



Interdisciplinary Digital Economy Research

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Response to the BERR interim report 'Digital Britain', January 2009.

Introduction

The Digital Britain (DB) report presents an overview of the current state of Britain's digital telecommunications networks and lays out an ambitious strategy for the development of, amongst other things, high-speed broadband connections for the entire UK linked to the switchover from analogue to digital TV and radio broadcasting and the development of third and fourth generation mobile devices. The report's core premise is that the UK's digital industries (hardware, software, content, networking, etc.) already constitute a significant element of the UK economy and that the expansion of digital networks (in terms of speed, quality and access) is vital to continued economic prosperity and growth. Following its brief from BERR, the report envisions a primarily private sector led expansion of the networks backed by public sector legislation, regulation and support unfolding over several years.

Whilst the DB report touches on many aspects of the development of these networks and services, overall it is chiefly concerned with technical and infrastructural issues and with the development of demand for expanded digital services. These are, of course, extremely important aspects of the future development of these networks. However, having discussed the report in some detail, members of *digitUL* wished to highlight certain areas that are either absent or underplayed but which are significant to the likely growth and success of ‘Digital Britain’. We will introduce each in turn.

1 – Education. The role of education in the creation of ‘Digital Britain’ is present, but underdeveloped. Digital technologies are rapidly being integrated into formal educational settings at all levels through the creation of Virtual Learning Environments, increasing availability of computers in schools and homes and the growing use of online content in classroom teaching. The higher education sector in the UK and elsewhere continues to be a significant innovator of online systems, archiving, visualization, software and so on. Whilst the report alludes to all of this in passing, considerably more research needs to be conducted into: a) the effects of the incorporation of digital technologies on educational practice, experience and outcomes; b) the capacity of schools, colleges and universities to maintain and/or increase investment levels in rapidly developing technologies; and c) the potential for the development of new educational infrastructures using the faster networks.

2 – Inclusivity. The issue of inclusion in the new and expanded networks is treated in the DB report as primarily a question of access. Inclusivity is understood to be a function of physical connectivity, demand management/creation and content production. Little or no consideration is given to questions of *affordability* (particularly in the context of the current economic situation), *desirability* (demand is simply assumed to follow automatically from supply), *security* (the extension of digital services to vulnerable social groups poses new challenges) or *sustainability*. Many of these questions are left to the Government’s ‘digital inclusion team’ as matters to be dealt with *after* the new networks and services are created. Research into these areas now, however, might suggest different ways that infrastructure, connectivity and content can be structured either to

ensure a greater level of inclusion (more broadly defined) from the outset or to mitigate foreseeable problems (e.g. the rapid obsolescence of home computing equipment).

3 – Copyright. As above, there is an assumption running through the DB report that the issue of copyright will be resolved through regulation after the construction of the digital networks. Given the complexities of these issues – demonstrated by recent international court cases such as those involving Napster, Pirate Bay, etc. – the issue of rights will not be so easily remedied. Just as important, the significant increases in access, traffic and participation in the expanded networks will create new environments in which existing rights regimes will be severely tested. No consideration is given in the DB report either to the likely efficacy of current rights legislation or to the possibility that very different rights regimes may emerge. Similarly the report assumes a straightforward producer/consumer relationship with respect to digital content, goods and services. As examples such as open source, copyleft, copyriot, digital commons, indymedia and others have already demonstrated, this assumption as a basis of massive investment seems at best questionable.

4 – Location technology. Despite being primarily being driven by technological considerations, important areas of software, hardware and infrastructure are not mentioned. Of particular significance are spatial technologies (GPS, mobile GIS, location-based services and location via mobile phone/wi-fi signal) that are increasingly being incorporated into mobile devices and used as means of defining and targeting territorial markets. These developments raise not only opportunities but also significant issues concerning regulation, privacy and inequality on the part of consumers. Further, for potential commercial producers innovating concepts of value to the UK economy, there are long-standing concerns regarding Government agency control over copyright, costs and distribution of spatial data. The Ordnance Survey, for example, in spite of being a government agency holding data whose collection was funded by public monies, severely restricts access to its mapping data for certain types of application. The capacity of content providers to develop products relevant to the new networks presupposes access to datasources that are currently restricted for either security or commercial

confidentiality reasons. At present, UK developers are already at a disadvantage on this issue in relation to both the USA and other EU countries; this divergence of opportunity is likely to increase as location-based services and digital worlds become more widely used in commerce over the next 5-10 years unless these underlying data issues are tackled.

5 – Wider context. The DB report repeatedly cites the examples of the electricity and water supply networks as precedents for the issues to be faced in creating advanced digital systems. Quite apart from the doubtful relevance of these utilitarian examples to the much more complex issues raised by interactive digital networks, the DB report does not situate its proposals in the context of earlier attempts to create digital and/or telecommunications networks in the UK or elsewhere. More compelling precedents, for example, might be found in the Alvey programme (1983-1990), the BIDE Report 1986, the JCI programme (Joint research Councils Initiative in Cognitive Science and Human-Computer Interaction (1998) and Esprit (1994-8). All of these had similarly ambitious plans for large-scale networks of various kinds and in all cases had very mixed results. A key problem identified in those programmes that were least successful was the prioritisation of technical infrastructure over broader theoretical and contextual matters. In effect this led to the creation of complex networks in the hope that appropriate functionality would develop spontaneously as a market response, something that did not happen.

In addition to the historical context, the wider social implications of a networked society are not considered. What, for example, are the health implications of increased screen-based working and/or greater exposure to electromagnetic radiation (cf. the recent European Parliament Report on health concerns associated with electromagnetic fields (2008/221(INI)))? What are the likely consequences, particularly for children, of increasing use of social networking sites not just in terms of security but in terms of life-chances and experience? Given the potential for these networks to impinge on every aspect of government policy and on the wider society, their relative neglect in the DB report is of concern.

We raise these issues not in on the assumption that they all have negative impacts on the likely success of the programme laid out in the DB, but because they are current issues that could be significantly affected by the planned expansion of the networks and/or which could have implications for the successful roll out of new technologies, industries, applications and so on.

Should you wish to discuss these matters further, please do not hesitate to contact us.

Yours faithfully

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(On behalf of the *digitUL* research group)

About *digitUL*

digitUL is an interdisciplinary group of researchers at the University of Leicester. With members drawn from computer science, psychology, geography, politics, media and mass communication, museum studies, law, management and sociology, the purpose of the group is to develop creative synergies between different approaches to digital systems. Created in 2008, the group brings together over 50 researchers from across the university to conduct innovative and advanced research into the technical, social and political implications of a digital society.