Klontzas, Michael

iVision and the BBC: Building Public Value

Original Citation


This version is available at http://eprints.hud.ac.uk/3666/

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@ hud.ac.uk.

http://eprints.hud.ac.uk/
iVision and the BBC: Building Public Value

Michael Klontzas, City University, London, UK

Abstract

Breaking with conventional wisdom that sees public service broadcasters as conveyors of content in line with historically shaped socio-political ideals, centred on quality, access, diversity and independence, evidence suggests that PSB is often the driving force behind key technological innovations serving public policy aims. In the drive towards wholesale digitalisation and the accelerated introduction of an information society, this hitherto understated function is now deemed critical and comes to the fore. More specifically, recent public policy initiatives in the UK, culminating to the 2006 White Paper, openly assign the mission of contributing to the process of ‘building digital Britain’ to the BBC, the flagship public service broadcaster. This vision of digitalisation is defined in broad terms in the policy discourse, as involving all platforms indiscriminately. The BBC’s contribution, designed to entice users to a digital future and simultaneously cement the continued relevancy of the institution in the 21st century, finds expression in a variety of implemented and proposed digital services deliverable over a range of digital platforms, including television and radio, the internet and mobile networks. This paper seeks to interrogate the host of controversial and closely scrutinised internet services offered by the BBC in the light of the digital vision articulated in the public policy discourse. These services shift the emphasis away from the time-honoured broadcasting paradigm to a more interactive approach. Through widespread application of emerging Web 2.0 practices, the users are now invited to participate, and generate and share their own content. The imminent iPlayer, the on-demand television and radio catch-up online facility (pending regulatory approval), promises to free users from the straightjacket of linear, scheduled programming, allowing them to time-shift and possibly space-shift their viewing and listening experience around their personal choices and needs. These initiatives are not developed in a vacuum. They are not merely part of an evolutionary process. They are expressions of a certain policy agenda and historically situated conceptualisations of the public interest and ‘public value’. Their appropriateness is evaluated on this basis.

1. Introduction - Commitment to digital

The broadcasting history of Europe demonstrates the crucial intervention of public service broadcasters in spearheading and at times even rescuing policy initiatives, ranging from the introduction of the very first broadcasts, to the current push towards digitalisation. In this context, the rise of the internet is understood as both a challenge and an opportunity that public service broadcasters in Europe cannot ignore. The particular focus of this paper is on the role that the BBC plays in response to the emerging dynamics. While reporting on the latest developments surrounding the recent White Paper (DCMS, 2006) and new BBC Royal Charter (2007), together deciding the prospects of the BBC, the discussion is anchored in the wider framework of the long, critical involvement of the broadcaster in facilitating the implementation of the broader digitalisation policy in the UK now and in the future.
It is a tradition of sustained commitment to expressed socially and politically significant agendas that progressively cements BBC’s institutional makeup as a policy delivery mechanism. Its historical contribution has been catalytic in a vast array of policies that often had little to do with content provision. In the convergence era this role becomes more prominent than ever before. In the drive towards analogue switch-off in the UK, now set to be phased-in between 2008 and 2012, near-universal take-up of digital television by the viewers is an essential precondition. In this context, government and industry alike accept that the BBC is indispensable in the promotion of digital penetration. Its involvement has been critical for the launch and establishment of Digital Audio Broadcasting (DAB) in 1995. Following the demise of ITV Digital in 2002, it rescued the Digital Terrestrial Television platform (DTT), now known as Freeview, and the switchover plans. Only last April it had its longstanding proposal for Freesat approved by the BBC Trust. This subscription-free digital satellite platform is meant to offer the ¼ of all UK households, which cannot yet receive Freeview, a universally available free route to digital television, in the run-up to analogue switch-off. The BBC has been driving digital take-up by introducing compelling digital-only television and radio services. It has been investing resources and its trusted household brand in the new platforms (Klontzas, 2006a: 111-21; Klontzas, 2006b: 608-10; Klontzas, 2004; Conlan, 2007; BBC Trust, 2007b).

2. New media strategy

These moves progressively come to dovetail with BBC Online and a broader new media strategy outlined as Creative Future in April 2006. Centred on a combination of interactivity, branding and content, BBC Online has been exhibiting ambitions to become a global brand since its early days. It places the internet ‘at the heart of a new mission in the digital era, summarised as “creativity, learning and citizenship”’, with an emphasis on adding value to other services, providing UK content in a market dominated by US material, and acting as a ‘trusted guide’ to the web (Hills & Michalis, 2000: 489-90). By now, the scope of BBC Online's portfolio has widened dramatically, cutting across a variety of spheres ranging from complementing its broadcasting services to promoting education, and encouraging participation and creativity.

In line with the BBC’s public purposes, as laid out in the 2006 White Paper, Creative Future was the result of ten teams and hundreds of people working for a year to explore what the BBC needs to do over the six years to 2012 to stay abreast of developments and audiences’ expectations. The underlying concern is the ‘seismic shifts in public expectations, lifestyle and behaviours and on building new relationships with audiences and individual households’. Addressing the far more disruptive effect of the impeding second wave of digital in an on-demand world, the key recommendations emphasise the importance of ‘360 degree
cross-platform content’, personalisation, richer audio-visual and user generated content, easier navigation, greater audience understanding and new media technologies (BBC, 2006a).

**Creative Future** reflects the long-term commitment of the BBC to transform itself into a broadcaster for the digital age, spending at least £106 million a year (out of its £4 billion a year licence fee budget guaranteed now until 2012) on its new media ‘find, play and share’ strategy. This strategy is five-fold. It involves:

a. its ‘legacy’ products, for example, its news web site, its parenting site or some of its educational services that form the core of its remit to inform, educate and entertain

b. moving its audio-visual assets into the on-demand space so that its content is made available at any time, anywhere through its iPlayer

c. sharing user-generated formats through a ‘digital campfire around which the audience can gather and share stories’ (e.g. the Reaction Network, Film Network and message boards). Building on a monthly UK audience of 15 million reached by bbc.co.uk and its registered user-base of 3 million, this facility, dubbed as BBC 2.0, will be a public service version of something similar to MySpace or Flickr.

d. commissioning new formats that are focused on new media

e. acting as a trusted guide to the web by developing navigation facilities, based on Web 2.0 recommendation engines and social software, that will provide easy access, not just to the BBC’s content, but to all British content across all digital platforms, including the web, digital mobile and iTV (Gibson, 2007; New Media Age, 2006).

The development that promises to consolidate the BBC’s broadband strategy is the soon-to-be launched BBC iPlayer – formerly known as integrated Media Player (iMP) or MyBBCPlayer. The facility seeks to extend and build on the success of BBC’s Radio Player/Listen Again, which dramatically increased consumption of its radio services by offering access to streamed live and on-demand deferred reception of a radio programme up to seven days after its original transmission. Following a successful four-month trial between November 2005 and February 2006, involving a representative closed panel of 5,000 triallists, last April the proposed service was finally approved by the BBC Trust, the body that replaced the Board of Governors in the new Royal Charter period, and iPlayer is planned to be rolled out later in the year.

It ‘aims to put the audience in the driving seat’ by offering users live streamed television and radio, as well as a downloadable seven-day catch-up service over the internet and cable. The BBC’s Director of New Media & Technology, Ashley Highfield, revealed at Milia, the audiovisual and digital content market at MipTV in Cannes, that the research indicated that iMP increased the viewing of BBC programmes, extended peak-time and built loyalty (New Media Age, 2006; Broadband TV News, 2005; BBC, 2006b; BBC Trust, 2007a).
For the development and the potential of iPlayer, the BBC adopted an inclusive attitude, trying to involve many industry players in a drive to offer its ‘audiences platform-neutral, universal access to its content’. As Highfield stated at the MIX06 conference,

> We have a duty of universality, so it’s vital that we innovate through a number of strategic partnerships with technology companies and distributors such as Microsoft, Apple, Sony, Homechoice, NTL and Telewest.’ (BBC, 2006c)

The BBC hopes that iPlayer will become the standard way of downloading television programmes over the internet in the same way as Apple’s iTunes has become the favoured means of downloading music for iPod owners. It is also in talks with other broadcasters about making the iPlayer a gateway to other channels, and Channel 4 and ITV in particular expressed keen interest (Gibson, 2005a). iPlayer makes economic sense for the BBC. It represents an opportunity to make video distribution more efficient. Conventional programming delivery costs £7 million a year, or £700,000 over satellite. By using peer-to-peer technology and multicasting the cost drops further to £70,000, adding to the frustration of broadband providers who will see their network traffic increase dramatically (informitv, 2006a).

Very importantly, with iPlayer the BBC will be better positioned to exploit commercially its huge back-catalogue, brand-name and appeal abroad. By remit, the BBC cannot charge the British public for its services or introduce advertising in its programmes in the UK because the licence fee payers have already paid for those services. Conversely, it is mandated to extract revenue from exploiting its assets on the global market which, combined with efficiency gains across the board, will generate additional funding for making quality programmes.

The BBC confirmed that technology tested during the 2004 Athens Olympics, when the BBC provided hundreds of hours of live coverage to broadband internet users, it successfully tested software allowing it to restrict transmission to UK licence fee payers. Earlier technologies tested had proved unreliable. Since then other webcast events and BBC programmes are restricted to UK households. This means that iPlayer could identify non-UK residents and through its commercial arm, BBC Worldwide, the BBC could charge international viewers for downloading content or, as controversially announced, introduce advertising to bbc.com, the international version of bbc.co.uk, when accessed from overseas, to the dismay of the commercial competitors. The possibility of a commercial version of iPlayer is one model, but the BBC is also reportedly considering strategic partnerships (e.g. with Google) (Gibson, 2005b; Gibson, 2006; Sweney, 2007).

The BBC is looking to introduce its iPlayer in three versions: (a) a public catch-up service allowing domestic audiences to view a programme up to seven days after it is aired; (b) a BBC Worldwide-run commercial download service where UK subscribers will be allowed to keep the content that they acquire; and (c) a
BBC Worldwide-run international commercial version giving viewers an opportunity to access BBC content. None of these are likely to feature internationally acquired content, making talks over rights acquisition within the UK crucial (Broadband TV News, 2006).

Through its commercial arm, the BBC is keen to distribute its own content internationally via an expanding range of agreements with key global players. On several occasions, BBC officials flagged up the idea that the BBC would be looking at strategic partnerships (e.g. with Google and Apple’s iTunes, or ‘the other usual suspects’), but no concrete plans are disclosed yet. For one, seeking to expand the reach of the type of content broadcast by BBC Prime, the BBC Worldwide entertainment channel, capitalising on Britishness through new media platforms, seems an obvious strategy. Last March saw the launch of two BBC-branded entertainment, and one dedicated news clips channels on YouTube intended

‘to increase reach through the partnership, to bring new audiences to the proposed BBC iPlayer service, and to secure commercial revenue via BBC Worldwide, its commercial subsidiary, to supplement the licence fee’ (New Media Age, 2006; Fry, 2006; BBC, 2007).

3. The enabling context
For these developments to take place, a number of enabling conditions had to be fulfilled. Recent advances in technology made online delivery of audiovisual content a realistic mass consumer market proposition. BT’s decision in March 2006 to upgrade swiftly its PSTN infrastructure from 2Mbps to up to 8Mbps nationwide at no cost to consumers or industry, a plan that involved 5,300 exchanges and 99.6% of UK homes and businesses, placed the UK in the first position of broadband availability among the G8 countries. This, coupled with the adoption of more efficient compression technologies like MPEG-4, which reduces the bandwidth required for the transmission of a single standard definition audiovisual stream to 1.2-2Mbps (down from the previous 5Mbps achieved with MPEG-2) was an essential component in rolling out broadband television. With ADSL+ higher speeds, up to 24Mbps, are already available through certain service providers that, having taken advantage of Local Loop Unbundling (LLU), have installed their own equipment in BT exchanges, mainly in urban areas. This amount of bandwidth is sufficient to carry even HDTV transmissions (Informitv, 2006b; Taaffe, 2006).

The public internet, as opposed to purpose-built proprietary networks designed to support IPTV (Internet Protocol Television), is not inherently suitable for broadcast-type distribution of audiovisual content. The insurmountable scalability issues associated with unicasting are to be addressed by BT already investing billions in a next generation network that will eventually support multicast, a technology that effectively allows even millions of users to join or ‘tune’ to a particular channel. The BBC and ITV have been trialling
the technology since March 2006. In the meanwhile, another way round the bottleneck challenge is peer-to-peer (P2P) networking, the core distribution technology in iPlayer and similar webcast facilities such as Veoh and Joost (informitv, 2006c).

A significant requirement before online distribution of television became feasible was resolving the intellectual property rights restrictions, originally designed for an offline world. Ofcom’s (Office for Communications, the UK communications super-regulator) *Television Production Sector: A Review*, launched in February 2006, highlighted the need for more clarity on the new media rights position, but consistent with its light-touch deregulatory approach, it made clear that it did not seek to propose a prescriptive solution to this issue. The new arrangement should emerge through commercial negotiation between broadcasters and producers, rather than by means of regulatory intervention. However, Ofcom reserved the right to impose a solution. If, by the end of the consultation period, it became clear that the industry was unable to agree that these issues could be successfully resolved, Ofcom stated it would have little choice but to conclude in its policy statement that intervention would be needed through changes to the Codes of Practice governing the relationships between the main terrestrial broadcasters and independent producers. The regulator indicated that as platforms and types of rights proliferate, a possible approach might involve a new definition of rights windows based on time, rather than platform (Ofcom, 2006).

Responding to Ofcom’s calls for a new media rights deal to be reached without regulatory intervention, Pact, the UK trade association for producers in film, television and interactive media, just in time before the end of May deadline, finalised changes to their existing agreements with the BBC. Extended windows were enabled to allow viewers to catch up on previously broadcast programmes using video-on-demand services. Viewers will be able to use video-on-demand or download services to catch up on any episodes of a series that they have missed providing that the series is still being transmitted. They will also be able to download and store programmes locally for later viewing. Once accessed, they will have seven days to view them. Commercial video-on-demand rights will be available to exploit in the UK for the first time. Independent production companies will also have greater freedom to exploit other new media rights and enjoy an improved share of revenue from commercial exploitation in the UK. Soon afterwards, similar agreement between Pact and Channel 4 and ITV were reached, allowing for 30-day windows (Pact, 2006; White, 2006; Pact, 2006b; Pact, 2006c).

These developments clearly signal the growing importance of rights on secondary markets, in anticipation of the rise of online and mobile content distribution. Sales from new media and mobile rights may still be tiny, but as more content is delivered over new services, this is expected to grow rapidly. This agreement is
designed to accommodate the BBC’s plans to introduce catch-up and on-demand services through its iPlayer, and at the same time safeguard the independent producers’ intellectual property rights.

4. Creative Future and reactions

The ambitious plans, known as BBC Director General Mark Thompson’s Creative Future vision, are not without controversy though. Unsurprisingly, this phenomenal expansion is met with severe criticism from a number of camps, most notably the Conservative party and affected industry players. They feel the BBC, using its powerful brand and abundant resources, free from commercial risk considerations, may waste public resources in areas that are not strictly justified by its public service remit or the need to compensate for a non-existent market failure. Pouring substantial investment into new media activities that are evidently delivered well by the market is arguably unnecessary and even damaging, driving commercial competitors out of the market it distorts, and running against the public interest that the broadcaster is required to serve. For example, according to Mike Darcey, Group Commercial and Strategy Director at BSkyB, if the whole BBC archive were to be free online, ‘it would be extremely difficult for any other video-content business models to survive, apart from possibly Sky with sport and movies’ (McCrone, 2006). From this perspective, certain offerings do not fit in the traditional PSB model of universally available information, education and entertainment. The appropriateness of public service broadcasters expanding into the internet was challenged by the European Commission (1997: 29). Some of these services attract more attention than others, particularly when they go beyond clearly being an extension to traditional BBC activities, and commercial interests are at stake. A pertinent example is BBC Jam (formerly the Digital Curriculum). With a budget of £150 million, the online interactive learning service for 5 to 16-year-olds was discontinued in March 2007 by the BBC Trust after complaints to the European Commission from commercial rivals (BBC, 2006e: 45, BBC, 2007; Kiss, 2007; Cave et al, 2004: 263).

The possible chilling effect the involvement of the BBC may have on competition and innovation is frowned upon in terms of UK and EU competition policy. It is addressed in the 2004 Graf Report to the Department of Media, Culture and Sport. The issue is upheld in the 2006 White Paper, which introduces the ‘public value test’ by the BBC Trust, and the ‘market-impact assessment’ by Ofcom. All new BBC ventures and substantial changes to existing ones will have to be subjected to the test and the assessment. iPlayer and Freesat were among the first proposed new services to get clearance by last April. Another proposal to be submitted for approval in the second half of 2007 is the BBC Archive, currently undergoing trialling. It is hoped to make an estimated one million hours of previously broadcast TV and radio programmes available to licence fee payers on-demand as an extension to iPlayer. Other notable services include a revamped BBC
Jam and the Creative Archive developed in partnership with the other Creative Archive Licence Group members with the aim to allow re-editing, using and sharing appropriately cleared content for non-commercial creative purposes (McCrone, 2006; Ofcom, 2004a; Ofcom, 2004b; Ofcom, 2004c; Ofcom, 2004d; DCMS, 2004b; DCMS, 2004c; BBC, 2006d; Creative Archive).

In its defence, the BBC claims moving with the times is an intrinsic part of being a public service broadcaster in the digital era, and that its involvement actually helps to stimulate the industry. On iPlayer specifically, the BBC suggests it has a positive market impact as it opens the way by trying to figure out how to implement digital rights management over a peer-to-peer network on behalf of the whole industry. According to Jonathan Lambeth, director of communications for AOL UK, the risk of the BBC not being staked out in broadband ‘is greater than any potential downside’ (Sheppard, 2005).

5. Controversy policy discourse

Recent policy discourse is centred on the tension between this market distortion potential of the BBC, and the proactive role it is invited to play in promoting digitalisation. On the one hand, there are calls for it to be restrained to providing services that are distinctive from what the market can deliver. On the other, it is expected to lead the way into the digital era. Tessa Jowell, the Secretary of Culture, Media and Sport, explains that

‘...the BBC is not the only player in the market. It doesn’t operate in a vacuum. When it flexes its muscles, the rest of the market feels it.’

Then, in the same breath, she adds:

‘But, by the same token, it’s important that we never forget that the BBC is not some aberration that landed by circumstances out of our control and continues to persist in occupying the broadcasting environment. The BBC is there as a deliberate act of public policy.’ (Jowell, 2006: 12)

This duality is also found early on in the 2004 Graf Report, the outcome of the review of BBC Online complementing the almost concurrent reviews of BBC’s digital radio and digital television - all feeding into the review on the BBC’s Royal Charter, which was renewed for ten years started in January 2007 (DCMS, 2004a, BBC Royal Charter, 2007). This report addresses the concerns of the commercial sector by acknowledging the adverse impact BBC Online may have on competition, and by insisting that:

‘BBC Online should be clearly distinctive from commercial offerings. The quality of a particular service, however high, does not constitute distinctiveness per se. [...] In some cases, there seems little real difference between BBC Online and its commercial rivals, apart from advertising content.’ (DCMS, 2004a: 10)
At the same time, however, the report accepts that the BBC, in conjunction with key stakeholders, has a significant role to play in promoting take-up of broadband and the internet, countering the digital divide (ibid: 11-3). It should continue 'to act as a home and guide to the internet for those who require it' (ibid: 9).


In the context of this paper, the key point is that since the late 1990s the BBC (and not only) sees itself as being inextricably linked to the process of digitalisation. ‘Building digital Britain’ is understood as falling within the scope of the public service remit of the Corporation. Year 2004 signals a significant shift. Take-up of the internet is now brought under the same banner as digitalisation of television and radio. In fact, the internet is treated as just another digital platform, with references to ‘BBC on demand’, ‘video-rich broadband’, the Creative Archive and open source navigational tools finding their way into discussions previously reserved for BBC initiatives designed to promote digitalisation of the broadcast media (BBC, 2004a: 11). Following on the 2005 Green Paper, the contribution the BBC is expected to make towards pushing digitalisation forward is cemented in the 2006 White Paper, which introduces a sixth, special purpose that all BBC services should aim to fulfil in the new Royal Charter period: ‘Building digital Britain’, or as the Charter expresses it,

‘In promoting its other purposes, helping to deliver to the public the benefit of emerging communications technologies and services and, in addition, taking a leading role in the switchover to digital television.’ (BBC Royal Charter, 2007: §4)

The broadcaster does not only aim to ‘develop a deeper relationship with licence fee payers and to strengthen BBC accountability’ by being a starting point on the internet and guide to the medium. It is also ‘a leader in promoting take-up of the internet’ (BBC, 2005: 16, 39). The recent policy documents highlight the adverse impact this formidable behaviour might have on competition, and the 2006 White Paper ventures to contain those ill-effects by introducing ‘Service Licences’ and the Public Value Test, to be applied to ‘all [BBC] proposals for significant change to existing services or for new services’ (DCMS, 2006: 7, 28).

Structured around the role of the BBC Trust, the ‘guardians of the licence fee and the public interest’, this ‘new triple-lock system’, as Tessa Jowell described it, is meant ‘to embed transparency and certainty into its decision-making’ (Jowell, 2006: 9; BBC Royal Charter, 2007: §22). Sceptics fear that
'under pressure from the commercial sector those service licences[may] become straitjackets which actually prevent the BBC from adapting its programme strategies and its operational decisions to ensure that it does indeed remain central to British cultural life.' (Barnett, 2006: 25)

To critics, such as former BBC Director General Greg Dyke, the BBC's new governance system is an ‘unworkable “fudge”’ holding back the introduction of new services. iPlayer has already taken four years to get to the approval stage, and it will not be launched before autumn. In the meanwhile, the BBC missed the opportunity to be ahead of the game, as Channel 4 and ITV recently launched their own broadband video download services (Tryhorn, 2007).

6. Conclusion

Breaking with the past, over the last six or seven years, public policy debate has been seeking to lay down a more explicit, prescriptive framework for the contribution of the BBC in promoting public policy. This becomes evident from the outset in the engagement of the BBC in the process of digitalisation, starting with its participation in the Digital Television Action Plan. The whole range of documents released by Ofcom and the Department of Culture, Media and Sport (DCMS) in 2004 affirms the premise that the BBC should be instrumental in driving digital. The prescriptiveness in this approach, informing the new ten-year Royal Charter, becomes clearer with the advent of the new, sixth purpose for the BBC in the 2006 White Paper: ‘Building digital Britain’ (DCMS, 2006: 6). The recent less-than-generous licence fee deal, determining the BBC's income for the next six years, now openly requires the BBC to commit resources to the switchover effort. It is expected to contribute £600 million for targeted help for vulnerable groups making the switch to digital television, another £200 million towards Digital UK’s marketing campaign publicising the transition, and to cover the £400 million cost of building a ‘media centre’ in Salford and moving the new media facilities there (Gibson, 2007). Greg Dyke argues that the BBC made a mistake even contemplating allowing ‘the government to shift the costs of digital switchover on to the licence fee. [...] If you are the government or parliament and you want to switch off the analogue signal, that’s your responsibility’ (Tryhorn, 2007).

In the same vein, some commentators challenged this arrangement by pointing out that the ultimate beneficiary of analogue switch-off would be the government:

'It is pretty clear that the corporation is now regarded in some important parts of Whitehall as just another government department, with its licence fee a ready source of cash to support a variety of policy objectives - at no apparent cost to the taxpayer.’ (Hewlett, 2007)
Bibliography


BBC (2004a), Building public value: Renewing the BBC for a digital world. London: BBC.


BBC (2006b), Press release: iMP trial shows television over the net could revolutionise broadcasting, says BBC's Head of New Media, 5 April, [http://www.bbc.co.uk/pressoffice/pressreleases/stories/2006/04_april/05/imp.shtml](http://www.bbc.co.uk/pressoffice/pressreleases/stories/2006/04_april/05/imp.shtml) (last visited: 16/5/07).


BBC Royal Charter (2007)


BBC Trust (2007b), BBC Trust final conclusions on BBC participation in a “Freesat” proposition, 27 April.

Broadband TV News (2005), ‘iMP integrates into MyBBCPlayer’, 5 September.


New Media Age (2006), ‘BBC makes long-term plans for new media’, 13 April.


Sheppard, F. (2005), ‘The Beeb wants to take a lead in on-demand telly’, The Scotsman, 1 September.


