

Regulatory and industry background

Introduction

1. This appendix provides supporting background material on the regulatory environment and the media sector in which ITV and BSkyB operate.

Regulatory background

2. The regulatory environment affects broadcasters in different ways, partly for historic reasons but also because the industry has not been homogeneous and has included licence-fee-funded public service broadcasters (the BBC), commercial public service broadcasters that are funded by advertising revenue and other commercial broadcasters without any public service functions that are funded through a mixture of advertising and subscription.

The BBC

3. The BBC is established by a Royal Charter and funded by a licence fee. The current Charter which came into force in 2007 runs until the end of 2016. Under the Charter, the BBC is governed by the BBC Trust, which sets the strategic direction of the BBC and has a clear duty to represent the interests of licence fee payers. The Trust sets purpose remits, issues service licences and holds the Executive Board to account.¹ Operational responsibility rests with the Executive Board. An Agreement² which accompanies the Charter recognizes the BBC's editorial independence and sets out its public obligations in detail.

¹The BBC Trust must set Purpose Remits for each of the BBC's Public Purposes. These define the Trust's priorities for the Executive Board and explain how it will judge the Executive's performance against them. The six Public Purposes include, for example, sustaining citizenship and civil society, promoting education and learning and stimulating creativity and cultural excellence.

²*Broadcasting: An Agreement Between Her Majesty's Secretary of State for Culture, Media and Sport and the British Broadcasting Corporation*, Cm 6872.

4. The regulatory obligations of the BBC's UK Public Services are contained in articles 43 to 63 of the Agreement. These articles deal with such matters as content standards, accuracy and impartiality, the Fairness Code, quotas for independent productions and international obligations. Ofcom's functions in relation to the BBC are contained in the Charter and Agreement, Part 5 of the Broadcasting Act 1996 (broadcasting standards) and CA 2003. So, for example, article 29 of the Agreement requires the BBC Trust and Ofcom to establish a Joint Steering Group in respect of market impact assessments in order to apply the Public Value Test in relation to any significant proposal the BBC might have to modify its UK Public Services.

Ofcom's regulatory powers

5. Ofcom's principal duty in carrying out its functions is to further the interests of citizens in relation to communications matters and to further the interests of consumers where appropriate by promoting competition. Section 3 of CA 2003 divides Ofcom's duties into six areas:
 - a. ensuring optimal use of the spectrum;
 - b. ensuring that a wide range of electronic communications services—including high-speed data services—is available throughout the UK;
 - c. ensuring a wide range of television and radio services of high quality and wide appeal;
 - d. maintaining plurality in the provision of broadcasting;
 - e. applying adequate protection for audiences against offensive or harmful material;
and
 - f. applying adequate protection for audiences against unfairness or the unwarranted infringement of privacy.
6. Ofcom also regulates through codes, which licensees are obliged to comply with via their licence conditions. There are codes on television access services (subtitling,

signing and audio description), broadcasting, cross-promotion, sports and other listed events, EPGs and rules on the amount and distribution of advertising.

7. If a licensee is found to be in breach of a condition of its licence, Ofcom may, among other sanctions available to it, issue a direction requiring compliance with the relevant licence condition and may impose a fine. Ofcom also has the power to revoke the licence where the broadcaster is in breach of its licence if no other remedies are considered appropriate and it is necessary in the public interest to do so.

Electronic Programme Guide services

8. Ofcom's Code on Electronic Programme Guides (EPG Code) requires all providers of EPGs licensed under the Broadcasting Acts to give public service channels (which currently comprise all BBC television channels, ITV1, Channel 4, Five and S4C Digital and the digital public teletext service) such degree of prominence as Ofcom considers appropriate. The EPG Code also requires that undue prominence is not given to connected channels on an EPG, that an objective policy for allocating listings on the EPG is maintained and published, and that any agreement with broadcasters for the provision of an EPG service is made on fair, reasonable and non-discriminatory terms. BSkyB is subject to these requirements.
9. In addition to the EPG Code, BSkyB is subject to certain access conditions concerning its EPG. Under section 45 of CA 2003 Ofcom has the power to impose 'access-related conditions' and has done so in the case of BSkyB's subsidiary, Sky Subscribers Services Limited (SSSL), in relation to the provision of conditional access services. These conditions include, for example, a requirement to provide conditional access services upon request, on fair and on reasonable terms. Although class licences issued to BSkyB under the Telecommunications Act 1984 have largely been revoked, certain provisions in those licences remain in force, including, in

particular, conditions relating to the provision of EPGs and access control services for digital transmissions.

Digital terrestrial television and multiplex licensing

10. The regulatory framework for DTT is set out in Part 1 of the Broadcasting Act 1996 (as amended by CA 2003) which provided initially for the availability of six frequency channels or 'multiplexes' each able to carry at least three television channels together with some additional data services.
11. 'Multiplexing' facilitates the digital broadcasting of several services in a single frequency channel. The provider of the multiplex takes the broadcaster's services and assembles them into a multiplexed digital bit stream which is sent to transmitter sites where it is modulated and amplified and then transmitted from the aerials on radio masts. To achieve this, the multiplex provider must enter into commercial contracts with the owners of site and mast facilities and also secure the required transmission equipment. The multiplex sends the packaged parts of each signal sequentially so that the receiver can separate and decode them.
12. Prior to the establishment of Ofcom, all multiplex providers had to be licensed by the Independent Television Commission (ITC). Multiplex licences were awarded by competitive tender to those whose applications were best calculated to promote DTT development. The Broadcasting Act 1996 specified the matters to be taken into account when deciding on the award of multiplex licences including the applicant's plans for transmission infrastructure provision, the variety of programme services to be transmitted and the promotion of receiving equipment.
13. In relation to the application for Multiplex C considered in 2002, the ITC imposed conditions including one which provided that although BSkyB could supply the three

channels named in the application it could not manage a multiplex itself.³ Current regulation of multiplex services is carried out by Ofcom. Table 1 shows the current multiplex providers, their respective ownership structures and the channels which sit on each multiplex.

14. Section 17 of the Broadcasting Act 1996 provides that, if Ofcom is satisfied that the holder of a multiplex licence has failed to comply with any condition of the licence or with any direction given to the holder, Ofcom can impose a financial penalty or give a notice reducing the period for which the licence is in force by a specified period which cannot exceed two years. A multiplex licence continues in force for a period of 12 years with the option, subject to certain conditions, of renewal for a further 12-year period.

Media ownership and control

15. Section 350 and Schedule 14 CA 2003 relax certain former restrictions on licence-holding and establish new rules relating to the ownership of cross-media services. Paragraph 2 of Schedule 14 replaces restrictions on participation in companies holding Channel 3 licences (formerly contained in Part IV of Schedule 2 to the Broadcasting Act 1990 as amended by the Broadcasting Act 1996). No person may hold more than a 20 per cent share in such a company if he is the proprietor of national newspapers with more than a 20 per cent share of the total national market. CA 2003 removed this restriction in relation to Channel 5.
16. Under section 351 CA 2003, Ofcom must carry out a review of the effects or likely effects on a Channel 3 licensee's programming if there has been a 'relevant change of control'. For these purposes, a 'relevant change of control' means a change in the persons having control over a body holding the licence to provide a Channel 3

³ITC News Release of 4 July 2002.

service or any body which is connected with a body holding such a licence and is involved, to a substantial extent, in the provision of the programmes included in the service provided under that licence, or is likely to become so involved.⁴ The programming matters which would need to be considered include the extent to which time is allocated to different types of programming such as news and current affairs; regional production; and the quality and range of programming.

17. Section 281 CA 2003 requires that the Channel 3 licences include conditions securing that a person cannot become the appointed news provider for Channel 3 if the ownership restrictions in CA 2003 were contravened if that person held a Channel 3 licence.

Conditions relating to competition

18. Section 316 CA 2003 allows Ofcom to include conditions that it considers appropriate for ensuring fair and effective competition in the provision of licensed services and connected services. Ofcom has considered it appropriate to include such conditions in the licences for Channel 3, cable/satellite services, DTT channels and multiplexes. Among other provisions, these licences may include conditions requiring that a licensee shall:
 - a. not enter into or maintain any arrangement, nor engage in any practice, which is prejudicial to fair and effective competition in the provision of licensed services or of connected services;
 - b. comply with any code or guidance for the time being approved by Ofcom for the purposes of ensuring fair and effective competition in the provision of licensed services or of connected services; and
 - c. comply with any direction given by Ofcom to the licensee for that purpose.

⁴CA 2003, section 352(10).

19. Ofcom retains concurrent powers under the Competition Act 1998 (Part 1) and its power under section 316 CA 2003 should not be used if it is more appropriate to use the concurrent competition powers.⁵

Advertising

20. Section 322 of CA 2003 requires that the regulatory regime for broadcasting licences related to the provision of television programme services, the public teletext service and other licensed teletext services are to include a condition that the licence-holder must comply with certain Ofcom directions. These include rules on the maximum time⁶ to be given to advertisements in any given time period, the minimum interval that must elapse between two periods of advertisements, the number of advertisement slots that are allowed in any programme or hour or day, and the exclusion of any advertisement from a specified part of a service.
21. Ofcom's directions regime for advertising is set out in its *Rules on the amount and distribution of advertising*. The rules give effect to, and in some respects exceed, requirements laid down in the EU Directive on Television Broadcasting 89/552/EEC (TVWF Directive) (as amended by Directive 97/36/EC).
22. For Channel 3 (ITV1 and GMTV), Channel 4, Channel 5 and the simulcast digital services of these channels, the total amount of advertising in any one day must not exceed an average of 7 minutes per hour of broadcasting. For these purposes, a day's broadcasting is deemed to commence at 6am and run for the following 24 hours, and in the periods 6pm to 11pm and 7am to 9am, the total amount of advertising must not, without Ofcom's prior permission, exceed an average of 8 minutes an hour on any one day. In any one clock hour, there must be no more than 12 minutes of advertising. There are other rules concerning break identification

⁵Section 317(2) and (3) CA 2003.

and categories of programme which cannot carry advertising. The Audiovisual Media Services Directive (AMSD) proposed by the European Commission seeks to liberalize advertising restrictions in member states and should enter into force by the end of 2007.⁷

23. For commercial channels (other than Channels 3 to 5), the total amount of advertising in any one day must not exceed an average of 9 minutes per hour of broadcasting, but this may be increased by a further 3 minutes an hour for teleshopping spots provided the time is not used for other forms of advertising. There are also special rules for teleshopping channels, self-promotional channels and certain kinds of local television channels.

Carlton Communications Plc and Granada plc: the Contract Rights Renewal Remedy

24. The undertakings accepted by the Secretary of State for Trade and Industry following receipt of the CC report on the Carlton and Granada proposed merger included the Contract Rights Renewal remedy (CRR). The CRR only applies to airtime on ITV1. The main features of the CRR are:
 - a. Advertisers and media buyers have the right to renew the terms of their 2003 contracts without charge for the duration of the undertakings.
 - b. Advertisers and media buyers have the right automatically to reduce the proportion of their ITV1 advertising spending, contracted in line with reductions in ITV1's share of commercial impacts.
 - c. ITV must ensure that any terms included in new ITV1 contracts are fair and reasonable.

⁶Standards for the content of television advertising are administered by the Advertising Standards Authority.

⁷For instance, Article 18 of the newly modified AMSD proposal of 24 May 2007 states that the proportion of advertising and teleshopping spots within a given clock hour shall not exceed 20 per cent.

- d. Advertisers and media buyers have the right to bring contractual disputes to an independent adjudicator.

Programme content

25. The Broadcasting Act 1996 as amended and section 319 of CA 2003 require Ofcom to draw up a code for television and radio, covering standards in programmes, sponsorship, fairness and privacy (the Ofcom Broadcasting Code). Broadcasters are required by the terms of their Ofcom licence to observe the Broadcasting Code.
26. The Broadcasting Code imposes requirements in relation to the accuracy and due impartial presentation of news, editorializing in relation to matters of political and industrial controversy and balance in terms of presentation. It gives effect to a number of the requirements of the TVWF Directive and was also drafted in the light of the Human Rights Act 1998.
27. The Broadcasting Code applies to radio and television content in services licensed by Ofcom, services funded by the licence fee and provided by the BBC (with certain exceptions) and to S4C.

Independent productions

28. Article 4 of the TVWF Directive obliges member states to ensure that, where practicable, broadcasters reserve a majority proportion of transmission time (subject to the exclusion of transmission time for news, sports, advertising and other content) for 'European works'. Article 5 obliges member states to ensure that, where practicable, broadcasters reserve at least 10 per cent of their transmission time (subject to the same exclusions as in Article 4), or 10 per cent of their programming budget, for independent productions.

29. Section 277 of CA 2003 sets out that the regulatory regime for all public service channels which are licensed by Ofcom are to include a condition that in each calendar year not less than 25 per cent of the total amount of time allocated to the broadcasting of qualified programmes is allocated to a range and diversity of independent productions.
30. Section 285 of CA 2003 requires public service broadcasters to have in place a Code of Practice which sets out the principles that they will use when commissioning from independent producers. These Codes of Practice set out a general framework within which commissioning takes place and are backed up by more detailed terms of trade. The Producers Alliance for Cinema and Television (PACT) has negotiated terms of trade between independent producers and public service broadcasters for independent productions. In general, these ensure a more level playing field in terms of the rights retained by the independent producer. The BBC recently introduced commissioning reforms and established a 'Window of Creative Competition' (WOCC). This initiative involves the BBC making available up to 50 per cent of its original programming budget to outside suppliers, rather than the minimum 25 per cent required to be outsourced to qualifying independents under the relevant legislation.
31. Section 285 of CA 2003 requires Ofcom to ensure that the regulatory regime for every licensed public service channel includes conditions requiring the broadcaster to put in place a code of practice in relation to its dealings with independent producers. The PACT terms of trade do not apply to BSkyB.

Sport

32. Sections 299 to 302 of CA 2003 amend provisions in the Broadcasting Act 1996 which regulate the broadcasting of sporting and other events of national interest (listed events). These provisions ensure that no UK broadcaster can obtain the rights

to broadcast live and on an exclusive basis certain sporting or other events of national interest designated by the Secretary of State, without first having offered those rights to a broadcaster in another category or if no such other broadcaster acquires those rights, then not without the prior written consent of Ofcom. The effect of these rules is that live coverage of a number of leading sports events (eg Wimbledon) cannot be shown exclusively on pay-TV in the UK.

33. On 23 June 2001, the Commission opened an investigation into the joint selling arrangements put in place by the football clubs in the Premier League for the exploitation in the UK of media rights to Premier League matches. In November 2005, The FA Premier League (FAPL) provided the Commission with improved commitments relating to the sale of the FAPL's media rights for the 2007 season onwards. The Commission adopted a decision in March 2006 formally accepting the commitments. These arrangements enable the FAPL to sell a number of packages of media rights, showcasing the League as a whole throughout each season. Live television rights are to be sold in six balanced packages with no one bidder being allowed to buy all six packages. The process will be monitored by a trustee selected by the Commission who will report on compliance. In July 2007, the Commission published a White Paper on Sport which addresses, among other things, the relationship between the sport sector and sport media. The Commission recognizes that joint selling of media rights raises competition concerns but has accepted it under certain terms, acknowledging that collective selling can be an important tool for redistribution of income and therefore, a mechanism for achieving greater solidarity within sports.⁸

⁸European Commission, Com (2007) 391 White Paper on Sport.

News and current affairs

34. Section 279 of CA 2003 requires that the regulatory regime for every licensed public service channel includes conditions that Ofcom considers appropriate for ensuring that the:
- a. Programmes included in the channel include news programmes and current affairs programmes.
 - b. News programmes and current affairs programmes are of high quality and deal with both national and international matters.
 - c. News programmes are broadcast for viewing at intervals throughout the period for which the channel is provided and the time allocated is appropriately split between peak viewing times and other times.
35. The regulatory regime for every Channel 3 service has to include conditions that Ofcom considers appropriate for securing that, in each year, the time allocated to the broadcasting of news programmes and the time allocated to the broadcasting of current affairs programmes each constitutes no less than what appears to Ofcom to be an appropriate proportion of the time allocated to broadcasting all the programmes included in the channel. On the regional Channel 3 services (taken together), it must include news programmes that are able to compete effectively with other television news programmes broadcast nationwide in the UK.

Public service remits: Channels 3, 4 and 5

36. The regulatory regime for every licensed public service channel must, under section 265 of CA 2003, include a condition requiring the provider of the channel or service to fulfil the public service remit for that channel or service. The public service remit for every Channel 3 service and for Channel 5 is 'the provision of a range of high quality and diverse programming'. In addition, some changes in programme policy require

Ofcom's consent which can lead to additional requirements, for example in relation to children's programmes on ITV.

37. The Channel 4 service was originally established under the Broadcasting Act 1981 and was regulated by the Independent Broadcasting Authority. Section 23 of the Broadcasting Act 1990 provided for the establishment of the Channel Four Television Corporation, and the Channel's functions were transferred over to the new Corporation in 1993. Channel 4's board is appointed by Ofcom with the approval of the Secretary of State. Its primary functions are now set out in section 199 of CA 2003 and its public service remit is set out in section 265(3). That section describes Channel 4's public service remit as the provision of a broad range of high-quality and diverse programming which, in particular:
 - a. demonstrates innovation, experiment and creativity in the form and content of programmes;
 - b. appeals to the tastes and interests of a culturally diverse society;
 - c. makes a significant contribution to meeting the need for the licensed public service channels to include programmes of an educational nature and other programmes of educative value; and
 - d. exhibits a distinctive character.

38. Section 295 of CA 2003 requires the regulatory regime for Channel 4 to include a condition requiring Channel 4 not to be involved, except to such extent as Ofcom may allow, in the making of programmes to be broadcast on Channel 4.

39. Channel 4's Ofcom licence requires in relation to news provision that news programmes 'shall be of high quality and deal with both national and international matters. Coverage shall be accurate, impartial, authoritative and comprehensive, in

terms of both geography and subject matter. Live coverage of important, fast-moving events shall be provided, with news flashes outside regular bulletins as appropriate’.

Industry background

Channel providers

40. Television channels consist of a linear stream of content ready for distribution. Channel providers combine different types of content, such as television programmes, films and advertisements, into a complete schedule of content. Channel providers (other than the BBC) are licensed by Ofcom and are responsible for content standards. The four original analogue terrestrial channel providers (BBC, ITV, Channel 4 and Five), along with BSkyB, account for the majority of television viewing, as shown in Table 1.

TABLE 1 Viewing by channel provider in multi-channel homes,* Q2 2007

Channel providers	Examples of channels (wholly-owned by the provider)	Audience share Q2 2007 %
BBC	BBC1, BBC2, BBC4, CBBC	31.3
ITV	ITV1, ITV3, ITV4, Citv	21.7†
Channel 4	Channel 4, Film4, More4, E4	11.5‡
BSkyB	Sky One, Sky News, Sky Sports 1	7.8
Five	Five, Five Life, Five US	5.6
UKTV	UKTV Drama, UKTV Food	3.9
Virgin Media	Trouble, Bravo, LIVING, Challenge	2.7
Discovery	Discovery, Discovery Science	1.5
Nickelodeon	Nickelodeon, Nicktoons	1.3
Disney	Disney Channel, Disney Cinemagic	1.1
Cartoon Network	Cartoon Network, Cartoonito	0.8
Emap	Karrang!, Kiss, FHM, Q, The Box	0.8
MTV/VH1	MTV One, MTV Dance, VH-1	0.9
Hallmark/Movies 24	Hallmark, Movies 24, Movies 24+	0.7
Paramount Comedy	Paramount Comedy 2	0.6
Eurosport	Eurosport, Eurosport 2	0.3
Sci-Fi	Sci-Fi Channel	0.5
Other (>60 channels)	Fox, Zone, Jetix, MUTV, Setanta	7.1

Source: CC interpretation of BARB data.

*Viewing is by channel provider, for wholly owned channels only. Includes timeshifted channels.

†Including GMTV.

‡Including S4C.

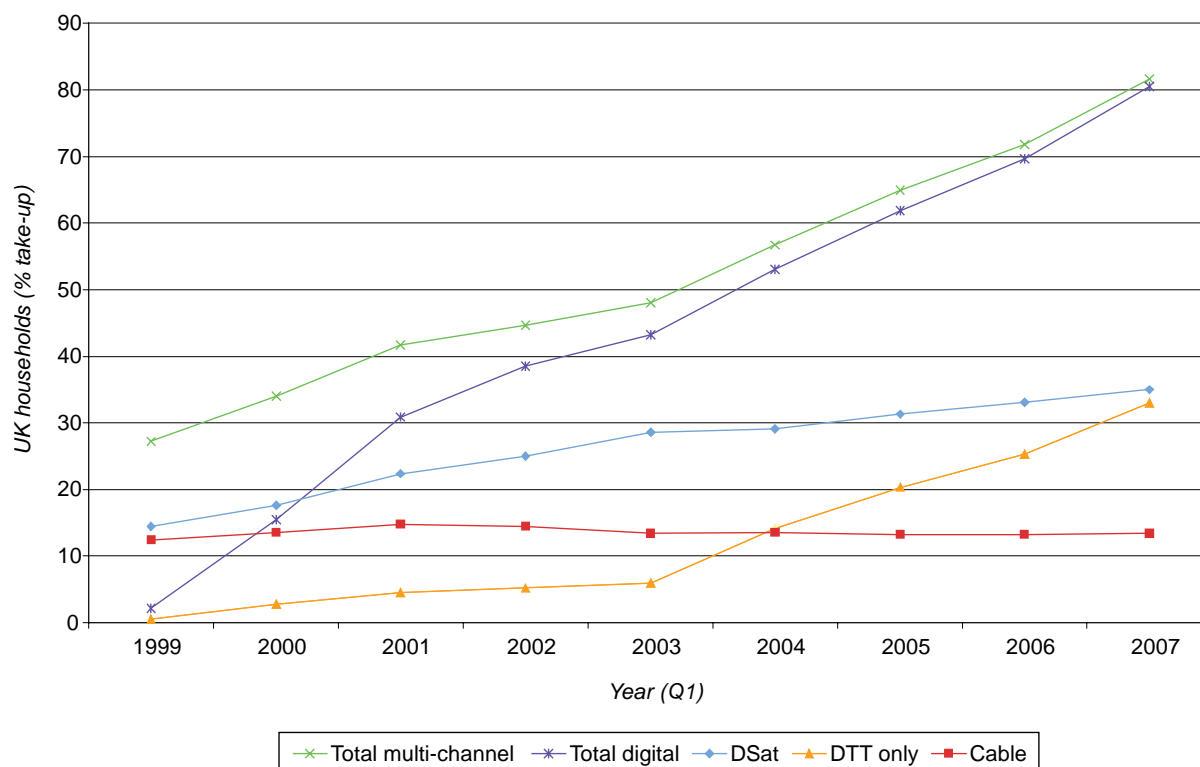
Distribution platforms

41. A channel provider must also acquire transmission capacity in order that its channels can be distributed to viewers’ reception equipment. Various alternative transmission

platform technologies are available: analogue terrestrial, DTT, DSat, cable, broadband television (embracing two different ways of providing television through telephone lines) and mobile television (also embracing various different technologies). Figure 1 shows the take-up of the main multi-channel television platforms over the period 1999 to 2007.

FIGURE 1

Platform take-up, 1999 to 2007



Source: CC interpretation of data from Ofcom, 'Digital Progress Report, Digital TV, Q1 2007', p6.

42. The main distribution platforms are described below.

Analogue terrestrial

43. Analogue terrestrial will be switched off completely by 2012 (see paragraph 2.5) and DTT—digital television received through an existing aerial—is being extended to provide comparable coverage for the public service (and other) channels. DTT's existing coverage is limited, with a full service available to 73 per cent of UK house-

holds.⁹ The public service broadcaster multiplexes on DTT will reach near universal coverage (98.5 per cent) once the analogue signal has been switched off in 2012; it is not yet clear what coverage will be attained by other multiplexes. Switching off the analogue signal will also free up spectrum for alternative uses, which may include additional DTT services or other services such as wireless broadband, mobile telephony and mobile television.

44. DTT capacity is divided up into six frequency bundles (known as ‘multiplexes’): Multiplex 1 was gifted to the BBC, the other five multiplexes (including a second multiplex controlled by the BBC) are licensed. Table 1 shows the multiplex structure for England as of July 2007. The existing licences are unlikely to be available again for fresh award until at least 2022.¹⁰ Some licences specify reserved capacity for the use of public service broadcasters. ITV nominally controls around 25 per cent of DTT capacity, with 48.5 per cent of Multiplex 2 (via Digital 3 & 4 Ltd) and 100 per cent of Multiplex A (via SDN). However, as one of the six multiplexes belongs exclusively to the BBC, and 50 per cent of Multiplex A capacity is reserved for the use of Five, ITV effectively controls about 20 per cent of ‘available’ DTT capacity¹¹ (25 per cent if the BBC’s licensed multiplex, currently used exclusively for public service purposes, is excluded). ITV is a member of DTT Multiplex Operators Limited (DMOL), a company formed in 2007 to act as the technical guardian for the DTT platform and which replaced the Digital Network in its role as the coordinating trade body for DTT multiplex licensees and the decision-maker for changes to EPG listings, for example Top Up TV offers pay-TV services to DTT viewers, providing conditional access services for accessing its own retailed services and those of third parties.

⁹ZenithOptimedia, UK Media Yearbook 2007, p7.

¹⁰Assuming the existing licensees renew their licences for a further 12 years in 2010–2014.

¹¹Capacity not used by ITV itself may, however, be leased to third parties under long-term agreements.

TABLE 1 The multiplex structure for England, July 2007

<p>Mux – 1 (16QAM)</p> <p>BBC</p> <p>Operated under main BBC board</p>	<p>Mux – 2 (64 QAM)</p> <p>Digital 3&4</p> <p>Joint venture between Ch 3 companies and Ch 4</p>	<p>Mux – A (64 QAM)</p> <p>SDN</p> <p>Wholly owned by ITV plc</p>	<p>Mux – B (16QAM)</p> <p>BBC</p> <p>Owned and operated by BBC Free to view Ltd</p>	<p>Mux – C (16QAM)</p> <p>NGW</p> <p>Owned by MUKBH Ltd</p>	<p>Mux – D (16QAM)</p> <p>NGW</p> <p>Owned by MUKBH Ltd</p>
<p>BBC 1 BBC 2 BBC3/CBBC BBC News 24 BBCi (4 streams)</p>	<p>ITV1 ITV2 ITV3 ITV4 C4 E4 More 4 Film Four+1 Teletext Teletext Cars Teletext on 4 Radio x 2</p>	<p>Five QVC Bid tv Price-drop tv Five Life Five US Setanta sports UKTV Gold (TUTV) Thomas Cook tv Teletext Holidays (more audio than text) Teletext Games Various MHEG (QVC, BBC radio EPG, EMAP, TUTV etc) Radio x 6</p>	<p>BBC4/Cbeebies BBC Parliament BBCi 301 BBCi 302/Community BBCi 305 x4 news BBCi x4 streams BBCi Text Radio x 6</p>	<p>Sky 3 Sky News Sky Sports News E4+1 UKTV History Sky Text Various MHEG (Sky/UKTV/Virgin/TVT V) Radio x 4</p>	<p>The Hits TMF ITV2+1 Ideal World Ftn/UKTV Bright Ideas Film Four Radio x 9</p>

DSat

45. DSat is digital television received through a satellite dish. DSat signals are available to approximately 98 per cent of UK households with a television. Although some spare satellite capacity is available (for example, from satellite owners such as SES Astra, or satellite distribution companies such as Globecast), BSkyB owns the only EPG currently available for use on the DSat platform, and provides technical services such as conditional access and AC.¹² BSkyB's EPG and technical platform services are subject to Ofcom regulation (in particular, obligations to provide access to third parties on fair, reasonable and non-discriminatory terms—so that channels can be listed and accessed by DSat viewers, alongside those retailed by BSkyB). BSkyB also uses the DSat platform to distribute its own packages of pay-TV and FTA channels.

Cable

46. Cable is digital television provided through a closed fibre-optic/hybrid fibre-coaxial network (there are no third-party retailers using this platform). Due to the high costs of laying cable networks, coverage is limited mainly to urban areas (digital cable television was available to 45 per cent of UK households in 2006).¹³ Virgin Media controls access to nearly all the UK's cable network (the exceptions being the Isle of Wight, the west coast of Scotland and Lancaster).¹⁴
47. Other distribution platforms, such as broadband television and mobile television, currently operate on a very small scale. We describe these new platforms in more detail below.

¹²Although non-BSkyB subscribers can receive unencrypted FTA channels without a listing on BSkyB's EPG, viewers will find it more difficult to locate channels and programmes.

¹³Source: Ofcom, *The Communications Market 2006*, August 2006, p247. Analogue cable television services are available to a further 5 per cent of UK households.

¹⁴In March 2006 the two biggest cable operators, NTL and Telewest, merged, acquiring Virgin Mobile in July 2006: rebranding as Virgin Media in February 2007.

Broadband television

48. Broadband television is where audiovisual content is distributed via the Internet, usually using a standard telephone line (although other options, such as wireless delivery, are technically possible too). There are currently two service variants: 'Internet Protocol TV' (IPTV) and 'television-over-the-Internet'.
49. *IPTV*: content is delivered through the Internet in the form of a conventional television channel (a continuous stream of television programmes, film, etc). IPTV, like cable, is a 'closed' system: the provider manages the quality of the service provided. It is not possible to send a request to the provider from a computer in the home.
50. *Television-over-the-Internet*: an 'open' system, where the user goes to a website and either downloads a video file to a hard disc for later viewing, or views a stream of video content hosted by a website provider (a 'pull' VoD set-up). Delivery of television-over-the-Internet may be subject to variations in quality, such as interruptions in viewing, as the provider does not manage the system as with IPTV. Television-over-the-Internet services include podcasts, downloads from websites such as You Tube, BSkyB's VoD service 'Sky Anytime to PC' (movies, sports highlights and television programmes), and free 'catch-up' services such as ITV.com (with live streaming and 'catch-up' VoD launching during summer 2007) and BBC iPlayer ('catch up/watch again' service launched in July 2007). As an open system, this variant of broadband television allows anyone to provide audiovisual programming to end-users via the Internet.
51. Broadband television services (both IPTV and television-over-the-Internet) are typically carried via ADSL-enabled standard telephone lines—providing a two-way link

like cable, but with less capacity.¹⁵ As described above, this has implications for the services that can be provided. For example, the platform could become unstable if content (such as a primetime drama or soap opera, or a live FA Premier League match) were offered to a mass audience, or if several television channels were only offered in HDTV format. The costs of overcoming these capacity constraints, by replacing existing copper telephone lines with fibre-optic cable, means that the penetration of broadband television is likely to be limited in the short run.¹⁶

3G mobile television

52. Another new distribution platform, 3G television by mobile phone, is in the early roll-out stages.¹⁷ 3G operators have teamed up with television broadcasters: for example, 'Sky by Mobile' offers Orange and Vodafone 3G customers a choice of three television packages (with around 26 channels in total) for £5 per month each, and has over [] subscribers.¹⁸ ITV has teamed up with the 3 network to offer simulcast ITV1 and ITV Play channels for 99p and 49p per day respectively, or £5 per month for a package of 18 television channels. Like broadband television, mobile television using 3G networks currently faces capacity constraints—limiting potential growth over the next few years (although Datamonitor believes that trials suggest that consumer demand for mobile television does exist).¹⁹ There is, as yet, no commercially available mobile television using broadcast technologies such as DVB-H.

¹⁵The relative performance of cable and broadband television depends on various factors. For broadband television, the bandwidth available to an end-user is dependent on the type of technology deployed (eg ADSL2+) and the distance of the end-user from their local exchange. The available bandwidth on cable networks depends on the extent of use of other users in their locality—as cable bandwidth is shared at the local level.

¹⁶Datamonitor, *Media & Broadcasting Technology* 06/2006 (DMTC 1195).

¹⁷There are other ways to receive television on mobile devices: for example, broadcasting direct-to-mobile services using dedicated spectrum ('Mobile Broadcasting') and via the Internet.

¹⁸BSkyB Main Submission, paragraph 6.23.

¹⁹Datamonitor, *Media & Broadcasting Technology* 06/2006 (DMTC 1195), p41.

Service developments

53. The television industry is characterized by significant and rapid changes in technology and consumer demand. Many consumers—used to downloading music to various digital devices—now expect increased flexibility and control over what they watch and when they watch it (also where they watch). Technological developments, in particular the move from analogue to digital processing and transmission, have led to the provision of new services to meet many of these consumer demands. We describe below some of the key service developments—bundling, PVRs, VoC and HDTV.

Bundling

54. Some companies are expanding their activities in line with the technological convergence of sectors. For example, after NTL Incorporated acquired Virgin Mobile Holdings (UK) in July 2006, the cable company (renamed Virgin Media) was able to offer 'quadruple play' bundles of television, fixed telephony, mobile and Internet access. Another example was BSkyB's acquisition of the Internet provider EasyNet in 2006, allowing it to offer 'triple play' bundles of television, telephony and Internet access²⁰ (and the option of offering television directly through telephone lines).

Personal video recorders

55. PVRs are hard-disc-based recording devices—built into a digital set-top box or television, other equipment, such as DVD players, or sometimes in the form of software for a computer. Large hard disc capacity allows viewers to effectively construct their own viewing schedules and skip advertisements (around 40 per cent of PVR users do this according to end-user studies),²¹ creating new challenges for advertisers. BSkyB introduced its PVR service (Sky+) in 2001. Other retailers, including

Virgin Media and Top Up TV, also now offer PVRs. At the end of June 2007 there were nearly 2.4 million households using BSkyB's PVR alone.²²

Video on demand

56. VoD services allow viewers to select from a range of programming stored in a library of content. Viewers are able to choose when to start viewing their chosen content—and have pause, forward and rewind capabilities similar to those available on a DVD player. Recent movies are a popular form of VoD content (Telewest was the first to offer such services, in 2005). Other types of VoD content include programmes available after they have been broadcast FTA (eg 'catch-up' services from the BBC, ITV and Channel 4 are currently being rolled out). This 'pull' VoD is only possible on cable or broadband television platforms, ie two-way networks (broadband television is described in more detail below). 'Push' VoD is an alternative way to deliver VoD services for one-way networks (BSkyB was the first to offer push VoD services for film and sports content under the Sky Box Office brand in December 1997). BSkyB and Top Up TV, for example, offer PVRs with reserve hard-disc capacity. These PVRs automatically record VoD content broadcasts (the content is usually broadcast overnight) which viewers can subsequently access at a time that suits them, and with full pause, rewind and fast forward control.

High definition television

57. HDTV is a digital system offering significant improvements in picture quality, and enables surround sound to be broadcast direct to consumers.²³ Many commentators believe that HDTV is likely to be a crucial component of future competition within the

²⁰Sky Talk and Sky Broadband.

²¹Datamonitor, *Media & Broadcasting Technology* DMTC 1195, June 2006 (p32).

²²BSkyB, results for the year ended 30 June 2007.

²³Surround sound is also available for certain standard definition broadcasts.

television industry.²⁴ In order to receive HDTV, the content itself needs to be filmed using HD cameras (non-HDTV programming can be converted into HD format, but with inferior quality to ‘true’ HD content) and viewers require both an HD-enabled television and set-top box (for example, since May 2006, BSkyB has offered an HDTV service using an HD set-top box that costs £299, plus £30 ‘one-off’ standard cost). Viewers are usually also charged an additional monthly subscription fee (for example, up to £5 from Virgin Media, the first to offer a nationwide HDTV service). BSkyB announced that it had 292,000 HD subscribers as at 30 June 2007²⁵ and Virgin Media announced that it had deployed 167,000 of its HD-capable set-top boxes in its second quarter results for 2007. Consumer awareness of HDTV is still fairly low,²⁶ and the availability of services remains fairly limited—partly due to capacity constraints (an HDTV channel requires considerably more signal capacity than an ordinary standard-definition television channel), and other technical issues. Take-up is expected to accelerate, however, as the price of HD equipment continues to fall, and more content is filmed in HD. Members of the ‘HD For All’ campaign,²⁷ which include the public service broadcasters alongside HDTV manufacturers and retailers, are keen supporters of the introduction of HDTV to the DTT platform. They are lobbying Ofcom and the Government for the use of future spectrum capacity for HDTV services on DTT.

²⁴Datamonitor, for example, *Media & Broadcasting Technology*, DMTC 1195, June 2006 (p24).

²⁵BSkyB: results for 12 months to 30 June 2007.

²⁶Around half of all consumers are unaware of the equipment required to receive HDTV, according to Continental Research (*Digital TV Report*, Autumn 2006, p13).

²⁷See www.hdforall.org.uk.