

A N N E X G

SMAG Position Paper on Digital Broadcasting Switchover

Prior to the SMAG Brainstorming Event on the Transition from Analogue to Digital Broadcasting, members read and considered a variety of documents on the subject, in particular those representing studies and views from the ITC, the BBC, the DCMS and the DTI/RA. A discussion guide was also provided to members to assist in focusing the discussion at the Event and this report is structured around that guide which posed a number of questions so that there could be clarity on the market, the technological factors, and the regulatory issues. This note summarises the conclusions reached on each question.

What is the future shape of broadcasting?

SMAG considered that the past practice of broadcasting which intrinsically links particular "content" with a particular "delivery method" is no longer appropriate. Today, the same intrinsic "content" can be delivered in numerous ways, or a combination of ways, and audiences are emerging that will demand special or customised presentations. Content will be re-packaged many times across different delivery methods. Immediacy and customisation of services are becoming more important in our society, with the associated willingness to pay for such benefits. Rather than being willing to watch only those programmes broadcast free-to-air at a scheduled time, an increasing number of the population are prepared to pay for extra choice in content and scheduling. The traditional distinction between "broadcasting" and "telecommunications" is no longer valid as content (whether audio, video, or data) becomes all-digital and interactivity becomes the norm.

At the same time, there is resentment from a significant part of the population that some traditional content, especially national sport, is only available from a particular service provider

and that which was previously free now requires a payment or subscription.

Delivery should ideally become technology-neutral, with different delivery methods being appropriate and being successful in the market on the basis of their capabilities in bandwidth, their service proposition and their tariffs.

SMAG did not feel that a complete close-down of terrestrial broadcasting in the short or medium term was possible. There are many issues involved, such as the need to have reception on portable sets and the need for services with a degree of local content. There was little justification in the short or medium term for a view that terrestrial broadcasting could be replaced completely by satellite and cable, or content delivered over the Internet via telephone lines and new broadband networks.

Traditional free-to-air, terrestrial, analogue broadcasting is currently occupying a large amount of potentially valuable spectrum and the current duplication of certain analogue and digital services increases the congestion to some extent (although not markedly because of the different non-interfering nature of the signals). A move to all-digital terrestrial broadcasting would reduce inefficiency in use of the spectrum.

SMAG agrees that early switch off of analogue terrestrial broadcasting and a transfer to digital terrestrial broadcasting would yield more efficient use of the spectrum available.

What is the future for public service broadcasting?

There is still a majority of people in the UK who rely wholly on analogue terrestrial broadcasting; they have no cable, satellite or PC installations. There is also a significant number of homes in which there are additional TV sets which still rely

on the analogue signal. Therefore despite the growing number of people choosing alternative delivery methods there is, and will continue to be for a long time, a high dependency on the traditional free-to-air channels. In many households there simply does not appear to be an interest in having greater choice than offered by the existing free-to-air channels and there is no willingness to pay for television services, other than to comply with the basic licence fee payment.

Although the traditional concept of "public service broadcasting" is becoming diluted as content "channels" from different sources with different perspectives proliferate, it is difficult to see that it would be acceptable to take away (or even reduce substantially) the existing "public service broadcasting" service of five channels to this sector of the UK community. This implies that if delivery methods other than analogue are to be used, then means must be found to provide reception at no cost to the individual.

SMAG recommends that the present coverage of 99.5% for analogue, "free to air" channels should become a target of 99.5% coverage for "free to home" channels, but that there may be more cost-effective ways of achieving this in some areas/regions than using terrestrial broadcasting.

If an early switch over is desirable then how can it be achieved?

The average number of television receivers per household now stands at 2.4 sets, but VCRs increase this to around four receivers per household. The lifetime of a main TV set is typically eight years, but it is then used for many more years as a secondary set in another room in the house. There will therefore be a huge amount of equipment which will not be life-expired by the earliest switch over date of 2006 proposed by DCMS. Apart from the prospects of home area networks alleviating this problem, a proactive strategy for public awareness should at the very least begin now to minimise the complexity of having to add digital convertors to all analogue sets and VCRs.

There should be high-profile public announcements that on a specific date it is

intended that analogue broadcasting will be switched off and be replaced by digital terrestrial broadcasting. This will assist manufacturers to market more digital TV sets, provide cautions on analogue set purchase, and encourage consumers to make informed purchases between now and then. [It is interesting to note that the high profile 3G mobile phone auction created a huge increase in sales of 2G WAP phones, despite the fact that only a very small amount of those people with the WAP facility actually use it, but they feel the need to be part of the future service evolution]. It can be argued that once many consumers realise that the future of TV is digital they will want to be involved and ready for the change. The increased consumer demand will increase availability and choice and subsequently reduce the price of sets and set-top boxes.

SMAG recommend a Ministerial commitment to a specific date for switch over.

How does Government ensure that those consumers who do not purchase a digital TV or have additional analogue sets are not excluded?

Government has committed itself to an information society that it has stated should be all-inclusive. The TV is a powerful communication appliance in the home and many are much more comfortable with the TV than with computers. Because of the way that the computer industry has not addressed user-friendliness, there is a significant backlash against increasing use of the computer in some domestic environments. The TV, in its evolution to become an interactive appliance, has an important role to play in bringing e-commerce, e-government, and other information services to the home, particularly for sectors of the community that feel alienated from computers because of their impressions or experiences.

Existing approaches to the provision of home digital reception equipment, whether terrestrial, satellite, or cable, have involved the service provider in subsidising (totally, or to a large extent) the consumer equipment, reckoning that the capital cost can be recouped over time on the profit margins associated with services that

the customer will purchase. The revenues associated with broadcast services are not large in terms of overall household spend and other service providers such as banks, retailers and travel companies have become involved in assisting with such subsidy to open up a new retail channel into the home.

SMAG considered an interesting approach to the provision of a "digital communicator" into the home. The household recurrent spend on television services ranges from around £100 per year (licence fee for free-to-air services only) to around £500 (all pay-per-view channels, plus licence fee). This is small by comparison with, for example, electricity, gas and water supplies (increasingly provided by one company to a given consumer) which may account for ten times this amount. Telecommunication services are probably in the same revenue range as the television services cited above and certain operators are moving to provide a unified package of energy and telecommunication services to the home, with an even greater associated revenue stream per household. Maybe a better approach to the analogue/digital transition is to recognise that the digital unit for the home has a much wider function than reception of digital broadcasting, but is in essence an interactive (i.e. two-way) digital communicator which also receives digital television services. The rationale for subsidising it into the home by the utility companies and others is the saving to the consumer and the competitive position for the supplier that can be obtained through provision of a range of services, such as automatic energy meter reading (electricity, gas, water) using Bluetooth connection to the communicator and automated load monitoring and control (which could save very significant capital cost to the energy companies). Already, such remote energy monitoring and control schemes are being introduced in the USA. Health monitoring and security services are also applications for such a device. Because of the value of the revenue stream and the potential savings through introduction of the communicator, it is vastly

easier to justify it than trying to introduce it on a broadcasting revenue model alone.

The digital communicator would in essence be a residential gateway to perform online banking, meter readings for utilities and provide direct access to local and central government information and services whilst also delivering (as standard but secondary) the basic free-to-air channels plus well-known services such as Teletext. It is the core of the home area network (HAN), which is attracting much interest from equipment manufacturers, focusing on the concept of a central digital processor or server in the home, linked to computers, television displays and appliances by narrowband wireless (Bluetooth) for voice and control functions, and by broadband wireless (Hiperlan2, UWB, and others) for video services. Such a processor could feed digital signals or carry out the analogue to digital conversion prior to wireless transmission, thereby eliminating the need for multiple set-top boxes for legacy analogue equipment.

Such a digital communicator approach has many advantages. The Government demonstrates its commitment to e-commerce and e-government for all by ensuring (but not having to provide) a standard gateway into the home and universal access to services. The private companies assisting the entry of this equipment into the home achieve cost savings in performing specific functions. There are major savings in capital plant if more control can be exercised over demand profiles and some of these savings can be passed to the customer. Individuals who are not otherwise connected to the electronic information services would not be excluded from access to digital TV and could be persuaded of real additional value in having the digital communicator. Improvement in health services could be an additional consumer benefit and cost-savings element to Government.

The economic benefits of making a swift digital transition and re-farming this spectrum, plus taking an international lead in this area would be considerable for the UK. With five years to develop the technology in partnership with

industry, and the speed of technological change, the unit cost of the box would become relatively inexpensive. Basic technical standards within the box would need to be defined and agreed, but based on existing international achievements such as the DVB standards. Consumers will of course have a choice of service provider to access from the communicator.

SMAG feels that no one should be excluded from the digital revolution. As such this provides a unique opportunity for the Government to realise its Information Age society by enabling the creation of a standard residential gateway and digital communicator into the home, providing social and financial benefits to both consumers and suppliers.

How should the spectrum/re-farming be managed?

There are many models already investigated for re-farming the analogue television broadcasting spectrum. SMAG discussed at length the options available. If there was to be no significant reduction of terrestrial broadcasting services associated with the transition from analogue to digital broadcasting, the inescapable conclusion was that only around ten frequency channels (or 80MHz) of spectrum could be released. Indeed, if the function of the digital communicator was to have multiple functions as indicated above, there would be no rationale for reducing coverage of terrestrial services. There is in any case a defined situation of spectrum licensed to ON-digital in their contract lasting until 2012 and separately to the BBC for their digital services.

SMAG felt it important that ON-digital should focus on content. Bearing in mind the earlier comments about the separation of content and delivery, it was felt that any combination of these activities in one company was not helpful to the future competitive environment and efficiency of spectrum use. Efforts need to be made in digital broadcasting, as in 3G telecommunications, to avoid duplicating the number of transmission masts and minimise environmental concerns, as well as to minimise the financing of transmission infrastructure.

Content providers needed to be able to negotiate with alternative providers of delivery infrastructure that had the maximum incentive to make best use of the spectrum.

SMAG considered that the approximately 80MHz of spectrum liberated through the digital transition could then be auctioned. Since it would not be needed by another digital terrestrial content provider to sustain a competitive market (assuming that there is not a market for even more channels and that an adequately competitive situation exists with cable and satellite), it could be auctioned to the highest bidder on a non-interference basis and subject to international constraints. This would allow the market to decide the best use and avoid Government having to specify particular forms of use.

SMAG suggests that a focus should be on allocating spectrum for digital use to delivery companies, not connected with content, thereby avoiding expensive duplication of infrastructure or additional environmental concerns, and resulting in a more efficient use of the spectrum available. SMAG also suggests auctioning the spectrum freed up by the digital transition on a non-interference basis rather than trying an approach based on an assumed model for the evolution of future services.

How should spectrum pricing be applied?

Spectrum Pricing is essential. Analogue broadcasting should be notionally priced in line with other commercial uses like cellular, but the application of spectrum pricing should be cash-neutral to the broadcasters at the time of introduction, but should then provide financial incentives to release spectrum that was not being used productively. This approach has been used with spectrum allocated to MOD. Pricing for the digital service should be applied on the switchover date. Content suppliers to On-Digital, such as the BBC, would negotiate fees directly with On-Digital.

Analogue broadcasting has become an inefficient use of spectrum and spectrum pricing must be used as an incentive to encourage the switch to digital broadcasting and the optimum utilisation of that spectrum.

International dimension

This must remain a key consideration in terms of global economies of scale, standards and harmonisation. Strong efforts will be needed by Ministers, supported by the RA, to ensure that the analogue/digital transition in the UK does not move at the pace of the slowest in Europe.

To summarise, SMAG wishes to see a rapid evolution in digital networks and a major growth in services and content. Key elements in overcoming barriers to adoption are to encourage:

- ▲ early adoption of digital TV through clear Government messages;
- ▲ promotion of this as a massive opportunity to meet digital switchover, Information Society and inclusiveness goals;
- ▲ involvement of a multiplicity of service companies (e.g. Banks, Energy Companies) to promote the installation of a digital communicator which will also drive digital TV;
- ▲ more and better designed appliances (for inclusiveness);
- ▲ drivers for compelling content; and
- ▲ studies on human factors barriers to the adoption of the e-environment.