skills programme and roadshow, should be pooled across various members of the current Group. Once again, however, there need be no assumption that this implies that a single company is needed to manage these projects.

## Summary

The report contains ten recommendations: -

- 1) Establish a group to plan for the demands of a very high bandwidth environment
- 2) Create a "Benefits of Broadband" campaign
- 3) Establish a Broadband Roadshow
- 4) Negotiate discounted broadband access for a group of SMEs
- 5) Set up time-limited access subsidy scheme
- 6) Establish "Broadband Skills for Creatives" programme
- 7) Extend Wi-Fi project to create Community Broadband Network(s)
- 8) Establish central, open-access web site
- 9) Set up and fund arts project(s) for this site
- 10) Do not formally constitute the Group as a company

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June 2003