

PSB Freesat: Independent Review of Market Implications

Broadcasting Policy Division,
Department for Culture, Media and Sport

Prepared by Fathom Partners and Indepen

21st December 2006

Contents

1	Summary	4
2	Background, terms of reference and approach	5
3	The PSB Freesat proposition: alternative scenarios	6
3.1	Overview of the PSB Freesat proposition	6
3.2	Consideration of the platform’s HD capability	6
3.3	Four scenarios for the platform and its market impact	6
4	Market impact of the SD PSB Freesat proposition	9
4.1	The definition of the SD PSB Freesat proposition.....	9
4.1.1	The content offering.....	9
4.1.2	The scale of the proposition.....	10
4.1.3	Derivation of the customer base, and Digital Switch Over	11
4.1.4	Our view on the proposition	12
4.2	The Market Impact of the SD PSB Freesat proposition	13
4.2.1	The market affected by the proposition.....	13
4.2.2	Impact on participants.....	13
4.2.3	Impact on potential new entrants	15
4.2.4	Impact upon individual channels.....	16
4.2.5	Wider impact on innovation and investment	16
4.2.6	Impact on secondary markets.....	16
4.2.7	The effect upon competition, and consequent consumer benefits.....	17
4.2.8	The benefits of the proposition for Digital Britain	19
5	Market Impact of the HD PSB Freesat proposition	20
5.1	The HD PSB proposition and its scale.....	20
5.2	The market affected by the proposition.....	20
5.3	Market Impact of the HD PSB Freesat proposition	20
5.3.1	Impact upon Sky HD subscription service	21
5.3.2	Impact upon NTL	22
5.3.3	Effect on new entrants.....	22

5.4	Impact on competition and benefits for consumers.....	22
Contact information	23

1 Summary

The BBC Governance Unit has reviewed the market implications of PSB Freesat, as part of its application to DCMS to launch PSB Freesat as a joint venture with other PSBs.

Central to this market impact assessment is the question of whether the platform will carry a strong HD channel line-up, i.e. including BBC channels in HD. This question depends on the outcome of a separate Public Value Test on the BBC's HD services. We have assessed the market impact of the platform under all of the possible scenarios that could arise. Our findings are summarised as follows:

- If PSB Freesat launches **without a strong HD channel line-up**, the platform would have limited appeal (estimated 0.5m customers after 6 years). Alternatively, it may not win the backing needed to launch at all. In our view, the BBC Governance Unit's definition of this proposition's content-offering and scale is not sufficiently clear.
- In its review, the Governance Unit assessed the market impact of PSB Freesat without a strong HD channel line-up, i.e. excluding BBC HD services. It looked thoroughly at the areas of market impact, and we agree with its findings in many areas. However (in our view) the Governance Unit's review underestimated the negative market impact upon participants. We believe that this proposition, in spite of its limited size, could have a negative market impact upon Sky's subscription services as well as its free services. In the event that it does not launch, the proposition's market impact would be negligible.
- If PSB Freesat launches **with a strong HD channel line-up**, it could be a fairly successful service (estimated 2.5m customers after 6 years).
- The Governance Unit did not consider the market impact of PSB Freesat with a strong HD channel line-up. We have provided a brief viewpoint on its likely market impact. We believe that this proposition would exert significant negative impact on current and prospective participants across the TV market, including potential new entrants.

Findings on impact on competition and Digital Britain, for all scenarios:

- We agree with the Governance Unit that the proposition will increase competition, with consequent benefits for consumers (e.g. lower prices, increased promotion of free satellite services). However, because the proposition is publicly supported, the usual presumption that the benefits of competition for consumers outweigh the market impact on producers does not apply.
- The Governance Unit discusses in general terms the possible contribution of PSB Freesat to switchover, and suggests a linkage to the benefits associated with "Digital Britain". However, in no scenario do we find that the PSB Freesat platform would contribute significantly to digital take-up or delivers benefits associated with "Digital Britain". However, we note that the broader question of "public value" is outside the remit of the Governance Unit's and our review of market impact.

2 Background, terms of reference and approach

The BBC Governance Unit prepared a “Review of Market Implications” of a BBC proposal to create a joint venture free satellite offering known as PSB Freesat. It is proposed that the joint venture would include the public service broadcasters BBC, ITV, Channel 4, and five; and that it can support the broadcast of both standard-definition (SD) and high-definition (HD) television.

The Governance Unit has made it clear that HDTV from the BBC is subject to a separate Public Value Test (PVT) under the new framework established by the new BBC Charter and Agreement that comes into force on 1 January 2007. A full Market Impact Assessment by Ofcom will form part of this PVT.

The Department for Culture, Media and Sport (DCMS) asked Fathom and Indepen to comment upon this review, and specifically to *“form a view on whether the Governance Unit’s assessment is robust, and offer (its) own desk-based views in any areas of disagreement or uncertainty”*.

Our report should be read in conjunction with the BBC Governance Unit’s assessment of market implications. We have worked with BBC management to clarify aspects of the PSB Freesat proposition, and have analysed the BBC’s model and supporting consumer-research in some detail. This assessment of the Governance Unit’s review follows a set of earlier comments and a revision of the Governance Unit’s initial review to more clearly draw out the extent to which the proposition relies on HDTV services.

3 The PSB Freesat proposition: alternative scenarios

3.1 Overview of the PSB Freesat proposition

The proposition is described in section 2 of the Governance Unit's review.

The proposition consists of two main parts:

- Customer premises equipment – the set-top box (STB) or integrated digital television set (IDTV), satellite dish and any in-home cabling required to receive the service¹;
- Content – the television and radio channels and interactive services available to consumers who have this equipment.

3.2 Consideration of the platform's HD capability

The platform's content offering (the channel line-up, and whether these channels are in SD or HD) is key to understanding the consumer-demand for the platform, and thus also its impact on the market. In particular, the issue of SD and HD content on the PSB Freesat platform is crucial to assessing its market impact.

If the platform does broadcast a full complement of PSB HD channels², then it is this feature that will be the principal appeal to consumers and this would in turn exert significant impact upon the HD market, and all the participants therein³.

The proposition that the BBC Governance Unit is putting forward, and whose market impact they have assessed, excludes broadcast of the BBC channels in HD. As its review emphasises⁴:

"This assessment by the Governance Unit is limited to the establishment of the platform and the operation upon that platform by the BBC of its existing (SD) services. This assessment does not consider those issues related to any future assessment applied by the BBC Trust to the launch of any HD services by the BBC."

In our view the HD cannot so simply be removed from this market impact assessment, and we question the BBC Governance Unit's approach of reviewing the market implications agnostic of the outcome of the HD decision. We have preferred to consider alternative scenarios for PSB Freesat, and to assess the market impact of each scenario. By considering all possible scenarios in this way, we believe we can reach a comprehensive assessment of the possible market impact of PSB Freesat.

3.3 Four scenarios for the platform and its market impact

In order to address these contingencies and assess their market impact the approach we adopt is to consider four alternative (and collectively exhaustive) scenarios for the PSB Freesat platform.

¹ Hereunder, all references to STBs could also include IDTVs

² That is, if the BBC wins approval under the HD PVT referred to in section 2

³ This is clear from the BBC Governance Unit's understanding of the propositions appeal to consumers: the 2.5m subscribers by 2012 (quoted in BBC GU paras 22, 43 and elsewhere) are based on model that assumes that 80% of subscribers will buy the service specifically for its HD capability.

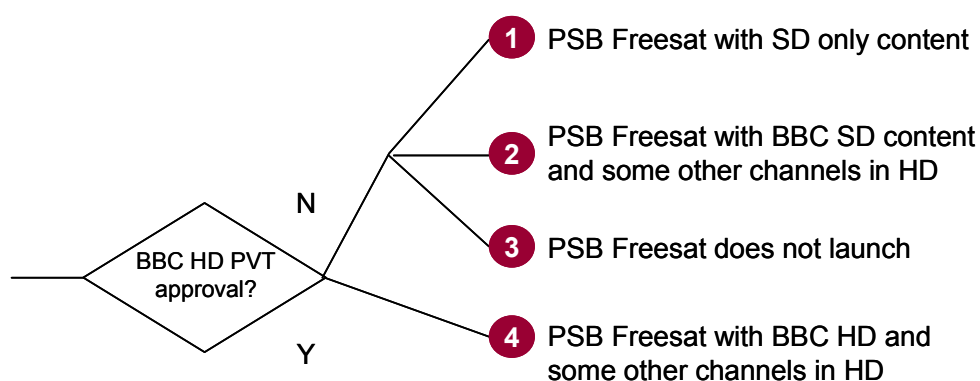
⁴ Paragraph 7

1. BBC HD is not approved, and the platform launches with SD only offerings by all participating broadcasters. This SD only scenario was modelled by the BBC, and the maximum modelled uptake was just under 0.5m households after 6 years of operation.
2. BBC HD is not approved, and the platform launches with BBC SD and a range of HD content from other broadcasters.

Scenarios 1 and 2 together form the proposition whose market implications the BBC Governance Unit has assessed. In our document we review these scenarios together in section 4, as “the SD PSB Freesat” proposition.

3. BBC HD is not approved, and consequently the platform does not launch at all. There are two plausible reasons why the platform might not launch if BBC HD is not approved. Firstly, STB manufacturers and retailers, upon whose participation the service depends, may not support an SD-only offering, or a non-premium HD service that lacks BBC content. Alternatively, the BBC may decline to devote resources to launch and promote a platform that carries its competitors’ HD services, but not its own. This scenario is not mentioned in the BBC Governance Unit’s assessment. Clearly, under this scenario, the service would never launch and would have zero or minimal market impact.⁵
4. BBC HD is approved, and the platform launches with a full complement of HD services. This full SD and HD scenario was modelled by the BBC, with a forecast high scenario of 2.5m households after 6 years of operation. The BBC Governance Unit’s review of Market Implications explicitly does not consider the market impact of the platform under this scenario (BBC GU review, paragraph 7).

These are expressed diagrammatically below:

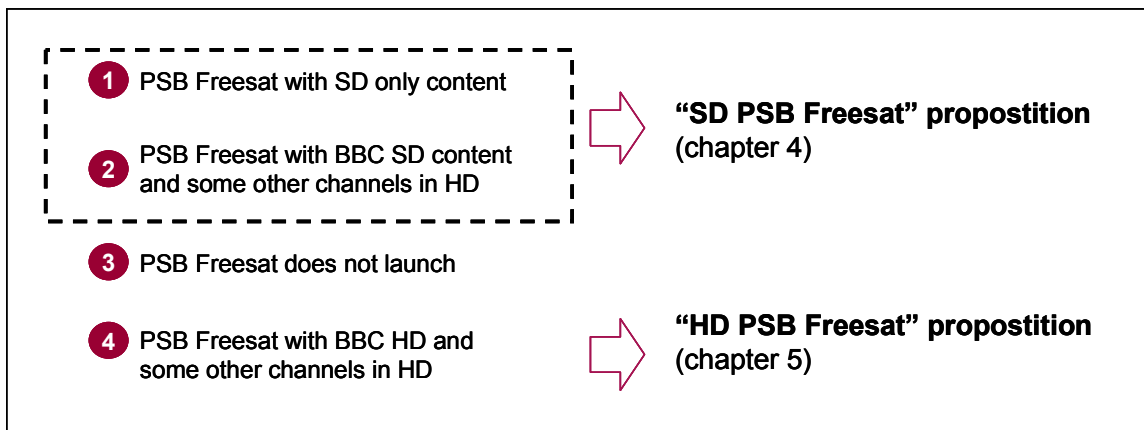


⁵ There is the possibility that the proposition could exert some market impact even if it does not launch. In the event that PSB Freesat is approved by the Secretary of State but never launches: during the possible period following the announcement of its approval, its prospect could exert a chilling effect on new entrants or innovations by existing market participants.

We assume that the platform will not launch before the outcome of the HD PVT decision, and have therefore excluded any possible scenario where the platform launches as “SD now, possibly with HD to come”, i.e. pending the outcome of the BBC HD PVT. The earliest date that the platform could launch is given as September 2007; and the HD PVT decision is expected at some point during mid-late 2007. Even if the launch is feasible a few months before the outcome of the HD PVT decision, we expect the launch would be postponed until the decision is known (probably for reasons related to STB manufacturer support for the platform). The BBC Governance Unit’s review does not comment on this issue.

We have structured this review according to these scenarios. In section 4 we give our independent viewpoint on the market impact of scenarios 1 and 2 (which we have called “the SD PSB Freesat” proposition”), and comment upon the BBC Governance Unit’s review of the market implications under these scenarios. In section 5 we briefly set out our view of the market impact of scenario 4 (which we have called “the HD PSB Freesat” proposition). Scenario 3, where PSB Freesat does not launch, needs no further exposition.

Therefore the remainder of this document is structured as shown in the diagram below:



4 Market impact of the SD PSB Freesat proposition

In this section we comment on the Governance Unit's assessment of the market impact of a PSB Freesat platform which does not carry BBC HD services. This proposition will carry SD services from the BBC and some other broadcasters (scenario 1) and may also carry HD services provided by other broadcasters, for example ITV, Channel 4 and five (scenario 2).

We consider scenario 1 and 2 jointly, as the BBC Governance Unit does. We doubt that this proposition would constitute a viable HD offering (for reasons set out in section 4.1 below), so we have (for the sake of simplicity) named this the "SD PSB Freesat" proposition.

In this section we are commenting directly on the BBC Governance Unit's view of the market implications of PSB Freesat. We agree with many of the points made by the BBC Governance Unit, in particular their conclusion that PSB Freesat would exert a negative impact on BSkyB, and could lead to changes in pricing strategies of existing suppliers. In this section we highlight some points of agreement and difference between our analysis and theirs, and we add other important considerations.

We first consider the definition and scale of the proposition (section 4.1), then discuss its market impact (section 4.2)

4.1 The definition of the SD PSB Freesat proposition

The proposition is not clearly articulated by the BBC Governance Unit. This in turn makes it difficult to accurately assess the proposition's likely market impact. This uncertainty exists in three areas: content offering, its scale and customer-derivation. Each is covered in the rest of this section.

4.1.1 The content offering

The channel line-up available on the service is not made clear by the BBC Governance Unit. The content-offering is a primary determinant of customer-demand, and therefore should be expressed as clearly as possible. The BBC Governance Unit refers to the content available on the service in their paragraph 10, which states that "*BBC management hopes it will initially carry all channels broadcast 'in the clear'*"; however the Governance Unit's review does not discuss what channels (if any) might broadcast in HD, nor elaborate on the question of which channels may not be able to be carried on the service at all (notably Channel 4 because of its contract with Sky). We acknowledge that any such discussion would be speculative and assumptive, but it should not be omitted.

We assume that the channel line-up would be the same as that currently available on Freeview. This is the same line-up that was used by BBC Management to carry out consumer-research for this proposition⁶.

Importantly, our view is that this proposition (in the absence of BBC HD services, as put forward by the BBC Governance Unit) would not be a viable HD proposition, and so we do not foresee significant take-up of HD-enabled PSB Freesat boxes in this scenario. This view is consistent with the BBC Management's model, and we believe we are broadly in agreement with the BBC Governance Unit on this point. There are reasons to support this view on both the demand- and supply-side:

⁶ Research was carried out by BMRB in April 2006, with some 2000 face-to-face interviews

- Not a compelling HD offering. To customers wishing to take HD, the HD channel line-up would lack critical mass of content, and thus be unattractive relative to alternative HD platforms.
- We assume that HD enabled boxes would cost customers significantly more than SD enabled boxes. The BBC's model assumes a price-difference of just £25, but in the absence of manufacturing-scale for the HD box relative to the SD box, the price-difference could be far greater. The limited HD channel line-up (without the BBC) would therefore be unlikely to justify the price-increment for the typical customer.
- STB manufacturers may choose not to supply HD boxes for the PSB Freesat platform, given that the likely take-up for these boxes appears to be very small

4.1.2 The scale of the proposition

The Governance Unit does not clearly state the range of possible take-up for the service. Where they do state such a range (for example, paragraph 3.4, 20, 47, 8.4), it is for a different proposition, where the BBC does broadcast in HD (our scenario 4).

According to the BBC Management's model for the take-up of PSB Freesat, from which the Governance Unit has quoted take-up figures, this proposition would attract between 261,000 and 482,000 households after 6 years of operation (that is, by end-2012 of the BBC's model)⁷. The Governance Unit refers to this upper 0.5m figure in paragraph 21 of its review. This range reflects the price of PSB Freesat box: the higher figure assumes that it is priced at parity with Sky Freesat's box (both at £125), and the lower take-up figure assumes that Sky cut the price of their box to £99 in order to compete more aggressively against the new PSB entrant.

Therefore, this proposition is expected to have limited take-up: the higher figure represents 2% of UK households after 6 years of operation. Any analysis of its positive or negative market impact should of course be taken in the context of its small size.

Our overall view is that the forecasting approach is reasonably sound. The major factor that could push the range beyond its upper figure would be modelling the uptake of PSB Freesat for secondary sets (the BBC forecasts for PSB Freesat customer numbers do not account for the estimated 36m secondary sets in use). The major factor that could take the range below its lower figure would be an aggressive competitive response from Sky Freesat: were Sky to pre-emptively promote its Freesat service, or dramatically reduce the price of the Freesat box, the customer base for PSB Freesat could remain extremely low.

For the sake of simplicity, we will assume take-up of this service to be the 0.5m figure referred to by the BBC Governance Unit.

⁷ These estimates are outputs from a model created by the BBC and Scientific Generics (an external firm of consultants), and the main input to this model was market research carried out by BRMB in April 2006.

4.1.3 Derivation of the customer base, and Digital Switch Over

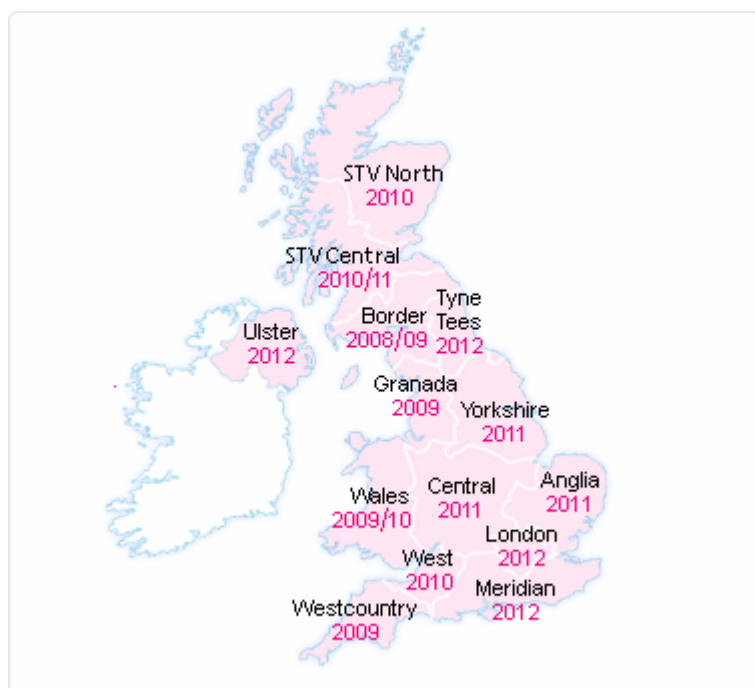
Who are these 0.5m households? What TV service did they have before PSB Freesat; what service would they have taken if PSB Freesat were not to launch?

The Governance Unit does not provide any detail of the derivation of the customer base for the service. In assessing market impact, it is obviously helpful to think who the customers are, what service they are coming from, and what they might otherwise have chosen.

According to the BBC's model, all these subscribers are analogue households who are out of coverage of Freeview. However, it is reasonable not to treat this modelled derivation too strictly: we believe that the subscriber base would also consist of some households which are switching from Sky or cable subscription services (attracted to the fact that PSB Freesat has no ongoing subscription); this view is supported by the BBC Governance who foresees customers being drawn from existing digital providers, both free (e.g. Freeview) and subscription (e.g. Sky subscription)⁸.

Given the importance of out-of-Freeview-coverage analogue homes as the target for this service, we feel it is relevant to consider the timing of digital switchover. Digital switchover will be a gradual process, with Freeview coverage increasing over time as switchover occurs region-by-region (see map below – switchover will occur as early as 2008 in the Border region and by 2010 half of the regions will have switched to digital⁹).

Expected Timetable for Digital Switch Over



⁸ BBC Governance Unit review, paragraph 3.1

⁹ Source: "Digital UK". <http://www.digitaluk.co.uk/en/when.html>

As the PSB Freesat proposition is time dependent (i.e. the proposition will probably become stronger and better known after 1-2 years of operation, as the channel line-up is strengthened and as equipment prices fall), it is possible that the market opportunity for it (as a fill-in proposition) will diminish before the proposition becomes the attractive offering (in terms of channels, equipment-price etc) assumed in the model's base-case.

In addition, in our view there are uncertainties relating to consumer behaviour in the period shortly before switchover. For example, will consumers in out-of-coverage areas wait until switchover and take a Freeview service immediately afterwards? These issues will have a material affect on the conclusions drawn in the assessment, but are not sufficiently considered by the Governance Unit's review.

4.1.4 Our view on the proposition

Based on our understanding of the content offering and its scale, we therefore understand that under this scenario, the service would:

- be received in SD. Any HD service it would carry would be so limited to have negligible market impact
- carry the full tier of non-premium channels, like the current Freeview line-up
- attract 0.5m customers after 6 years of operation (mostly out-of-Freeview-coverage analogue homes)

In preparation for considering the market impact, it is useful to compare the PSB Freesat service with the Sky Freesat service, its closest competitor (in the opinion of the BBC Governance Unit, with which we agree). On the parameters of household coverage, box price, TV and radio channel line-up, bandwidth, HD capability given suitable box, advanced functionality (e.g. PVR and interactive services), PSB Freesat is identical to (and from a consumer perspective, indistinguishable from) Sky Freesat. The BBC Governance Unit does not explicitly suggest any areas of difference between the two services. The only possible distinctions that we see (which may not be readily distinguishable from a consumer perspective) are:

- PSB Freesat has an assurance of remaining free for perpetuity, whereas Sky could possibly end its free service and encourage its Freesat customers to subscribe to a pay-television service.
- Brand: some customers might prefer a PSB brand to Sky's brand, or vice-versa.
- Pathway between basic and premium subscription services. The upgrade or downgrade path between Sky Freesat and Sky subscription is very simple: the Sky Freesat box contains conditional access technology enabling the decryption of pay-channels if the customer chooses to pay (and receive a smart card). In contrast, PSB Freesat boxes are unlikely to include conditional access technology that would support Sky subscription services.
- Ability to support paired or add-on services. PSB Freesat could be capable of supporting "paired services", i.e., services which use pair broadcast TV with DSL advanced services, analogous to BT Vision's overlay of DSL services over DTT broadcast; and could have an upgrade path to pay-services (analogous to Top-Up TV's service on some Freeview boxes).

4.2 The Market Impact of the SD PSB Freesat proposition

In this section, we comment upon the Governance Unit's view of the market impact of this SD PSB Freesat proposition. We reflect the Governance Unit's approach, looking first at the definition of the relevant market; then at the impact on current and prospective participants; then on innovation and investment, secondary markets, competition and benefits for Digital Britain.

4.2.1 The market affected by the proposition

The Governance Unit's review discusses the definition of the relevant market in some detail (section 5). It concludes that the relevant market is defined widely as *"as the provision of digital TV retail offerings in the UK"*. However, it goes on to suggest a narrower definition of *"free satellite offerings (e.g. Freesat from Sky) only"* and states *"Given the similarity of offerings, the proposal is most likely to impose a competitive constraint on Freesat from Sky"*

The Governance Unit does also consider the possibility that: *"The proposal may also have some effect on subscription services. It is possible that the effect may be concentrated at the level of 'basic' subscription services, which in the consumers' view may be comparable to the PSB Freesat proposition."*

The proposition could theoretically exert impacts widely, but given its small size, its lack of an attractive HD service and its closeness to Sky Freesat, its impact on participants will be concentrated on Sky (both Freesat and subscription).

We therefore place focus on what the BBC Governance Unit rightly calls *"a chain of substitution with certain subscription packages"*. It could exert some negative market impact upon other participants (notably) NTL, but we consider this impact to be relatively minor.

4.2.2 Impact on participants

Unlike the HD proposition discussed in section 5, we believe that any significant market impact exerted by this smaller SD proposition will be mainly upon Sky. However, we believe that the static and dynamic impact upon Sky will be greater than that foreseen by the Governance Unit, and that the impact will be felt more by Sky subscription services than by Sky free services. The reason for this is that the launch of PSB Freesat would alert its paying subscribers to consider a free-satellite alternative: this could trigger a *"Freeview effect"* within Sky's paying subscriber base. This section elaborates on our thinking on this area.

The BBC Governance Unit's review considers static and dynamic impact on participants. The Governance Unit draws some top-level qualitative conclusions about the overall market impact of the proposition, which are summarised below:

"The roll-out of PSB Freesat may encourage some consumers to switch from their existing digital providers (or in the case of analogue households, choose PSB Freesat over an alternative digital offering)."

"PSB Freesat might lead to a change in pricing strategy by existing suppliers. For example, Sky might respond to its launch by lowering the price of its free satellite package."

In our view, the BBC Governance Unit's assessment of impact (section 7) draws attention to potential areas of impact which would be very unlikely to occur, given the proposition's limited consumer appeal. It does this because of confusion over the proposition's definition and its scale. For example paragraphs 43 and 47 refer to the highest uptake scenario being 2.5m, whereas in fact it is only 0.5m for this proposition.

The Governance Unit acknowledges a static effect, as customers who would have otherwise taken Sky Freesat take PSB Freesat instead. We agree with this.

The proposition would also increase the base of people with satellite equipment installed, increasing the ease of customer acquisition for Sky. Similarly, PSB Freesat would introduce an additional downgrade path for Sky subscribers (although, because of the need to obtain a different STB to receive PSB Freesat, a less probable path than to Sky Freesat). We also note that Sky would potentially lose customers to PSB Freesat having cross-subsidised the establishment of an installed base of satellite dishes.

We would expect the upgrade effect to outweigh the downgrade effect, as Sky customers wishing to downgrade are more likely to downgrade to Sky Freesat, unless they have some specific reason for wishing not to stay with Sky. Considering the timing of these effects, we would expect to see the downgrade effect to be realised immediately, while the upgrade effect would be longer-term (as users of PSB Freesat would be unlikely to immediately upgrade to a Sky subscription service).

The Governance Unit notes that *"PSB Freesat might lead to a change in pricing strategy by existing suppliers. For example, Sky might respond to its launch by lowering the price of its free satellite package."* Again, we agree that this is likely.

The most significant negative impact for Sky in our view, which the Governance Unit does not consider, is that the introduction of PSB Freesat could change the distribution of customers between Sky's platforms, pushing customers from pay to free Sky services. Critically, the launch of PSB Freesat would raise awareness of availability of free satellite services, and in particular BSkyB's Sky Freesat service. Currently, Sky's Freesat service is relatively obscure – it is barely promoted, BSkyB do not publish the number of customers, and the service is very difficult to obtain¹⁰ compared to the pay-television service. In our view, the introduction of PSB Freesat would (over time) prompt a number of customers to move from Sky subscription services to Sky Freesat, or to lapse their paying subscription (customers who do this still receive the PSB channels and miscellaneous other channels broadcast in the clear).

The scale of this downgrade could be significant. The estimated 3m - 4m¹¹ Sky customers who subscribe to the basic package (without premium channels such as sports or movies) would be most vulnerable to churning down to a non-subscription service. Though this effect would not lead to a net transfer of customers from competitors to PSB Freesat compared to the counterfactual, it would lead to revenue loss for Sky as customers move from pay-services to free services.

We recognise that in the counterfactual (i.e. without PSB Freesat) Sky pay non-premium subscribers could switch down to free satellite services, or indeed switch to Freeview. However, we feel that this switching effect could be significantly accelerated by the introduction of, and publicity surrounding, PSB Freesat.

¹⁰ Its website (<http://www.freesatfromsky.co.uk/>) cannot be reached from its main consumer site (www.sky.com). Neither retailer mentioned on the Sky Freesat site (Currys and Comet) sell Freesat receivers on their websites.

¹¹ Sky reported 7.8m pay UK customers at September 2006. This 3- 4 million figure is a estimate of the proportion of those customers that do not take premium channels.

It is possible that Sky might respond to this (prospective) churn-off by cutting prices or offering increased discounts to customers who are considering churning in order to retain their business. We note that these dynamic effects would, in part, substitute for the static effects: if competitors were to drop their prices in response to PSB Freesat then they would lose fewer customers.

Therefore a significant impact on participants of the launch of a SD PSB Freesat would be upon Sky subscription services, due to the migration of Sky's subscription customers to free satellite services, or price reductions on the subscription tariffs.

We note a small potential effect upon cable providers. NTL would not benefit from the addition of satellite dishes due to PSB Freesat, but would suffer the detriment due to customers adopting Freesat (or potentially Sky once they installed a satellite dish). We therefore agree with the first, but not the second part of the Governance Unit assessment (paragraph 46) in this regard, namely that *"The purchase of a satellite system would allow an easier upgrade to subscription satellite services, although this effect is obviously likely to be smaller for cable providers."* The effect would not be smaller for cable, rather it would be negative.

In addition, prices for offerings targeting the secondary sets in a household might be reduced. PSB Freesat would give consumers the option of free services for secondary rooms, which would erode the premium that Sky and NTL would be able to charge for their "multi-room" offerings.

4.2.3 Impact on potential new entrants

New licence fee funded activity can deter the entry of new competitors due to concerns over scope / funding creep and / or direct substitution of licence fee supported services for new operator activity. The Governance Unit concludes that:

"...whilst PSB Freesat may exercise a competitive restraint on competing services, it is highly unlikely to deter significant levels of investment or result in market exit."

"The large multimedia firms such as Google, BSkyB and Microsoft are devoting vast resources into developing new ways of accessing audiovisual content. The roll-out of PSB Freesat will not halt this process nor is it likely to have a material impact on whether the initiatives succeed or fail."

Given the limited appeal of this SD PSB Freesat proposition, we agree with the Governance Unit that it is not likely to deter potential new entrants into the TV market.

There is another side to the impact on new entrants: the introduction of PSB Freesat could stimulate competition in the market for complementary pay-television services. By "complementary services" we mean:

- satellite pay-television services that use the proposition's set-top box specification as the basis for a box with conditional access: a satellite equivalent of Top-Up TV on digital terrestrial TV. Though the joint-venture company would not lend its brand to the set-top box of a provider of such pay-services, there is nothing to stop such a provider using the basic box specification and adding conditional access functionality for the decoding of pay-services
- pay-television services over broadband that use the basic PSB Freesat set-top box to deliver free services which are complemented by pay-services (e.g. on-demand films) delivered by

broadband. The direct analogy is with BT Vision, which is soon to launch a similar 'paired' service of video-on-demand overlaid on a Freeview receiver.

The reason that we believe the PSB Freesat proposition could encourage new entry in these areas is that it partially reduces the barriers to entry for providers of pay-services. Any new entrant in the pay-television market needs to, among other things, carry the free-to-view services of the BBC, ITV, Channel 4 and five and develop a set-top box to support these services. The PSB Freesat proposition reduces both barriers, enabling providers of pay-services to 'piggy-back' on its activities, although this reduction is only partial and other barriers remain. Though in the counterfactual Freeview has already lowered these barriers to entry to some extent, it is important to note that, unlike satellite, the terrestrial platform lacks the capacity to support a significant range of new pay-channels or HD services.

4.2.4 Impact upon individual channels

The Governance Unit notes that:

"Those channels that may not appear initially as they are not currently 'in the clear' (such as Channel 4 and five) are not expected to face any significant loss as they will still be available on analogue until Digital Switchover."

We would make two points here. Firstly, these channels may still be available on analogue, but receiving them would involve customer inconvenience of having to switch from digital to analogue to watch these channels. Also (to the small extent that HD is likely to be relevant to this proposition), whilst these channels would still be available until switch-over, they would not be available in HD.

Therefore in our view, differential launch dates for PSB channels on PSB Freesat could therefore involve a greater loss for late joining channels than the Governance Unit assessment suggests.

4.2.5 Wider impact on innovation and investment

Licence fee funded activity can deter innovation and investment just as it does market entry.

In our view, the SD PSB Freesat proposition could have a wider chilling effect on innovation and investment. Spending public money on a new activity can create the perception that in future this activity will expand in scope or scale. This has a chilling effect on investment (particularly in infrastructure) by competitors and consequently a negative effect on new service development.

Furthermore, increased licence fee-funded activity could be seen by the market as a signal of more to come in any market in which the BBC participates or could in future participate. The chilling effect therefore has the potential to radiate into unrelated markets. However, any chilling effect is mitigated by the fact that this is a Joint Venture proposition which includes other broadcasters.

4.2.6 Impact on secondary markets

The Governance Unit notes in paragraph 15 that:

"It is necessary to consider related economic activities because the proposal may create externalities in markets beyond those which the proposal itself directly competes."

However, unless special circumstances apply, secondary market impacts do not involve net costs or benefits additional to those assessed in relation to primary market impacts.¹² The approach to valuing benefits and costs in secondary markets is discussed in some detail in Boardman et al (2006) who conclude that:¹³

“We can, indeed should ignore impacts in undistorted secondary markets as long as changes in social surplus in the primary market resulting from a government project are measured and prices in the secondary market do not change.” Page 113; and

“We should ignore effects in undistorted secondary markets, regardless of whether there are price changes, if we are measuring benefits in the primary market using empirically measured demand schedules that do not hold prices in secondary markets constant.” Page 118

Baumol and Oates (1988) also consider pecuniary externalities and note that they are a category of pseudo-externalities in which one individual’s activity level affects the financial circumstances of another, but which need not produce a misallocation of resources (or equivalently a net impact that is not reflected in the primary market).¹⁴

Cabinet Office Regulatory Impact Assessment¹⁵ reflects these principles:

“In general, the analysis of costs and benefits will need to quantify only at the first-round, or impact effects of proposed measures.”

Further, the Cabinet Office guidance notes that macroeconomic or second-round effects:

“...represent simply a re-distribution of resources within the economy, without any net overall economic effect.”

We do not consider that secondary market impacts should be considered in the assessment of overall market impacts in this instance, and note that in practice the BBC Governance Unit does not place much weight on secondary market impacts.

4.2.7 The effect upon competition, and consequent consumer benefits

The Governance Unit assessment concludes that there would be benefits to consumers from additional competition in relation to PSB Freesat:

“For consumers, competition may also be further strengthened by the introduction of PSB Freesat, as it provides an alternative supplier of digital TV retail offering to almost all households in the UK. A proportion of these households can currently opt for one provider only. The impact of competition will be particularly strong in those areas outside of the current Freeview footprint.”

¹² The potential chilling effect on incentives to innovate and enter in other markets does not fall into this category since the impact is not mediated directly via the market, rather there is an impact on investor expectations and in turn on behaviour.

¹³ Boardman, Greenberg, Vining and Weimer. 2006. “Cost-benefit analysis – concepts and practice.” Third Edition. Pearson Prentice Hall.

¹⁴ Baumol and Oates. 1988. “The theory of environmental policy.” Cambridge University Press.

¹⁵ HM Treasury. 2003. “The Green Book – Appraisal and evaluation in central government.” http://www.hm-treasury.gov.uk/economic_data_and_tools/greenbook/data_greenbook_index.cfm

In our view, a significant consumer benefit arising from the entry of PSB Freesat into this market (which is not stated in the Governance Unit's review) is that Sky may well react by promoting its Freesat offering to a far greater extent than it currently does. Sky may also, if this issue becomes a competitive differentiator between PSB Freesat and Sky Freesat, offer a guarantee to customers that it will remain free for perpetuity.

Therefore we conclude that the introduction of PSB Freesat would introduce competition into the free satellite market, and that this competition would carry benefits for consumers.

Additional competition necessarily involves harm to competitors, and therefore a negative market impact. However, the Governance Unit provides no assessment of how the benefits from additional competition should be balanced against any negative market impact.

The usual presumption in economics is that wherever additional competition is feasible, it is beneficial. In the first round, if increased competition results in lower prices for consumers, then consumers are better off and producers worse off by identical amounts. This basic equality is reflected in the discussion above.

However, net benefits are generally presumed to arise from increased competition because driving prices towards costs raises allocative efficiency (since additional consumption whose benefits exceed the costs occurs), because productive efficiency is promoted and because innovation and the introduction of new services is encouraged (dynamic efficiency).

The situation we are considering is, however, atypical since the entrant is in part publicly funded by the licence fee and would not charge for the service (consumers must of course pay for their own receiving equipment). To better understand whether the usual presumption of net benefits holds in this situation it is helpful to consider why competition promotes efficiency.

The key feature of competitive markets is that there is a market price, and producers are price taker in the sense that none of them sets the market price. Entry will occur until the market price is driven to cost, at which point marginal firms earn zero economic profit and allocative efficiency is satisfied. However, the entry of PSB Freesat into a market which includes pay to view services will have an ambiguous impact on allocative efficiency. The entrant's price is clearly below cost, while incumbent's prices may or may not be above cost.

In relation to productive efficiency, the existence of a market price provides an exogenous benchmark against which management performance can be assessed. This in turn enables more powerful incentives to be introduced, thereby promoting productive efficiency.¹⁶ The entry of PSB Freesat does not contribute to the formation of a price that provides meaningful benchmarks against which incumbent managers' performance can be assessed. The impact on productive efficiency of incumbents would therefore be expected to be, at best, weak. Another relevant consideration is the productive efficiency of the entrant versus incumbents, if market share is redistributed between the two. We do not assess the impact of this effect.

Finally, in relation to dynamic efficiency, a key impact of increased competition in normal markets is that it may intensify the incentive to innovate to escape from competition.¹⁷ It is not at all clear that this incentive would operate in this way in this context because PSB Freesat is not required to make a market

¹⁶ Joseph Farrell. 'Monopoly Slack and Competitive Rigor', in Eric Rasmusen, Readings in Games and Information. Oxford: Blackwell Publishing (2001).

¹⁷ Philippe Aghion and Rachel Griffith. 2005. "Competition and Growth – reconciling theory and evidence."

return and is therefore not subject to normal market disciplines. In addition, the entry of PSB Freesat into the market may have a chilling effect on innovation in other markets, as discussed earlier.

The conclusion is that it is far from clear that the usual economic conclusion that increased competition necessarily produces net benefits in terms of producers and consumers taking account of static and dynamic effects holds in this instance. The broader appraisal of public value taking account of the separate public value assessment may, however, capture other benefits associated with increased competition which are outside the scope of any market impact assessment.

4.2.8 The benefits of the proposition for Digital Britain

Paragraphs 59 to 62 of the Governance Unit review consider the potential impact on digital take-up. This assessment goes beyond the appropriate scope of market impact, and begins to touch on issues in relation to the possible Public Value associated with the proposition in terms of reach, quality, impact and value.

The key difficulty with the assessment as presented is that no clear linkage between the proposition and Public Value (or “Digital Britain”) is set out. The advantage of a fully Digital Britain, cited in the region of £1-2 billion, appears to us to be largely independent of the proposition. As we understand it, PSB Freesat does not add incremental digital coverage beyond that currently offered by Sky Freesat, and Freeview post full analogue switch off (estimated by the Government to be around 98.5%). Therefore, it is not clear how PSB Freesat would materially change the outcome.

Furthermore, attracting customers to PSB Freesat who might otherwise have taken Freeview as it becomes available in the run-up to switch-off would not necessarily deliver the full digital benefit associated with switchover. In the counterfactual, consumers in out-of-coverage areas might convert to digital immediately after switchover by buying a Freeview set-top box. In addition, the Governance Unit notes, the Freeview option is expected to be cheaper than the PSB Freesat option. Therefore, the accelerated conversion would involve additional costs for consumers.

We also note that there could be possible detriment to broader goals of “Digital Britain” if the business case for development of broadband infrastructure were to be impacted negatively by PSB Freesat. This possibility is discussed in more detail in section 5.3.3.

5 Market Impact of the HD PSB Freesat proposition

In this section, we provide a summary of the likely market impact of the scenario in which the BBC obtain approval to broadcast HD services, so that PSB Freesat is able to launch with a strong complement of HD channels¹⁸. This approval is subject to a Public Value Test, including a Market Impact Assessment to be conducted by Ofcom. This is scenario 4, as explained above in section 3, which we call the “HD PSB Freesat” proposition. We note that the BBC Governance Unit has explicitly written that they have not assessed the market impact of this scenario (paragraph 7), because they do not wish to presume the outcome of the HD PVT. However, in our view it deserves to be properly considered because it is a plausible scenario, and it is the scenario in which the service would exert the greatest market impact.

We have written less about the market impact of this HD PSB Freesat service than about the SD PSB Freesat proposition (in section 4). There are two reasons for this comparative brevity: firstly, this proposition, and therefore also this commentary, is additive to the SD PSB Freesat proposition; secondly, the BBC Governance Unit has not commented on it, so we in turn cannot comment on their viewpoint.

5.1 The HD PSB proposition and its scale

The BBC Management have modelled the likely uptake of this proposition in detail¹⁹: it is predicted to attract 1.2m to 2.5m customers after 6 years of operation, or 4% - 9% of UK households. This range depends on the competitive price response from Sky. These figures are referred to in the Governance Unit’s review of market implications. Our overall view is that the forecasting approach is reasonably sound, although the forecasts for PSB Freesat customer numbers do not account for secondary sets (there are estimated 36m secondary sets in use). In our judgement the upper range of take-up could consequently rise above the 2.5m upper figure forecast by BBC management.

According to the BBC Management model, where the platform is HD capable and broadcasts BBC services, 80% of those buying PSB Freesat are assumed to be specifically seeking HDTV, and only 20% represent households switching from analogue TV.

In terms of its channel line-up, its pricing and its HD capability, PSB Freesat in this scenario can be thought of as a “HD Freeview” and might therefore be expected particularly to appeal to owners of HDTVs that (like the many Freeview customers) are happy to go without premium sport and movie services available from Sky or NTL subscription services for their primary or secondary TV set.

5.2 The market affected by the proposition

In our view, the relevant market in which impacts will be exerted by this HD PSB Freesat would be the whole TV market. Providers and customers of HD services will be especially affected by the HD PSB Freesat service.

5.3 Market Impact of the HD PSB Freesat proposition

All the points we make above (sections 4.2.2 to 4.2.8) about the SD PSB Freesat also apply to this proposition; indeed the effect of each of those impacts may increase commensurately with the (approximately 5 times) greater scale of this proposition.

¹⁸ Following the BBC Management’s model and research, we assume that the service will launch with HD channels from the PSB broadcasters.

¹⁹ Model created by the BBC and Scientific Generics (an external firm of consultants), and the main input to this model was market research carried out by BRMB in April 2006. This forecast assumes that all the five major channels are available in HD at launch.

In addition, we identify three additional areas of significant market impact. Each is discussed below,

5.3.1 Impact upon Sky HD subscription service

Sky HD is a new and successful service offered by BSkyB. According to BSkyB's results for the three months ended 30 September 2006, *"Sky HD subscribers more than doubled during the quarter to 96,000, the fastest ever customer take-up of an additional Sky product, and already representing three times the sales levels achieved by Sky+ in its first year"*. In our view, a proportion of this HD subscription base would be attracted to a non-subscription HD free satellite service, whether that that is HD PSB Freesat or HD Sky Freesat.

We do foresee a sizeable direct effect exerted by PSB Freesat upon subscribers to Sky subscription HD services, as assumed in the BBC's model. With ever more TV sets "HD-enabled", consumers will wish to receive HD services (in order to exploit the full potential of their new set), and a proportion of these consumers will prefer a more limited channel range without subscription to the full Sky subscription package. This exact proportion will largely depend on the availability of HD channels, and the appeal of Sky's HD premium channels relative to whatever HD channels may become available on PSB Freesat. Given that in any counterfactual, Sky pay HD would be the only alternative to HD PSB Freesat, it is reasonable to assume that the majority of HD PSB Freesat's 2.5m customers would otherwise have chosen Sky HD.

A competitive pricing response should be expected from Sky, in particular:

- Reduction in prices for HD offerings. The provision of free HD services would reduce the premium that commercial operators would be able to charge for HD. This impact would affect any operator offering HD pay-television services.
- Reduction in prices for offerings targeting the secondary sets in a household. PSB Freesat would give consumers the option of free services for secondary rooms, which would erode the premium that Sky subscription services would be able to charge for its "multi-room" offerings. This would, in turn affect the pricing of competitors' multi-room offerings (e.g. NTL).

In addition to reductions in headline prices, these effects could be manifested, in part, as increased discounting of services. For example, Sky might have to offer increased discounts to customers who are considering churning in order to retain their business.

We note that these dynamic effects would, in part, substitute for the static effects explained in the previous section: if competitors were to drop their prices in response to PSB Freesat then they would lose fewer customers.

In our view, as with the impact of SD PSB Freesat, a significant impact on Sky would be the migration of subscription customers to free HD services. The BBC assumes in its modelling of the proposition that the launch of HD PSB Freesat would prompt Sky to more actively promote its HD service on its Freesat offering. We agree that this is likely, with a consequent revenue-loss for Sky, as it is forced to give up the premium it would otherwise command for subscription HD services (it is our understanding that almost all Sky HD customers currently are subscription-customers, and that Sky's nascent HD Freesat offering is priced without equipment-subsidy and is barely promoted).

The same upgrade and downgrade paths between subscription and free-satellite services would exist in this scenario, as outlined in section 4.2.2.

5.3.2 Impact upon NTL

NTL have also announced plans to upgrade their network to allow download speeds of 50 MB/s, with the launch of a commercial trial scheduled for November 2006. This upgrade of Internet Access may support the further development of HDTV by NTL who currently have 40,000 consumers with HD compatible digital video recorder set top boxes.²⁰ Recent market analysis also points to the importance for NTL of HD content.²¹

We therefore expect NTL to also lose potential customers to PSB HD Freesat. NTL also suffers an additional disadvantage relative to Sky subscription, in that an upgrade path will exist from PSB Freesat to Sky subscription services, so PSB Freesat could serve to recruit customers directly to Sky subscription who might otherwise have considered alternative premium subscription providers, such as cable.

5.3.3 Effect on new entrants

The UK's existing DSL access network does not offer consistent broadband download speeds to all customers, and not all consumers can be expected to be able to receive an acceptable SD television service over existing DSL broadband infrastructure, and the network is unlikely to support HD services.²²

It is possible that HD PSB Freesat could reduce the available market for DSL-delivered television services (which might be offered by a wide range of companies such as Google, Microsoft, Sky and BT Vision). This could impact on the business case for upgrading the BT Openreach access network by bringing fibre closer to the home to achieve higher and more geographically consistent broadband speed (utilising VDSL technology for example).

5.4 Impact on competition and benefits for consumers

This greater competition within the HD sector brings benefits for consumers, in terms of greater product-choice and lower prices. We refer here to our caveats about measuring the benefits of competition, outlined in section 4.2.7.

We do not see that this HD PSB Freesat service would have any incremental benefits for consumers or for Digital Britain beyond those already attributed to the SD PSB Freesat proposition (section 4.2.8)

²⁰ NTL. 8 November 2006. Third quarter 2006 results." http://library.corporate-ir.net/library/13/135/135485/items/220339/NTL_Q32006.pdf

²¹ Merrill Lynch. 18 October 2006. "NTL Inc – 2007 – the turnaround year."

²² BT. March 2006. "Broadband access speeds in the fixed network." BT Group industry analyst briefing. <http://www.btplc.com/Thegroup/Industryanalysts/Industryanalystspresentations/BBintheixednetwork.pdf>

Contact information

This independent report was prepared jointly by Fathom Partners and Indepen.

The primary point of contact for any inquiries is:

Harry Hobson

Fathom Partners

3rd floor, 23-25 Eastcastle Street, London, W1W 8DF

hh@fathompartners.com

Telephone: 0207 636 6800

We thank the BBC Governance Unit and Strategy Unit and DCMS for their help to us in writing our report.