

## **DISCUSSION PAPER ANALOGUE SWITCH-OFF: ISSUES FOR CONSIDERATION**

### **Background: What is Analogue Switch-off?**

Analogue switch-off (ASO) refers to the termination of analogue television transmissions, usually following a period of simultaneous broadcasting in both analogue and digital formats. The transition is required in order to allow time for households to either convert their analogue sets with a set-top box (STB) or replace their television set with an integrated digital receiver.

At ASO, the radio spectrum being used to broadcast analogue signals is freed up, and becomes available for other uses. In New Zealand, free-to-air broadcasting by TVNZ and CanWest primarily uses the VHF band. Digital terrestrial television will be provided within the UHF band, which is currently also used for some free-to-air television services (such as Māori Television and Prime) and for SKY's UHF analogue service.

A 2006 cost-benefit study by Spectrum Strategy Consultants of the launch and transition to free-to-air digital television in New Zealand estimated there would be a net benefit of approximately \$230 million in making such a transition, provided ASO occurs by 2015.

The government has therefore determined that the achievement of ASO is in the national interest, and is an objective for the launch of and transition to free-to-air digital television. Prior to the launch of free-to-air digital television, consultation on the process and criteria for making the transition to ASO is required. The purpose of this paper is to identify issues to be addressed in this consultative process.

### **Process**

No ASO date is currently set, but the May 2006 Cabinet paper dealing with DTV indicates that a similar process to that implemented in the UK could be adopted. This involved setting a threshold for DTV penetration that would need to be met before an ASO date would be determined and announced. A further threshold level was identified as a pre-requisite before ASO could finally occur. The two thresholds selected for the UK were 50% and 95%.

Within New Zealand, the current level of digital platform penetration is around 40%, largely through subscriptions to the SKY digital service. According to the Spectrum Strategy cost-benefit report, a base case scenario forecasts that total DTV penetration would reach 56% by 2010 and 74% by 2015. It should be noted that take-up rates beyond this level would likely be influenced by the announcement of a firm ASO date.

For the purposes of ASO and thresholds, it is proposed that it is the total percentage of households with any form of digital TV that should be taken into account, rather

than only those households with a free-to-air reception option. This is because the critical factor for the achievement of ASO is whether households will have a television reception option once analogue signals are switched off. In assessing the total figure, however, the issue of what services are available on different platforms (free-to-air versus conditional access) may become relevant.

The coverage area for the initial DTT roll-out, reaching 75% of the population, is respectably high by international standards. A national launch is planned, and there is room to extend coverage further (to a maximum of around 87%) prior to ASO. A free-to-air digital option is also to be available to all New Zealanders from launch by means of satellite transmission. This should enhance the likelihood of digital take-up.

#### *Questions for Discussion*

- 1.a. Should an ASO date be announced when penetration has reached an agreed percentage? What would an appropriate threshold level be – for example 50% or 60%?
- 1.b. How would progress towards this percentage be monitored or measured, and by whom? How would we determine when the agreed percentage has been reached?
- 1.c. What total threshold would be appropriate for ASO to occur – e.g. 90% or 95%?

#### **Criteria**

Before setting an ASO date could be considered, several consequential questions would need to be determined. These would set clear criteria for the achievement of ASO, and enable appropriate monitoring of progress to be managed.

Many households have more than one television set, and associated analogue equipment, such as VCRs. Multiple analogue TV sets in one household may therefore require multiple set-top boxes (STBs) for a conversion to digital.

#### *Questions for Discussion*

- 2.a. For the purposes of ASO, do all TV sets need to be converted, or would it be a minimum of one per household?
- 2.b. What action, if any, might need to be considered for conversion of VCRs?
- 2.c. What is the best approach to ensure optimal functionality and convenience for consumers needing to purchase multiple STBs (including compatibility questions between free-to-air and conditional access options)?

## **Announcement of a Switch-off Date**

International experience within the EU suggests that the options are for an ASO date to be obligatory (mandated by government, and possibly backed by law), firm (an announced date is backed by government and industry, and usually with a clear ASO strategy/timetable) or a target (usually based on early estimates of take-up rates).

A number of EU countries have opted for target dates, but these have often needed to be postponed when take-up subsequently proved to be slower than initially thought.

Obligatory ASO dates are in place for Sweden (2008), Finland (2007), Denmark (2009) and Norway (2009). Such mandatory dates have tended to be backed up by regulation or legislation – for example, a US requirement that all new television sets sold in the market must be integrated receivers.

Within the EU, firm dates have been announced by the UK (2012), Switzerland (2008), Germany (2009), the Netherlands (2007), and Austria (2010). These dates have been set through a consensus between government and industry, reflecting a view that a partnership approach is best suited to managing a smooth transition to digital.

In order to drive ASO, an independent, authoritative “voice” may be needed, particularly if a consensus approach is selected. Elsewhere, this has been provided either by governments or by specially created switch-over commissions (such as Digital UK).

### *Questions for Discussion*

- 3.a. Should New Zealand adopt a target, consensus or obligatory approach to setting an ASO date?
- 3.b. Should some form of switch-over steering group be considered for New Zealand, and if so what form should it take? What role would it have?

## **Extent of ASO**

The questions to be addressed under this heading relate to the range and extent of television broadcasting services that would be affected by ASO. The answers will need to be informed by an understanding of the objectives of ASO – for example, the ability to free up radio-spectrum for other uses, and the need to replace an ageing and obsolescent analogue transmission infrastructure. The former is of more relevance to government interests, while the latter is primarily an industry consideration.

There are a significant number of regional and local broadcasters, many of which may not be simulcasting on the digital platform during the transition period. Within this group, there are a diverse range of channels, including both non-commercial and commercial services (such as tourist information channels).

There is an expectation that all spectrum licences freed up by the end of simulcast at ASO will be returned to the Crown. If ASO extends beyond simulcast services, all those other services would need to convert their existing UHF licences from analogue to digital. The Cabinet decisions on DTV in 2003 has determined that right-holders are able to convert their existing analogue licences to digital at any time.

#### *Questions for Discussion*

- 4.a. To what free-to-air services would ASO apply? All those services being simulcast on the DTV platform? All those services being simulcast on *any* digital TV platform? All services?
- 4.b. Should analogue conditional access systems, such as SKY UHF, be included in an ASO process?
- 4.c. Would ASO apply to free-to-air services, such as Prime, NZRB and local or regional broadcasters, which may not initially be included on the DTT platform?
- 4.d. If some analogue services are not covered by ASO, what are the implications for use of spectrum, maintenance of the transmission infrastructure etc? Who would bear the costs? Would Kordia be ready to continue providing a dual analogue/digital transmission service?

#### **Big Bang or Progressive Turn-Down**

The two main options for ASO are to set a date that applies across the board, or to develop a rolling approach, with analogue transmission being switched off region by region, or as transmission infrastructure requires replacement.

The advantage of a region-by-region approach is that lessons can be learned from a start in a defined area. It would also allow analogue transmission to be discontinued in (remote) areas where costly maintenance/upgrades to analogue equipment became necessary. Consideration would, however, have to be given to DTV penetration levels within affected areas.

A nation-wide ASO is more “democratic” in that all viewers (and broadcasters) are treated equally and given access to the same services. In total population terms, New Zealand is small by international standards. On the other hand, the topography means there are a high number of analogue transmission sites.

There would be a need to ensure retailers and installers support the programme and are ready to cope with increased demand for conversion equipment and installation as ASO draws near.

#### *Questions for Discussion*

- 6.a. Which approach (“big bang” or progressive) to ASO would be best suited for New Zealand?
- 6.b. If a progressive approach were selected, who would make the decision about which sites to switch off and when? (Kordia? Broadcasters? Government? All three groups, by consensus?)
- 6.c. Should a trial switch-off in one or two areas be arranged to test the process in advance of a full switch-off?
- 6.d. How would liaison with distributors, retailers and installers best be managed? What sort of notice period would they require?

#### **DTT Band Planning**

The October 2006 Cabinet decisions on DTV platform funding and spectrum licensing issues state that, when the timing for ASO is determined, MED will consult with DTT licence-holders (and other stakeholders) on the development of a band plan for DTT spectrum that will accommodate existing and future channels or services, and provide for the efficient and effective allocation of the spectrum available for DTT and other potential uses.

Once spectrum planning is confirmed for the roll-out of DTT, there should be a broad understanding of the extent to which re-planning is likely to be required at ASO. Discussion of consequential band-planning issues will occur after an ASO date has been set.

#### **Close off date for further new analogue licences to be issued**

Once the transition to ASO has begun, there will be a point at which it may no longer be appropriate to allocate further new analogue licences.

#### *Questions for Discussion*

- 7.a. Is a termination date for the allocation of new analogue licences necessary? If so, should it be the same time as when an ASO date is determined?
- 7.b. Would it be a viable alternative for any new analogue licences to be issued from 2007 to include a requirement that they will be cancelled at ASO – i.e. the term of the licence would be limited to planned ASO date, with the resource charge to be adjusted accordingly?

## Regional and Local Broadcasters

As noted above, it may not be cost-effective for regional and local services to enter an extended period of simulcast analogue and digital transmission. Nevertheless, the May 2006 Cabinet papers noted that such services would need to convert to digital at some point before ASO occurred.

Some local broadcasters may seek government support for their transition to DTV. If any support were to be considered, the following points are likely to be relevant:

- Rationale for any support would need to be defined;
- Local broadcasters would need to be categorised in accordance with the stated rationale;
- Any simulcast period would need to be kept as short as possible to minimise costs to government;
- The government has reserved the right to impose a “must carry” obligation for certain regional services on those allocated DTT spectrum licences without resource charge during the transition to ASO;
- Spare capacity on these multiplexes may become scarce;
- Some local broadcasters are concerned that a DTT option may not provide coverage to their area, and that a DTH services could be impractical, unaffordable or unavailable (due to lack of transponder capacity);
- Cost-effective options for delivering a truly local service would need to be identified.

### *Questions for Discussion*

- 8.a. What cost-effective options for the digital delivery of local and regional services can be identified?
- 8.b. Is DTH delivery of local and regional services viable, and if so, how could it be achieved?
- 8.c. Should consideration be given to the creation of a dedicated local/regional DTT multiplex, subject to the availability of suitable spectrum?
- 8.d. Are there other delivery platforms (existing or emerging) that might provide the best long-term solution to the digital delivery of local and regional services?
- 8.e. How important is it for local and regional broadcasters to be included on an EPG?

## Licence Renewals: UHF in 2010

UHF analogue renewals for commercially allocated licences have already been agreed from 2010 to 2020. This includes spectrum for some free-to-air services, such as Prime and the Racing Channel, and SKY’s Pay TV services. Provision will

need to be made for any such licences affected by ASO to be cancelled and returned to the Crown at ASO, or converted to digital if the services carried on them are not being simulcast at that time.

#### *Question for Discussion*

9. What, if any, adjustments need to be made in respect of commercially acquired licences being renewed in 2010 to take account of ASO occurring prior to 2020?

#### **MUSH Issues**

Public entities (such as museums, universities, schools and hospitals) may face significant costs if they need to convert a high number of TV sets and associated equipment. They will need to be informed of the options, timeframe etc early and well to ensure they can plan appropriately.

#### *Questions for Discussion*

- 10.a. Would the costs to some institutions be such that they would be likely to seek government support?
- 10.b. What is the best means of ensuring appropriate information is conveyed, and in a timely manner?

#### **Dealing with Non-Adopters**

Other markets have been concerned about the possible challenges to achieving ASO presented by those who are reluctant to consider, or uninterested in, DTV conversion. Some people may not wish to adopt DTV, while others may face difficulties in making the switch by reason of affordability or the lack of sufficient technical knowledge to install their own set-top box.

There are pros and cons to the option considered elsewhere of subsidising conversion equipment. International experience has included an EU legal challenge to Italy's policy of paying for one STB per household, balanced against the social equity approach announced in the UK, where there will be limited assistance for the elderly and disabled – paid for through the BBC's public broadcasting fee.

Other markets have seen take-up rise, then plateau, and have considered options for providing a push to facilitate the last phase of growth. Important factors have been identified as:

- Having all actors supporting the initiative (governments, broadcasters, network operators and manufacturers);
- Strong leadership (government or a switch-over commission);

- Effective communications strategy (advertisements, TV banners, letters to households, web portals, brochures), advising what is happening, when, what options people have and what they need to do. Installers and retailers need to be able to give accurate and clear advice;
- Resources – such as subsidy for content (which is a key driver for consumer take-up of DTV) or STBs, and for communications campaigns;
- Availability of DTV receivers or STBs at a reasonable price.
- Broadcasters launching new digital services.

*Question for Discussion*

11. Most of the factors considered important in maximising take-up of DTV have been taken into account by government decisions and the coordinated approach developed within the broadcasting sector. Are there further actions that should be considered by these parties to encourage take-up? If so, at what point in the transition should they be initiated?

**Retailers and Installers**

The experience elsewhere underscores the importance of careful planning and a clear timetable to manage supplies of consumer equipment in the market ahead of ASO.

Retailers and installers need to be well-briefed to be able to provide accurate information and advice to viewers.

*Question for Discussion*

12. Is this aspect of the transition to ASO well-prepared and coordinated? If not, what more needs to be done?

**Public Information**

While the FreeView broadcasters will be running their own advertisements to promote FreeView, and will be dealing with retailers and installers, there may be a need for additional public information in support of digital uptake and ASO:

- Information brochures explaining why the switch needs to happen and what people need to do;
- Regular announcements or updates to ensure public is aware government is strongly behind the switch to DTV;
- Liaison with Consumer Affairs to identify possible consumer issues and actions to manage them;
- Monitoring industry standard issues etc to ensure consumer interests are taken into account.

## Question for Discussion

13. Is such a carefully targeted and modest information campaign warranted? If so, what is the optimal form and timing? How might it best be delivered (e.g. through any switch-over steering group)?

## Disclaimer

The opinions contained in this document are those of the Ministry for Culture and Heritage and Ministry of Economic Development, and do not reflect official government policy. Readers are advised to seek specific legal advice from a qualified professional person before undertaking any action in reliance on the contents of this publication. The contents of this discussion paper must not be construed as legal advice. The Ministries do not accept any responsibility or liability whatsoever whether in contract, tort, equity or otherwise for any action taken as a result of reading, or reliance placed on the Ministries because of having read, any part, or all, of the information in this discussion paper or for any error, inadequacy, deficiency, flaw in or omission from the discussion paper.

## Invitation for Submissions

Comments on the proposals contained in this paper and on any related issues, are invited from interested parties. Written submissions should be sent no later than **16 February 2007** to:

Director – Digital Broadcasting Strategy  
Ministry for Culture and Heritage  
P O Box 5364  
WELLINGTON

or emailed to:

[jo.tyndall@mch.govt.nz](mailto:jo.tyndall@mch.govt.nz). (preferred option)

Any party wishing to discuss the proposals with Ministry officials should contact, in the first instance, Jo Tyndall, Director – Digital Broadcasting Strategy on:

DDI: 04-495 2564

## Posting and Release of Submissions

The Ministry for Culture and Heritage may publish all submissions on its website at <http://www.mch.govt.nz>. The Ministry will consider you to have consented to the publication of your submission, unless clearly specified otherwise in your submission.

Please advise the Ministry of any objection to the release of any information contained in a submission to this document, and in particular, which parts should be withheld, together with the reasons for withholding them. The Ministry will take into

account all such objections when responding to requests for information on submissions to this document under the Official Information Act 1982.

### **Privacy Act 1993**

The Privacy Act 1993 establishes certain principles with respect to the collection, use and disclosure by various agencies, including the Ministries for Culture and Heritage and of Economic Development, of information relating to individuals and access by individuals to information relating to them held by such agencies. Any personal information you supply to the Ministries in the course of making a submission will be used by the Ministries in conjunction with considerations of matters covered by this document only. Please clearly indicate in your submission if you do not wish your name to be included in any summary the Ministry for Culture and Heritage may prepare for public release on submissions received.

Ministry for Culture and Heritage  
Ministry of Economic Development

December 2006