



Submissions to Consultation

Licensing Digital Terrestrial Television

Submissions received from respondents

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1 B. Bonsal Communications Ltd.

Response to Commission for Communications Regulation

Re: Consultation on Licensing Digital Terrestrial Television General

The Commission for Communications Regulation (“ComReg”) proposes to licence a commercial Digital Terrestrial Television (“DTT”) platform of 3 X 8MHz multiplexes along with the state supported DTT multiplex.

In the existing environment a number of competitive factors will significantly impact the success of a new commercial DTT platform, these include:

1. Existing multi-channel television operators already serve 60%-70% of television households with cable, MMDS or satellite distribution. A new DTT platform has a very small incremental market out of which to try to generate a commercially viable business.
2. Existing cable/MMDS and satellite operators have transmission platforms of much greater capacity than the proposed commercial DTT platform, even considering the technological advances of the last few years, which will make it difficult for a new DTT operator to win pay TV customers from existing cable/MMDS and satellite operators.
3. The Irish television advertising market, while growing, is small by international standards and is already served by multiple domestic and multi-channel programming providers. Incremental television advertising revenues available to the commercial DTT operator(s) will be very small.
4. Most existing (English speaking) multi-channel programme providers are based in the UK and have single, simulcast feeds originating from the UK. They do not currently have the ability to separately insert advertising for the Irish market and given the size of the Irish advertising market it is considered uneconomical to develop such feeds (with the exception of one or two channels such as SKY News who do have a separate Irish based feed)
5. Existing multi-channel programming providers (including the UK terrestrial programme providers) have existing Pay-TV based contracts with the cable/MMDS and satellite platforms and are not in the position to change the basis on which their most highly viewed programmes/channels are provided to the Irish market. Accordingly, the programming content available on a free-to-air basis in Ireland is limited.

While the coincidental licensing of the state DTT platform is to be welcomed, and turning off the analogue signals of the state broadcasters will provide a boost to customer uptake of commercial DTT services, **the most significant issue facing the successful introduction of a commercial digital terrestrial television (“DTT”) platform in Ireland is the economic viability of a commercial DTT platform and the ability to successfully finance such an operation.**

Economic conditions make it highly probably that the state DTT platform and the commercial DTT platform must share mast sites, transmitters, network assets, etc. The costs of these resources will have to be shared and accordingly, the viability of the commercial platform will ultimately impact the performance of the state DTT platform.

Banks and financial institutions are not willing to accept high levels of risk and long periods of negative cash flow normally associated with the launch of new transmission networks. Accordingly, license terms and conditions need to eliminate, as much as possible, the risk of associated with successfully financing and operating a commercial DTT platform. The regulations must assist to promote the commercial viability of the platform as well as regulate the reasonable delivery of services.

Question 1: Do you consider that the proposed length of the licence period is appropriate?

It is critical that any commercial multiplex operator have an adequate time frame in order to establish market penetration, generate market value and accordingly a return on investment. This will be a challenge given established market conditions.

The suggested 12-year licence period is reasonable, however the starting date should be measured from the date commercial transmissions commence, allowing a development period for the rollout of the transmission network.

The economics of the proposed DTT platform means that it is highly likely that the development of the network will be undertaken by a group (which may or may not include the state broadcaster) and accordingly any 1 multiplex operator may not have complete control over the physical rollout of its transmission network. By making a provision for a network rollout period some of this uncertainty can be addressed.

The length of the network rollout period and the possibility that the network rollout may be delayed can be governed by imposition of sanctions for non-performance rather than burden the ultimate operating duration of the licence.

Additionally, a provision should be made within the regulations to allow for the subsequent extension of the licence(s) for a further period. This extension could be made subject to a review by ComReg that may include, among other factors, the general desirability or benefit of the DTT platform in Ireland, the efficient use of spectrum, the licensee meeting its obligations etc.

It is very likely that it will take some considerable time for a successful applicant to develop a viable commercial business and the availability of a licence extension, even if not initially guaranteed, will provide financial backers with a some comfort in respect of their investment. Making available the possibility of a licence extension will go a very long way in assisting any licensee with the financing/refinancing of the operations.

Question 2: Do you consider that factors other than those included above should be taken into account when deciding the licence duration?

In addition to comments re: measuring the start date from the point of initial commercial transmissions as noted above, ComReg should consider a provision in the regulations allowing adjustment of the licence period to take account of any delays in the actual date that RTE analogue transmissions are ceased.

The cessation of analogue transmissions will be one of the key events in triggering a reasonable take up of DTT set top boxes by consumers. If this event is delayed unduly, the viability of the commercial multiplex operators will be significantly impacted.

Question 3: Do you consider the proposed licence fee to be reasonable?

The proposed fee is not quite consistent with the MMDS fee as the whole of the identified MMDS spectrum is nationally available to the operator. The proposed fee for the DTT spectrum is calculated based on the assumption that 6 X 8Mhz “channels” are available nationally (i.e. 6 channels X 8MHz per channel X €2,375 per MHz = €14,000 proposed fee per multiplex). The reality is that only 1 X 8Mhz “channel” is nationally available to the operator. The fee level should

be adjusted to reflect the actual economic benefit to the proposed licensee(s) in order to be consistent with those fees imposed on the MMDS operator.

Additionally, the proposed fee should represent a maximum fee, to be fully implemented once the commercial DTT platform reaches maturity. All of the distribution platforms with which DTT will compete have had a very long period to establish themselves, and have substantial existing revenues with which to fund the fees. Given DTT's very high commercial sensitivity to front-end negative cash flows, the regulations should provide that the fees are suspended during the network rollout period (i.e. until commercial network transmissions commence) and that for the first 5 years the fees will be set at a variable rate ... say 3% of the multiplex operator's revenues up to the maximum level as proposed.

Establishing the fees in this variable manner (and suspending them during the rollout period) will assist in some degree to level the playing field between the various competing distribution platforms and will assist with the financing of the commercial DTT rollout. If this is not undertaken the DTT platform will always be burdened by paying a much larger proportion of its revenues as regulatory fees, and will be that much more difficult to finance, and ultimately to make commercially viable.

Question 4: Do you consider other factors, in addition to the range identified, should be taken into account in determining the licence fees?

In the event ComReg licenses regional multiplexes for specific geographic areas (i.e. non-national licenses) ComReg should consider an adjustment based on the approximate population coverage in the geographic area covered by the respective licence. This would have the effect of balancing potential revenues with costs.

Question 5: Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation?

CPI is measurable and can be equally and systematically applied across all platforms.

Question 6: Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use?

Establishing heavily proscriptive rollout obligations will not necessarily suit the very sensitive economic case for development of a commercial DTT platform. The process of establishing rollout criteria should be a flexible, multi-stage process that allows the structure of the market to be established prior to final definition of rollout obligations. Additionally licence conditions and regulations need to provide the ability to react to market conditions in the likely event that market conditions do not develop as initially anticipated.

While it is reasonable to establish minimum rollout obligations as part of the licence criteria, until the DTT market structure is defined it is not possible to establish specific, enforceable obligations. Accordingly, the initial establishment of minimum rollout obligations will necessarily have to be very general, to be subsequently refined in a 2nd stage, negotiated process.

While the results of the BCI multiplex competition have not yet been defined, it is not clear if there will be one party operating all 3 commercial multiplexes or multiple applicants each separately operating a multiplex, and each offering different rollout commitments. It is not clear if there will be a combined state/commercial transmission network or a separate state vs. commercial transmission network. It is not clear if the commercial market will be a pay TV or advertising

funded market and it is not possible to estimate the levels of revenues available to fund the network rollout.

Accordingly, the rollout obligations initially established as the part of the licensing process should be established as a minimum requirement. The criteria should be very general, referencing minimum levels of population coverage (say minimum coverage levels of 80% of the population) and set at a level designed to attract at least some commercial applicants. The initial rollout obligations should identify the minimum number of target geographic locations to be served (i.e. a certain minimum number of target transmissions “cells” to be established for example cells covering Dublin, Cork, Limerick Galway etc.) however should avoid identifying specific transmission points within those geographic cells. In most population centres there are several alternative transmission points acceptable for the DTT transmission network and there are several different potential operators of alternative DTT transmission platforms. Minimum rollout obligations that reference specific sites might pre-empt the BCI competition, effectively pre-determining the network operator handling DTT network transmission. This may prevent alternative commercial licensees from using their existing network resources to establish the lowest cost transmission network or from utilising the lowest cost operator and may give rise to subsequent challenges to the licence criteria.

The initial minimum rollout criteria should also be established for the state operator. Given the possibility (likelihood) that the state operator may share the transmission network with the commercial operator(s), the regulated minimum rollout obligations should be aligned. Any divergence in voluntary rollout undertakings can then be accommodated in subsequent final commercial licence condition negotiations.

Once the market structure is established via the BCI competition, more specific minimum rollout obligations can be established in discussion with the successful commercial applicants and in accordance with rollout commitments specified in the successful licence applications. This may involve developing a consensus between multiple parties (possibly including the state operator), a process that should be defined in the regulations governing the licence awards.

Given the high level of risk in respect of the viability of commercial DTT, a platform may only be viable if separate licensees share a single transmission platform (or in the event there is only one commercial licensee that a transmission platform is shared with the state operator). Accordingly a licensee may not be in complete control of the network rollout. The likelihood of multiple participants having to organise a single platform, and the nature of the development of the market may dictate a rollout time frame that is longer than what would otherwise be considered preferable. The regulations should anticipate this and allow for it.

The regulations governing the minimum rollout criteria need to incorporate some flexibility to address these issues. They should incorporate an ongoing consultation and discussion process with ComReg during the rollout period, an ability to re-align rollout obligations in response to market conditions and an appeal/arbitration process to address unanticipated issues that may arise in a fragmented, rapidly changing technical environment.

The likelihood of successfully financing a commercial DTT platform will be improved if regulations provide for an ability to react to changing market conditions.

Question 7: Do you consider it appropriate in the case of licenses issued to the BCI, for [ComReg](#) to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

It is reasonable for ComReg to incorporate voluntary obligations specifically offered by prospective licensees under the terms of the competition for multiplexes. However as noted above, it is possible (likely) that the commercial DTT platform will only be economically viable if transmission costs are shared across multiple operators (which may include the state operator). Accordingly, depending on the final market structure, the detail of these obligations may have to be standardised across multiple licensees and negotiated as part of a final licence condition. See above. Regulations should allow for a process to consolidate potentially different views and commitments across successful applicants, regulated by ComReg.

It is also inevitable that market conditions will develop that are different from those anticipated in various licence applications. The ability to successfully finance a commercial DTT rollout will be very sensitive to this risk. Please see above comments with respect to ongoing flexibility required in the licence conditions.

Question 8: Do you see merit in seeking voluntary sanctions for non-compliance with licence conditions, for example, failure to meet roll out obligations set down in the licence?

Minor sanctions such as fines and enforcement orders for minor issues such as late reporting or poor service records should be incorporated as a standard matter of course in the licence regulations.

Major sanctions should be limited to a loss-of-licence in the event the minimum specified rollout criteria are not met within a specified timeframe, taking account of any amendments of obligations in response to changing market conditions. Implementation of this sanction should only be undertaken following a consultation and discussion process with ComReg during the rollout period, a reasonable notice and remedy period to cure defaults, and an appeal/arbitration process to address changing market conditions.

While voluntary sanctions for non-compliance may be an aspiration, before applicants can reasonably be asked to commit to sanctions, or before they can be implemented or enforced, the final structure of the commercial DTT market has to be defined (number of multiplex operators, pay TV vs. Free-to-Air revenue model, cost and operation of the transmission network, etc.)

It may be possible to request an applicant to offer voluntary sanctions for non-compliance if there is one party licensed to operate all 3 commercial multiplexes and who is in control of its own transmission network. In this circumstance voluntary sanctions may be workable. In other circumstances where there are multiple participants in the platform(s) voluntary sanctions would be unenforceable.

In an environment where there may not be enormous interest in the DTT platform, it would be advisable to establish a positive incentive for good performance to match sanctions for poor performance (i.e. a process for the preferential award of additional spectrum, once available, in the event rollout criteria are met). Creation of a viable competitive commercial DTT platform is much more likely to generate the desired network development.

Question 9: Do you agree that the concept of a “Telecoms Data Cap” reflects the primacy of programming services, both television and radio, in DTT multiplexes?

While the intention to utilise the commercial DTT platform primarily for video and audio programming services is understandable, it would be necessary to formally define what constitutes “programming services” vs. “telecommunications services”, and to do so in a very broad, non-limiting way. This is especially true in a converging, changing technological environment and

more especially in an environment where it is very likely that a large proportion of set top boxes will eventually include both a DTT receiver and a broadband connection.

For example it's possible that a portion of the DTT spectrum may be used to populate and update an on-demand video or audio library stored on the set top box. This would likely be considered programming services. Would the same be true if the DTT spectrum were used to update a table of contents on the set top box listing information or entertainment available to be downloaded via a broadband link? If a DTT box incorporates a wireless return path to validate pay-per-view services using the DTT spectrum would this be considered programming or telecommunications services?

What happens if the set top box and home computer become an integrated device, and ... for example ... broadcast news headlines incorporate an interactive icon linking to an on-line news story or TV programmes start to incorporate icons for on-line adverts? Would these be considered programming or telecommunications services?

If a data cap is to be imposed, the definition of "programming services" needs to be formally defined and construed very broadly to include all possible applications related to the provision of video, audio and informational services.

Additionally, given the requirement to utilise the spectrum in the most efficient, advantageous way, the regulations need to incorporate an ability for the licensee to update the definition of "programming services" in consultation with ComReg in order to adapt to new developments in the market and in technology.

Question 10: Do you agree with the structure of the Telecoms Data Cap as proposed?

It is not clear how the capacity restrictions referenced in the consultation paper will be calculated. Do they refer to spectrum allocated for telecommunications use within any 24 hour period (MHz X hours) or data capacity of the multiplex (MBs X Hours)?

A sample calculation referenced in the regulations would be useful.

Until the distinction between "programming services" vs. "telecommunications services" and the calculation parameters are better defined it is difficult to comment.

Additionally, the regulations governing the licensee(s) should incorporate a provision for the licensee(s) to apply to ComReg for an update to any Telecoms Data Cap to enable the efficient use of spectrum.

Question 11: Do you consider that any other relevant conditions should apply?

The ability to finance, construct and operate a commercial DTT platform will be dependent on the ability of the commercial operator(s) to generate a return on investment. This will be very challenging in the existing environment.

It is very likely that the commercial operator(s) will have to sell, transfer or refinance their operations during the life of the licence(s) in order to recognise/realise this return or undertake the necessary refinancing. The licence conditions should lay down the terms under which the licence(s) (or effective ownership of the company operating the licence(s)) may be transferred.

Without this condition, it may be virtually impossible to finance/refinance the commercial DTT platform.

2 Broadcasting Commission of Ireland

BCI Response to ComReg Consultation Document 07/65

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- Q1. The primary consideration is to balance the need for multiplex operators to have sufficient time to become established and achieve a return on the substantial level of investment, against, the concern that licences would hold the licences in perpetuity and that an opportunity be afforded to ComReg and the BCI to be able to respond to technological developments in the future that are in the wider public interest.

A fair approach may be to consider a minimum period of 12 years. Such a decision is entirely a matter for ComReg. The BCI, at this time, is considering a contract term of 12 years. A final decision will be made at the Commission meeting on Dec 17th. Members will consider a report of the outcome of a forum that is due to take place on November 22nd at the Westlin Hotel, Dublin.

- Q2. An influencing factor is the time frame for analogue switch off. At analogue switch off, a Multiplex Contractor may be required to change channel or modify an antenna system to improve coverage or to vacate spectrum for the digital dividend. It is important that sufficient time is provided between analogue switch off and the final date of the licence or contract to ensure that such costs can be recovered. It may be difficult to encourage coverage improvements, post analogue

turn off, if there is insufficient time to recover the significant capital outlay that may be required. It is interesting to note that in the case of the UK, it would appear that the DTT licences awarded in 2002, could be extended up to 2026. This ensures an adequate return of the significant investment required for Digital Switch Off (DSO).

Q3 & 4. The comparison with MMD and the cost of €2,375 per MHz is considered to be a fair basis for developing a cost model. However the method of calculating the total number of Megahertz required for television multiplexes does not take into account, or promote, the use of Single Frequency Networks. The use of a SFN in the Dublin area increases the number of possible multiplexes from 8 to 16. It also opens the possibility of further licensing during the transition period. This ensures spectrum efficiency in the mostly densely populated area of the country. However the cost model does not reflect this achievement. A similar argument can be made for the Cork area.

It is also noted that the fee would appear to be the same regardless of the level of coverage and corresponding spectrum required. This implies that a Mux operator using 12 sites or 120 sites would pay the same licence fee. There may be benefit in ComReg providing a rationale in support of this concept.

Only 46 channels are available for use in the UHF band as Channels 36, 38 and 69 are not used for television services. An alternative fee could be based on 46 possible frequency blocks and between 8 and 16 Multiplexes in any one area.

The channels used in the transition period for television multiplexes may need to be altered to free up spectrum for the digital dividend and to provide improved coverage after analogue switch off. Significant costs would arise in relation to combiner / antenna modifications. It may be better to consider a lower licence fee, in the transition period, and an increased fee post transition based on spectrum efficiency including the use of SFNs. A lower fee or a slowly increasing fee would help to ensure that a viable platform would be established.

Q5 . Indexing the licence Fee using CPI as a proxy for inflation would appear to be appropriate given the duration of the licence.
The review of the licence fee on a yearly basis could be considered aspirational in nature as the mechanism required to change the fee is onerous. Instead, a slowly increasing fee, in the transition period, could be more manageable from both a fee setting and network operation perspective.

Q6 & 7. From a spectrum management point of view, there may be benefit in agreeing the spectrum requirements for both the RTE and BCI Multiplexes. This would provide ComReg with a clear view of where spare capacity exists and what channels need to be protected.

While we support the concept of achieving roll-out on a phased and agreed basis, we are also mindful that situations can arise that are totally outside of the control of the Multiplex Contractor. Platform operator, like other businesses, should be able to respond to market conditions and in this case, the Multiplex Contractor,

should be in a position to discuss enhanced or modified roll-out during the contract term. This would be similar to the manner in which RTE and current BCI contractors continue to enhance and modify network coverage.

The Broadcasting Amendment Act permits the BCI to set a minimum and maximum coverage area. Licences issued by ComReg normally include a condition requiring the transmitter station to be established within a finite period. This normal clause should be sufficient to ensure that unused spectrum can be considered for reallocation. The proposal to duplicate, the roll-out obligations agreed by the BCI as part of a Contract, as a ComReg licence condition, seems unnecessary and could be considered as dual regulation. Legal arguments could arise in relation to which has priority:- (i) the BCI Contractual clauses or (ii) the ComReg licence conditions. Since the BCI can mandate a minimum coverage area, the power of ComReg to terminate, suspend or reduce the geographical area of the licence may need to be clarified. Section 10(4) sets out the Commission's role in terminating or suspending a contract.

Q8. It is unclear as to how the BCI could agree or enforce "voluntary sanctions" as part of a Multiplex contract.

Q9 & 10 The term "telecoms data cap" needs to be defined. In particular, it must set out what is not permitted. It is unclear as to whether additional audio services (e.g. Radio) carried on a Television Multiplex would form part of this data capacity. In general, the BCI would take the view that the use of the word "predominantly" in relation to the definition of television multiplex in the 2007 Act would equate a figure of between 80 to 85%.

General Comments in Relation to Draft Technical Conditions:-

4.7.1.4 :- the term "*more than one programme service*" should be changed to "one or more programme services" to permit the future establishment of single channel low capacity QPSK Multiplexes that could provide a "local " or " community" television channels to a small area.

4.7.1.14:- as above – "one or more programme services"

4.7.1.17:-The word "scrambled" should be removed as free-to-air content can be received

4.7.5.3.1. Insert after the word Licensee: "*or in the case where the benefits of a licence have been passed to a third party, the third party*". This is required to differentiate between the responsibilities of the BCI and the Mux Operator. The onus rests with the Multiplex Operator to ensure that all staff are adequately trained...

4.7.5.3.3. as above.

4.7.5.4.3 and 4.7.5.4.4





The following comments are offered in the event that ComReg proposes to retain the picture resolution and minimum bit rate requirements.

In terms of SD we note that only BBC services in the UK use 720*576. Other PSBs use 704*576 and 544*576 for their additional channels.

The minimum programme bit rates proposed may reduce the benefit of using statistical multiplexing to such an extent that it is seen as been of little or no benefit. It is noted that the specification of the DCENR trial network proposed a minimum bit rate of 1Mbit/s. Specifying minimum bit rates at the proposed ComReg level will reduce the possibility of dynamically reallocating the bit rates per programme service for a period of time to allow some HD content to be carried. It could also mean that a programme service that does not carry programming during the whole 24 hour period, would be required to be encoded at a minimum bit rate when only an information caption is being displayed.

Some ambiguity could arise in relation to the retransmission of audio description channels as the minimum audio bit rate for MPEG2 is proposed as 96kbits/s whereas the source material may be at 64kbits/s.

4.7.5.9.1. and 4.7.5.9.2:-

Clarification is required as to whether audio services such as radio stations can be carried on the multiplex without ComReg's approval.

4.7.5.16 :-

Insert after the word Licensee: *“or in the case where the benefits of a licence have been passed to a third party, the third party”*.

4.7.6.3.2

QPSK modulation should be permitted to future proof the licence conditions to allow for low capacity QPSK Multiplexes for local or community television.

4.7.6.5.1 – Impairment Quality

Some clarification is required as our interpretation of the GE06 Plan is that the minimum median field strength for fixed reception is based on location probability of 95% and a time probability of 50%. This minimum median field strength is used to define the service area. Any increase in location and time probability would dramatically increase the required field strength. This in turn will reduce the service area and could have consequences for roll out obligations based on percentages of population. There is a need to clarify, if the basis for calculating the service areas is as set out in Table 19 or is a higher value required to reach the 99% figures proposed in this section.

4.7.6.6.3 Planning Parameters

Protection ratios for QPSK system should be added to future proof the document to allow for the possibility of local or community content to be carried on a dedicated QPSK television multiplex

End of Submission.

3 BT and Arqiva

BT Communications Ireland Limited (BT Ireland) and Arqiva Limited have formed a consortium to pursue business opportunities arising from the establishment of a DTT service in Ireland. The consortium combines access to the human and capital resources in broadcast networking of both organisations to address the strategic objectives of the Government, the regulatory authorities, DTT licensees and broadcasters.

BT and Arqiva welcome the publication of ComReg's Consultation Paper re DTT Multiplex Licence Conditions and the opportunity of responding to the questions that have been posed. We have also reviewed the Draft Technical Conditions within the Consultation Paper and offer some suggested corrections and improvements that you may wish to adopt.

2.0 Responses to Consultation Questions

2.1 Licence Duration

Q. 1. Do you consider that the length of the licence period is appropriate? If not, how long do you consider the licence period should be for? Please give reasons for your proposal?

Response – No. Assuming that analogue switch-off is mandated in 2012 we believe that the period between 2008 and 2012 represents a build or roll-out phase both operationally and commercially for DTT licensees. Thus there should be at least a 10 year licence term from 2012 to allow for return on investment. This suggests that the full licence period be up to 15 years.

Q. 2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal?

Response – Yes. We believe that DTT is being introduced into a highly competitive environment. The consumer, in future, will have increased choice. In order that DTT has the best chance of success, it should not have licence conditions more onerous than any other delivery mechanism.

2.2 Wireless Telegraphy Fees

Q. 3. Do you consider the proposed licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal?

Response – Yes. The proposed licence fee is in line with our expectations.

Q. 4. Do you consider that other factors, in addition to the range identified, should be taken in to account in deciding the licence fees? If so, indicate what they are and give the reasons for your proposal?

Response – Yes. We believe that a sliding scale of fees should apply until 2012 to take account of the regional roll-out of DTT infrastructure i.e. the addressable market or audience for DTT services will be constrained until analogue switch-off occurs.

Q. 5. Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation? What alternative methods could be used in reviewing the licence fee?

Response – Yes. Using CPI as a proxy for inflation is a well accepted indexation approach.

2.3 Roll-Out Obligations

Q. 6. Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal?

Response – Yes. Roll-out obligations are necessary to achieve full compliance on spectrum licence conditions. We do not, however, believe that the roll-out obligations imposed on the commercial licensees can be different from RTÉ because the sites to be used are owned by RTÉNL and it is probable that the commercial licensees will be dependant upon RTÉNL for the provision of common infrastructure (towers, antennas, accommodation, power etc) at those sites.

Q. 7. Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

Response – Yes. We agree that aligned obligations are sensible.

2.4 Sanctions for Non-Compliance with Licence Terms

Q. 8. Do you see merit in seeking voluntary sanctions for non compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer?

Response – No. We believe that a set of proportional sanctions set by ComReg represent the best way of treating all licensees in a similar manner. In setting the sanctions it should be noted that the commercial licensees will be dependant upon RTÉNL for site access and, more particularly, will not be able to influence the design of the antenna systems and hence the ultimate coverage of a particular site.

2.5 Other Relevant Conditions

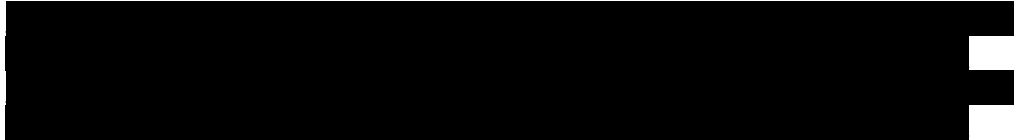
Q. 9. Do you agree that the concept of a “telecoms data” cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

Response – Yes. A “telecoms data” cap is reasonable.

Q. 10. Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal?

Response – Yes. A cap of 20% of the capacity of each multiplex at one time, subject to a cumulative maximum of 15% in any 24 hour period, seems pragmatic and reasonable to us.

Q. 11. Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal?



3.0 Review of Draft Technical Conditions

The comments below are not an exhaustive review of the specification but are intended to pick up the main areas where we felt it to be inaccurate or inappropriate.

As a general point, VHF Band III is mentioned at several points in the specification in terms of technical requirement but there is nothing specific in terms of actual sites and assignments. It is not clear from the document if there is an intention to licence DTT in Band III.

Secondly, unlike analogue specifications which have stood the test of time, we anticipate that DTT will continue to evolve. There is current discussion on DVB-T2 which will overhaul the existing DTT specification to permit greater payload and improvement to the efficiency of transmitters. We would therefore suggest that the specification takes the form of either an appendix to a licence or a code of practice that is referred to in a licence in order to facilitate future updates without affecting the body of the licence.

4.6.4 Non-Ionising Radiation

Due to the high power nature (up to 200kW erp) it is inevitable that ICNIRP limits will be exceeded in the proximity of the transmitting antennas with the system operating at full power. It is usual in broadcast systems to have procedures for reduced power or shutdown to permit safe working on or near the antenna systems.

4.7.4 System Transparency

It is possible that broadcast radio will be carried on the system as well as audio related to vision material. There is no mention of radio in the specification (such as coding rates, system etc).

4.7.5 DTT Multiplex Characteristics

The section on equipment construction (4.7.5.2) goes into more depth than would be expected in a licence document and is more appropriate to an equipment purchasing specification.

In the second section (4.7.5.3) "Digital Terrestrial Television Operator" is used as a term but not defined in 4.7.1. As the ComReg and BCI licences for the commercial multiplexes will be granted to Multiplex Contractors (cf Broadcasting (Amendment) Act 2007 i.e. licensees), it is reasonable to

assume that the operator of the transmission equipment will be a service provider to the Contractor (Licensee). The section as written seems to indicate that the contractual arrangements will be the other way round.

Under maintenance it is not clear what “these conditions” are. It is reasonable to oblige the provider to maintain the system and to be able to demonstrate that they have done so. The requirement seems to state that each Multiplex Contractor (Licensee) must employ a transmitter engineer to ensure that the transmitter specifications are met whereas it is most likely that the Contractors (Licensees) will sub-contract this as a service together with the reporting obligation.

The paragraph on weather is perhaps out of place in this specification.

4.7.5.4.3 Other Video and Audio Parameters

The HD resolution is specified as 1080i. The industry trend is towards progressive scan rather than interlaced so it is probable that 1080p/720p will be adopted.

Although not covered in this section, there is currently work going on to resolve a conflict where SD and HD are simulcast and both need to share the same Logical Channel Number (LCN).

4.7.5.4.4 Minimum Bit Rates

It is relevant to specify a minimum encoded bit rate in an environment where the multiplex is hard partitioned. For maximum efficiency in the use of the multiplex the norm is to statistically multiplex the programme streams. This means that the bit rate will be continuously changing between preset limits in response to the complexity of the picture. The effect is to maintain a constant picture quality.

Some specifications have addressed this by pegging the picture quality of the digital to the analogue but more recently it has become possible to make meaningful quality measurements of the digital signal (PQA measurements).

With current coding technology, 4.5Mbps is high for an acceptable quality MPEG2 (fixed bit rate) signal. Similarly audio is usually coded at 192kbps rather than 256kbps.

Similar comments apply to MPEG4.

A further complication can arise when considering resolution as, particularly with noisy source material, reduction in resolution may improve picture quality.

4.7.5.6 Service Information

For the avoidance of doubt the requirement to cross carry SI could be made more explicit in the preamble to this section.

With respect to EIT, the requirement to match within 1 second is tight, 10 seconds is more usual.

The requirement to implement Event Pause paves the way for automatic deletion of adverts in PVRs and may not be intended.

ST is not always implemented and does not need to be a regulatory requirement

BAT (Bouquet Allocation Table) again not always used but may be in Ireland so may need provision for it to be included.

4.7.5.8 Software Updates and Encryption

In the first sentence EN 301 192 should be TS 102 006.

4.7.5.10.1 Impairment Quality

This paragraph specifies that the signal should be substantially impairment free, for this to have validity the measurement point and method need to be specified. Impairments may be the result of poor receiving antennas or local electrical interference for which the Contractor (Licensee) cannot be responsible.

4.7.5.13 Conditional Access Systems - Condition 1

Paragraph 2 places an obligation on the Licensee to ensure that all Set Top Boxes (STBs) “made available by them” are labelled and the handbook describe the functionality and limitations. It is more probable that boxes will be designed and sold by the consumer manufacturers to a specification jointly agreed by broadcasters, Licensees (aka Multiplex Operators) and regulators. For early and widespread adoption of DTT services it should be imperative that STBs be freely available in consumer retail locations but this should not preclude the possibility of branded STBs (with, say, enhanced functionality) being distributed by Licensees if or when required. The method by which STB compliance is ensured is not addressed in this specification.

The remainder of this section is intended to prevent a Conditional Access Provider from gaining or exercising undue commercial advantage. Whilst the intent is clear and reasonable, in attempting to cover all options it has become complicated and difficult to interpret.

4.7.6 DTT Transmission Characteristics

4.7.6.1.1 Weather Protection

Repeat of 4.7.5

4.7.6.3.5 Software Updates

Repeat of 4.7.5.8

Similarly 4.7.6.4.1, 2 and 4.7.6.5.1 are repeats of earlier paragraphs.

4.7.6.6.3 Planning Parameters

It is appreciated that the tables presented from page 30 onwards have been extracted from RRC-06 documentation but many are lacking a title and the basis for the table such that they are not meaningful. For example, Table 17 probably refers to Fixed Reception and Table 18 to Portable Reception but it is not clear.

4 Central Remedial Clinic



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Licence duration: important for us, as whoever wins the right to broadcast must compete for this again. It means that if a poor job is done of the Electronic Program Guides or the accessibility of DTT, that this can be raised as an issue, and may involve the broadcaster losing their license.

Q. 1. Do you consider that the length of the license period is appropriate? If not, how long do you consider the licence period should be for? Please give reasons for your proposal?

Continuity of service is important for the end user, especially the disabled user. However, there should be the opportunity to hold the license holder to account, with the possibility of losing their licence. 10 years should be the maximum time.

Q. 2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal?

The implementation of accessibility features (audio descriptions, subtitles / captions, accessible EPG), should be a condition, as it would hold the licence holders to account for delivery of accessible services.

Q. 3. Do you consider the proposed licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal?

No opinion on the above

Q. 4. Do you consider that other factors, in addition to the range identified, should be taken in to account in deciding the licence fees? If so, indicate what they are and give the reasons for your proposal?

Regardless of the license fee, the needs of people with disabilities should be catered for.

Q. 5. Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation? What alternative methods could be used in reviewing the licence fee?

No opinion on this.

Q. 6. Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal?

Yes. These obligations should also make note that people with disabilities must not be excluded from the rollout on account of their disability, and that assistance is available for those who require it, both older people and people with disabilities.

Q. 7. Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

Yes, as above.

Q. 8. Do you see merit in seeking voluntary sanctions for non compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer?

Yes. Difficult to see what penalties could be of benefit. They should be a real deterrent from failing the rollout. Whatever the decision part of the penalty must be to complete the rollout at a later date, or provide funding to someone else should they fail to meet this extension.

Q. 9. Do you agree that the concept of a “telecoms data” cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

Yes

Q. 10. Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal?

There should also be a data stream set aside for the delivery of accessibility information, such as captions/ subtitles and audio descriptions. If this is not done, then the likelihood is that the broadcaster will only set aside bandwidth for money generating services.

Q. 11. Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal?

Further conditions relating to the provision of existing services should be included. This would include the teletext service, vital for deaf people. There should also be provision made for audio description, that this data is available to be transmitted alongside the programming.

5 Digital Radio

digitalRadio.ie

Response to ComReg Consultation Document 07/65:

Licensing Digital Terrestrial Television Digital Terrestrial Television (DTT) Multiplex Licence Conditions

digitalRadio.ie welcomes the opportunity to respond to this consultation and also welcomes the prospective roll out of DTT, which carries potential for the radio sector. The group is made up of radio stations involved in the current Irish DAB trial and has been established with the following aims:

- To bring together the radio sector to share knowledge of, and experience in the delivery of radio by digital means.
- To assist in representing the views of radio broadcasters in the development of digital media
- To sustain the value of the existing Irish radio market and its strong connection with audiences in a digital media context.
- To promote a public understanding of and engagement with radio as a digital medium.
- To co-operate in conducting and assessing the present DAB digital radio trials.

It is in reference to that second aim that this application is made¹. The DTT consultation document as issued by ComReg does not invite submissions on technical characteristics but it is the view of the group that it is reasonable and appropriate that representation should be made on the potential use of Band III for DTT.

digitalRadio.ie believes that the use of Band III for DTT is inappropriate for the following reasons:

- The Radio sector is Ireland's largest and most diverse broadcast market.
- Appropriate expansion of this market will be curtailed by the allocation of Band III spectrum to DTT.

¹ Note: digitalRadio.ie may represent views only where that representation is achieved by consensus of its members and is relevant to the development of radio in a digital context.

- There is at present no planned terrestrial alternative to Band III for the expansion of the radio sector, whereas digital terrestrial television services are also planned for Bands IV and V.
- Band III is particularly suited to mobile reception, a key characteristic of radio listening.
- The use of Band III for digital television will increase the complexity of spectral planning and increase the risk of interference between digital radio and television transmissions.
- The combination of the two technologies in Band III will tend to set the licence value of Band III spectrum in accordance with the revenue/cost scale of the TV broadcast sector.

At present, Band III is used for a limited number of analogue television transmissions and for the current DAB trials. digitalRadio.ie understands that the use of Band III for television, whether analogue or digital, may continue until full switch off of analogue television services. This submission concerns the use of Band III following that switch off.

6 Disability Federation of Ireland



Disability Federation of Ireland

Response to Commission for Communications Regulation Consultation paper on Licensing Digital Terrestrial Television

October 2007

Reference: Document No: 07/65

Disability Federation of Ireland (DFI) welcomes the opportunity to comment on the licensing conditions for Digital Terrestrial Television (DTT). DFI is the national support organisation and advocate for voluntary disability organisation in Ireland who provide services to people with disabilities and disabling conditions. DFI has a membership of 111 organisations and works to ensure that Irish society is fully inclusive of people with disabilities and disabling conditions so that they can exercise fully their civil, social and human rights.

DFI recognises the importance of DTT and its' potential to have a significant impact on the accessibility of television services to people with disabilities, older people and those who experience social exclusion. Given the current governmental policy of mainstreaming for people with disabilities, which finds expression in the National Disability Strategy and the Sectoral Plans, DFI urges ComReg to address accessibility issues in the issuing of licences for DTT.

Licensing needs to ensure equality of access and take account of Design for All issues as per the European directives on Public Procurement (2004/17/EC and 2007/18/EC) and the Audiovisual Media Services Directive (pending), which are not taken into consideration in the Broadcasting Amendment Act 2007.

Issues such as cost and information provision to most socially isolated and vulnerable groups in our society must also be considered. Account also needs to be taken of the importance of television as social inclusion indicator and DFI points ComReg to the British model where a Steering Group for Vulnerable Customers has been established to address how to inform people of the change, financial aid, helpline and assistance scheme which includes having someone to call to the house to set up the new system.

**Q. 1. Do you consider that the length of the license period is appropriate?
If not, how long do you consider the licence period should be for?**

ComReg 07/92s

Please give reasons for your proposal?

In the interests of continuity of service, which is an important issue for the end user, DFI considers 10 years to be an appropriate licencing term, during which there should be a review of the effectiveness of accessibility issues, after perhaps 3 years.

Q. 2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal?

The implementation of accessibility features (audio descriptions, subtitles / captions, accessible EPG), should be a licensing condition, as it would allow for provision to hold the licence holders to account for delivery of accessible services.

Q. 6. Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal?

Yes. These obligations should also make note that people with disabilities must not be excluded from the rollout on account of their disability, and that assistance is available for those who require it, as stated in the opening comments of this submission.

Q. 7. Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

DFI agrees that roll out obligations should be put in place, and also see user testing at design stage as a very important issue guiding roll out of accessibility issues for DTT. DFI recommends that research into this area be carried out in advance of roll out, for example, (NCBI) National Council for the Blind have a Centre for Inclusive Technology (CFIT) and there are various developments happening at European level which should also be considered.

Q. 9. Do you agree that the concept of a “telecoms data” cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

Yes

Q. 10. Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal?

DFI considers that there should also be a data stream set aside for the delivery of accessibility information, such as captions/ subtitles and audio descriptions as part of licensing conditions.

Q. 11. Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal?

Further conditions relating to the provision of existing services should be included in the licensing conditions, including the teletext service and audio description for deaf and visually impaired customers.

7 eircom Ltd.

RESPONSE TO CONSULTATION QUESTIONS

Q. 1. Do you consider that the length of the licence period is appropriate? If not, how long do you consider the licence period should be for? Please give reasons for your proposal.

Q. 2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal.

ComReg has outlined an initial period of between 10 to 12 years for the licensing. To secure involvement in the project from investors, potential bidders would seek the longest licensing period possible. For example, in the United Kingdom, the licence period has been set for 12 years. In Norway, the applicants got the licensing period extended from 12 to 15 years. We believe a longer licensing period would be most beneficial for the success of DTT in Ireland.

Q. 3. Do you consider the proposed licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal.

Q. 4. Do you consider that other factors, in addition to the range identified, should be taken into account in deciding the licence fees? If so, indicate what they are and give the reasons for your proposal.

ComReg propose the licence fee starting at €14,000 and increasing CPI based (4.5%) per annum during the duration of the contract. This fee appears excessive, considering the equivalent licence in the United Kingdom, which would be far more attractive to broadcasters due to the volumes of homes it could reach, only costs GBP10,000¹ (EUR14,800) per annum.

The UHF spectrum is undoubtedly valuable in terms of its propagation characteristics and potential applications. The price associated with the spectrum should be aligned with the nature of the services to be provided. One would expect relatively high licence fees, where such valuable spectrum is made available for purely commercial services, e.g., mobile broadband.

A lighter-handed licensing regime is appropriate where there is public service requirements or where there is value in the service provided, but there is a weak commercial basis.

Hence, a holistic approach should be adopted by ComReg when setting licence fees for DTT spectrum and for spectrum freed up for new commercial services.

Licence fees for new mobile/broadband applications should enable light licensing fees for the DTT licences themselves.

On the fundamental economics and value of spectrum, the proposed licence fee would seem to be derived on the basis of similar spectrum licensing conditions where spectrum is made available for purely commercial basis (mobile, 3G, WIMAX, TETRA, commercial radio etc).

¹ The UK also had a £25,000 application fee for the licensing process.

It is unlikely that there is a purely commercial case for DTT in Ireland based on the investment needed to provide adequate coverage, and as the majority of viewing in Ireland. Therefore, potential commercial value will be addressed via the first public service (PS) multiplex, i.e., that to be awarded to RTE. However, to ensure the successful adoption and therefore viability of DTT, a strong line up of programming will be required. The economics to produce a viable case for these additional channels, of good quality, will be difficult, based on the fact that the majority of viewing will be on the PS multiplex.

It is therefore important that licensing and other costs on the commercial multiplexes are kept to a minimum, to provide an attractive and viable opportunity for broadcasters and programme providers.

Q. 5. Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation? What alternative methods could be used in reviewing the licence fee?

Yes.

Q. 6. Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal.

Q. 7. Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

Given that rollout requirement for the public service multiplex licence to be granted to RTE is for "an extent similar to that such as is currently available by free-to-air analogue means," i.e., 99%, eircom does not believe that the proposed rollout obligation of 91% of the population is appropriate.

Given the high percentage of rural population in Ireland and its broad geographic dispersal, the last few percent of population coverage will require disproportionate investment and would not be economically viable. eircom thus believes that the coverage targets for the commercial multiplexes should be in the order of 70-80%.

Q. 8. Do you see merit in seeking voluntary sanctions for non-compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer.

No, eircom does not see merit in seeking voluntary sanctions from licensees in relation to service rollout. In light of ComReg's expanded enforcement powers and ability to impose fines under the Communications (Amendment) Regulations, 2007, eircom believes that compliance

with the requirements can be ensured with reference to ComReg-defined sanctions as with spectrum licences for fixed-wireless services or similar.

Q. 9. Do you agree that the concept of a “telecoms data” cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

Q. 10. Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal.

The UHF spectrum is valuable spectrum for both data (fixed or mobile) and DTT. However, these diverse applications require different network configurations to achieve optimum efficiency. A data network requires numerous low power cell sites and two-way transmission. A DTT network requires a smaller number of high power high sites for one way transmission. The large coverage area and imbalance in transmit power capability for a transmitting site and customer premise equipment limit the potential of a DTT network to carry meaningful telecommunications data services.

Hence, it is recommended that UHF spectrum be allocated to service types, i.e., for DTT or data services, in this digital dividend.

If data is to be carried in a DTT MUX, then it should be capped at a low level to ensure optimisation of the DTT network.

Q. 11. Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal.

eircom welcomes the opportunity to give feedback on the licensing conditions for the forthcoming multiplex licences. eircom notes and welcomes the policy goals for ComReg in relation to DTT namely:

1. Ensuring efficient spectrum use by terrestrial broadcasting spectrum users;
2. Enhancing competition between digital TV platforms whether Cable/MMDS, satellite or terrestrial;
3. Minimising disruption to consumers as a result of changes in transmission technologies and spectrum use.

Ensuring efficient spectrum use by terrestrial broadcasting

In relation to the first policy goal, eircom is concerned to note that in ComReg's spectrum management in relation to digital switchover gives little or no attention to maximising a 'digital dividend' in terms services other than television.

Digital broadcasting is roughly six times more efficient than analogue, allowing more channels to be carried across fewer airwaves. The plans for digital switchover should therefore allow for an increase in the efficiency with which the spectrum is used - including the potential for a large amount of spectrum to be released for wholly new services. One of the digital dividends expected from DTT is that spectrum will be freed for other purposes.

Due to the propagation characteristics of the UHF band, it is ideally suited to address the digital divide, in rural areas, and for deep indoor coverage in urban areas. The value of such

low frequencies is already recognised by the move, within Europe, to use UMTS in the 900 MHz GSM band. However, the heavy use of this band will make re-farming UMTS into the GSM 900 MHz band difficult. Spectrum freed up in the digital dividend could be used to facilitate re-farming and even provide a potential expansion band.

The UK and the United States are examples where spectrum will be freed for other purposes. In the UK, DTT will use 32 UHF channels and 14 channels will be freed up for other applications (112 MHz). Similarly, in the United States, 56 MHz in the 700 MHz spectrum will be auctioned in January 2008.

As the UHF band is common across Europe, the migration from Analogue to Digital Terrestrial Television could enable harmonised spectrum availability for new services across Europe. This could enable the “next generation” of pan European or even global mobile broadband solutions.

However, ComReg appears to be making no allowance to free up spectrum for purposes other than DTT at this stage. It is recommended that the totality of the digital dividend is considered from the first instance and that ComReg should work with other European administration to maximise the benefits of this very valuable spectrum across Europe.

In particular, when designing the channel arrangements, ComReg should take into account the detailed work of CEPT and other standards bodies and avoid allocating channels for DTT that are likely to be harmonised for advanced services.

Ensuring competition between digital TV platforms

In relation to the second policy goal, eircom believes that ComReg must find a balance between the related policy objective of “promoting competition,” by granting multiple DTT licenses, and the objective of ensuring competition between digital TV platforms.

Ireland has one of the higher pay-TV penetrations in Europe, with an estimated 71% of television homes subscribing to cable or satellite pay-TV services. With consolidation of ntl Ireland and Chorus, Liberty Global/UPC now controls cable networks passing about 850k homes with an established customer base of 600k. And Sky Ireland reported that as of end-April 2007 it had 484,000 customers.

In the context of the strong, consolidated competition from other digital TV platforms, there is a compelling case for potential licensees gaining two or more MUX licences to compete with the economies of scale and scope exercised by UPC Ireland and Sky Ireland. eircom thus calls upon ComReg to not define the DTT MUX licence conditions or conduct its award procedures in a manner that would exclude this possibility.

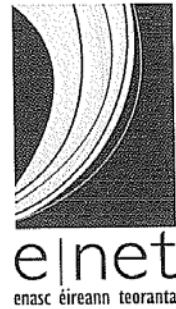
Minimising disruption to consumers

In relation to the third policy goal, eircom would acknowledge the requirement for least disruption to consumer as a result of digital ‘switchover.’ Ireland and Portugal remain the only two Member States of the European Union that have not confirmed an analogue ‘switch off’ plan and eircom believes that confirming such a date, and having a definite rollout plan, would further drive momentum of the digital switchover.

As mentioned above, Ireland has one of the higher pay-TV penetrations in Europe. Countries where DTT has been successful are traditionally countries that had a low percentage of pay-TV penetration, e.g., UK, France, Italy. DTT in Ireland will be starting with the disadvantage of having relatively few viewers on Terrestrial service. The licensing conditions and service offering for Irish DTT must be compelling or we will continue to see growth in the pay-TV

sector to the detriment of Irish based broadcasters and the prominence of Irish content in Irish households.

8 Enasc Éireann Teoranta



Ms. Sinead Devey
Commission for Communications Regulation
Irish Life Centre
Abbey Street
Dublin 1

12 October 2007

Dear Ms Devey,

**RE: SUBMISSION RE COMREG DOCUMENT 07/65 – DIGITAL
TERRESTRIAL TELEVISION (DTT) MULTIPLEX LICENCE CONDITIONS**

I refer to the above ComReg consultation. Although e|net has no comments to offer in relation to ComReg's proposals relating to DTT multiplex licensing – and so we do not intend to provide any responses to the specific questions posed by ComReg in its consultation paper – we wish to respond to the consultation in more general terms to offer some comments in relation to the use of the radio spectrum in order to provide communications and broadcasting services to end-users.

As ComReg has itself repeatedly pointed out, the radio spectrum is a finite national resource, which, as such, should be used in the most efficient manner possible. ComReg has, over the years, done much to free up spectrum that hitherto was not being used efficiently and it has had notable success in, for example, promoting the use of wireless as an access medium for the provision of broadband services, especially in those areas that have remained underserved by wireline access providers. ComReg's significant achievements in this area are demonstrated by the fact that almost 15% of all broadband customers are served by fixed wireless access providers, with a further 6% taking service from nascent mobile broadband providers.

The move from analogue terrestrial TV services to DTT will, as ComReg is aware, free up significant spectrum bands below 1 GHz. Currently, existing analogue broadcasters use almost half of this prime spectrum but, once the switchover to digital is complete, this valuable national resource will be freed up for use in other areas. This spectrum is particularly valuable, offering as it does a combination of high capacity and range. Once it has been cleared for reuse, the spectrum could be used for a range of different services, in particular for wireless and mobile broadband access services in remote and rural areas.

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e|net is a registered business name of e-nasc éireann teoranta

As ComReg will be aware, a number of other countries are further ahead of us in terms of completing the switchover from analogue terrestrial to DTT. In particular, in the US and the UK there is much discussion about the 'Digital Dividend' arising from the switch from analogue to digital TV services and in both countries work is already underway to assess how best to deploy the spectrum that is becoming available for reuse.

e|net believes that ComReg needs to recognise the strategic national importance of the switch from analogue to digital in Ireland and that, like its counterparts in the US and UK, ComReg must seize the opportunity arising from the availability for reuse of significant amounts of spectrum. While e|net does not doubt that it is important at this juncture for ComReg to be setting out licence conditions for DTT multiplex operators, we also believe that ComReg has a responsibility to acknowledge and champion the wider strategic opportunities arising from this 'Digital Dividend'.

There are, obviously, many services that could be deployed over the spectrum that will become available for reuse. In this context, e|net believes that it is important that some of the spectrum being freed up is made available for use in the provision of innovative services to customers. In e|net's opinion, one such option would be to reserve spectrum in order to offer wholesale wireless access services that would be operated and marketed to Authorised Operators (AOs) on open-access and carrier-neutral basis in the same way that e|net currently operates the publicly-funded MAN fibre assets. In this way, the significant benefits – in terms of increased competition, providing better choice, quality and value - that are currently accruing to end-customers in those areas currently serviced by the MANs could become more widely available.

e|net is grateful for the opportunity provided by this consultation to provide these comments on the strategic opportunities that arise from the switchover from analogue to digital TV services and we hope that ComReg will take these comments into account when considering its response to the consultation. e|net would be happy to expand on its proposals for future use of spectrum that becomes available arising from the 'Digital Dividend' in due course and we look forward to an ongoing debate with ComReg and other stakeholders on this important issue.

9 Ericsson

1 Introduction

It is apparent from section 4.7.6.6.3 of the Consultation Document, entitled “Planning Parameters”, that the proposed licence conditions are based on the existing Irish (RRC-06) broadcasting plan. Ericsson is seriously concerned that, in this regard, the proposed licence conditions appear to take no account of national and international developments concerning the “digital dividend”.

If DTT licensing is treated as a stand-alone issue, without reference to other possible uses of the existing spectrum or to developments in Europe and in the wider international forum, Ireland risks losing out on the potential benefits of the digital dividend and falling behind its competitors in the provision of advanced services such as mobile broadcasting, or rural broadband.

The issue is that, if DTT is licensed as proposed, any unused spectrum will be scattered around the frequency range, rather than being in contiguous blocks, and will not be at the same frequencies as in other European countries. Contiguous blocks are far more useful for developing services, and harmonised blocks (where the same frequencies are made available at more or less the same time in different countries) create economies of scale and opportunities for the development of pan-European services.

The US and UK have already earmarked such contiguous blocks of spectrum for release in 2007 and 2008, respectively. In Europe, the CEPT (Conférence Européenne de Postes et Télécommunications) is considering agreement on the earmarking of channels 62 to 69 (64MHz) for mobile services. These channels are included in the current Irish digital broadcasting plan, and in ComReg’s licensing proposal. If they become the standardised European band for mobile, then either Ireland will lose out on these services or broadcasters will be required to vacate these channels at a later date, to make room for them. This will cause expense and disruption to broadcasters, and delays to the introduction of new services.

Ericsson is not seeking to pre-empt discussions on the nature or potential use of the digital dividend. Rather, our concern is that decisions taken at this stage in the broadcasting context should not close off options or create problems in the future for the development of new services in both broadcasting and other forms of electronic communications, thus leaving Ireland at a competitive disadvantage. We propose, therefore, that the Irish RRC-06 plan should be amended and further developed to allow it to be brought into line with international developments, particularly at CEPT.

2 Background

Analogue television channels in Europe are typically broadcast in an 8MHz channel. The move to digital broadcasting allows the up to six digital television

channels to be broadcast in an 8Mhz channel. In addition analogue transmission requires different transmission sites to broadcast on different frequencies to avoid interference. Digital transmission techniques mean that networks can be designed such that all the transmission sites can use the same frequency. By taking advantage of these advances large amounts of spectrum can be freed up for additional television and other services.

This releases spectrum – referred to as the “digital dividend” - either for enhanced broadcasting applications such as additional terrestrial channels, mobile television, or high definition television or for other uses such as cellular radio or wireless broadband. This spectrum, compared to other frequency ranges, is particularly useful as the signals can travel a long way, they can provide indoor coverage and high bandwidth, and they are very suited to many different services including mobile broadband. At present, nearly 40% of the spectrum below 1GHz is used for broadcasting analogue television. The digital dividend, if appropriately packaged and used, presents an opportunity for new broadcast in addition to new and enhanced services to be developed.

The Radio Spectrum Policy Group², an advisory group to the Radio Spectrum Committee³ (a committee of EU Member States’ representatives set up to assist the Commission in developing policy and implementing measures), has issued an Opinion setting out three categories of demands for spectrum in the digital dividend⁴ as follows:

- Spectrum needed for the improvement of terrestrial broadcasting services: e.g. services with higher technical quality (notably HDTV), increased number of programmes and/or enhancement of TV experience (e.g. multi-camera angles for sports, individual news streams and other quasi-interactive options);
- Radio resources needed for converged broadcasting services, which are expected to be primarily hybrids of traditional broadcast and mobile communications services;
- Frequencies allocated to new uses which do not belong to the broadcasting family of applications. Some may be extensions of existing services in other frequency bands, such as 3G services and short-range devices, while others may not yet be marketed.

Although the Opinion is not binding on Member States, the UK communications regulator, Ofcom, for example, has acknowledged that it is likely that any proposals for future work it contains will be taken forward by the European Commission through its committee, the Radio Spectrum Committee (RSC)⁵.

² Established under the Commission Decision 2002/622/EC)

³ Established under the Radio Spectrum Decision 676/2002.EC of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum

⁴ RSPG Opinion on the “Impact on spectrum of the switchover to digital broadcasting”, RSPG 04-55, <http://rspg.groups.eu.int>.

⁵ <http://www.ofcom.org.uk/media/mofaq/rcomms/ddr/>

In a Communication⁶ on “EU spectrum policy priorities for the digital switchover in the context of the ITU Regional Radiocommunications Conference 2006 (RRC – 06)”, the European Commission called on Member States to support the launch of a debate on the usage of the radio spectrum dividend resulting from the digital switch-over, keeping in mind the proposals of the RSPG and the objective of securing a single market for equipment and services. It reminded Member States that they had an obligation to ensure that the regulatory treatment to be given to the digital dividend complied with the EU framework for electronic communications services and was consistently applied across the EU. Its view was that a part of the spectrum dividend should be earmarked for harmonisation on European level. It stated:

“It is of key importance to start already now a common reflection across the EU in order to avoid fragmentation and the emergence of “legacy” situations which would prevent the later establishment of an EU harmonised dividend.”

The implementation of ComReg’s current proposals for licensing DTT would create just such a legacy situation, preventing Ireland from benefiting fully from the digital dividend or, at the very least, delaying its benefits for many years to come.

3 International developments

In the US, Congress has set a deadline of February 17, 2009 for the clearing of analogue transmissions from the 700 MHz band. The Federal Communications Commission determined that all broadcasters using digital transmission could be accommodated in the core TV channels 2 – 51. As a result, it has cleared contiguous spectrum covering channels 52 to 69 (698 MHz to 806 MHz) - a total of 108 MHz of spectrum. Some of the spectrum is to be used for public safety, some for commercial services and some as guard bands between the two (with the potential for operations within the guard bands, as long as they do not cause interference to other users). The FCC is required to begin the auction of the commercial spectrum by 28 January 2008.

In the UK, the Government has decided that of the 368MHz of spectrum currently used for analogue television, 256MHz, or six multiplexes, should be used for DTT. The remaining 112MHz will be released for new uses. It represents 14 TV channels, six of which (Channels 63 to 38) are in one contiguous block while the rest (Channels 31-35, 37 and 39-40) are almost contiguous but are interrupted by two channels which are currently used for non-broadcasting uses (and at least one of which is likely to be cleared by 2009). As with the FCC’s auction, this allows for the possibility of paired spectrum which can be used for two-way applications, such as mobile telephony.

⁶ COM(2005) 461 final

Submissions Received, Licensing Digital Terrestrial Television

In the EU, as mentioned above, both the Commission and the Radio Spectrum Policy Group have recognised the importance of the digital dividend and have recommended that Member States should co-ordinate in determining it. At CEPT level, Task Group 4 of the European Communications Committee has been requested to prepare a report on harmonisation options for the digital dividend, including the possibility of harmonising, or co-allocating, a sub-band for mobile communications applications, while minimising the impact on GE-06, the DTT plan agreed at RRC-06 in Geneva. The channels being considered for harmonisation by CEPT (64MHz between 798 and 862 MHz – Channels 62 to 69) are contiguous, but are included in ComReg’s current licensing proposal. Therefore, Ireland is unlikely to benefit from harmonisation if the proposed licensing scheme is proceeded with. The following table illustrates this point.

Channel	From	To	Usage IRL	Ofcom	CEPT	USA
21	470	478	Allocated to DTT in Comreg DTT consultation			
22	478	486	Allocated to DTT in Comreg DTT consultation			
23	486	494	Allocated to DTT in Comreg DTT consultation			
24	494	502	Allocated to DTT in Comreg DTT consultation			
25	502	510	Allocated to DTT in Comreg DTT consultation			
26	510	518	Allocated to DTT in Comreg DTT consultation			
27	518	526	Allocated to DTT in Comreg DTT consultation			
28	526	534	Allocated to DTT in Comreg DTT consultation			
29	534	542	Allocated to DTT in Comreg DTT consultation			
30	542	550	Allocated to DTT in Comreg DTT consultation			
31	550	558	Allocated to DTT in Comreg DTT consultation			
32	558	566	Allocated to DTT in Comreg DTT consultation			
33	566	574	Allocated to DTT in Comreg DTT consultation			
34	574	582	Not allocated in Comreg DTT consultation			
35	582	590	Allocated to DTT in Comreg DTT consultation			
36	590	598	Not allocated in Comreg DTT consultation			
37	598	606	Not allocated in Comreg DTT consultation			
38	606	614	Not allocated in Comreg DTT consultation			
39	614	622	Allocated to DTT in Comreg DTT consultation			
40	622	630	Not allocated in Comreg DTT consultation			
41	630	638	Allocated to DTT in Comreg DTT consultation			
42	638	646	Allocated to DTT in Comreg DTT consultation			
43	646	654	Not allocated in Comreg DTT consultation			
44	654	662	Allocated to DTT in Comreg DTT consultation			
45	662	670	Allocated to DTT in Comreg DTT consultation			
46	670	678	Not allocated in Comreg DTT consultation			
47	678	686	Allocated to DTT in Comreg DTT consultation			
48	686	694	Allocated to DTT in Comreg DTT consultation			
49	694	702	Allocated to DTT in Comreg DTT consultation			
50	702	710	Not allocated in Comreg DTT consultation			
51	710	718	Allocated to DTT in Comreg DTT consultation			
52	718	726	Allocated to DTT in Comreg DTT consultation			
53	726	734	Allocated to DTT in Comreg DTT consultation			
54	734	742	Allocated to DTT in Comreg DTT consultation			
55	742	750	Allocated to DTT in Comreg DTT consultation			
56	750	758	Allocated to DTT in Comreg DTT consultation			
57	758	766	Allocated to DTT in Comreg DTT consultation			
58	766	774	Allocated to DTT in Comreg DTT consultation			
59	774	782	Allocated to DTT in Comreg DTT consultation			
60	782	790	Allocated to DTT in Comreg DTT consultation			
61	790	798	Allocated to DTT in Comreg DTT consultation			

62	798	806	Allocated to DTT in Comreg DTT consultation			
63	806	814	Allocated to DTT in Comreg DTT consultation			
64	814	822	Allocated to DTT in Comreg DTT consultation			
65	822	830	Allocated to DTT in Comreg DTT consultation			
66	830	838	Allocated to DTT in Comreg DTT consultation			
67	838	846	Allocated to DTT in Comreg DTT consultation			
68	846	854	Allocated to DTT in Comreg DTT consultation			
69	854	862	Not allocated in Comreg DTT consultation			

4 Recommendations

Digital switchover and the release of unused spectrum present an opportunity for Ireland to benefit from new and enhanced communications services, be they broadcasting, mobile, a hybrid of the two, rural broadband, or some innovative service as yet undefined. However, the social, cultural and economic benefit to be derived from the digital dividend is strongly dependent on how this spectrum is packaged. Without at this stage pre-judging what services it should be used for, or whether these should be the same in all EU Member States, the potential benefit of the spectrum will be maximised if the spectrum released by digital switchover is (a) in contiguous channels and (b) harmonised with that released in other European countries and/or large markets.

While recognising ComReg’s obligation under the Broadcasting (Amendment) Act 2007 to issue licences to RTE and the BCI, we feel that a licence which does not take account of the developments outlined above will waste spectrum, delay innovation and result in costly transitions in a few years’ time.

Further, this obligation must be balanced against ComReg’s objectives under the Communications Regulation Act, 2002 (“2002 Act”). Under section 12 of the 2002 Act, ComReg’s objectives include an obligation:

“in relation to the provision of electronic communications, networks, electronic communications services and associated facilities

- “(i) to promote competition,
- (ii) to contribute to the development of the internal market, and
- (iii) to promote the interests of users within the Community”.

In order to achieve the effective promotion of competition, Comreg is obliged to take all reasonable measures to encourage “efficient use and ensuring the effective management of radio frequencies and numbering resources”.

We consider that the current plan does not promote competition as it restricts the opportunity for operators in the broadcasting and telecoms sectors to avail of the “freed up” spectrum. The proposed plan is not an efficient use of the available frequency. Further, appears to be at odds with the developments in the rest of the internal market in this area. Accordingly, the proposal does not, in our view, promote the interests of users in the Community, who would best benefit from a harmonised approach to use of spectrum.

It might be noted that on its website, Ofcom has pointed to its obligation to promote competition as the objective underpinning its approach to the redistribution of spectrum.

The Irish RRC-06 plan should be regarded as the outcome of negotiations aimed at maximising the availability of spectrum to Ireland, which should be seen as a step in the process rather than as being set in stone. We recommend that:

- The Irish RRC-06 (GE-06) plan should be re-examined with a view to maximising the available spectrum from the digital dividend while accommodating both traditional broadcasting and possible new and advanced services.
- The Irish RRC-06 (GE-06) plan should be re-examined with a view to moving towards the use of single frequency networks.
- Channels not required should be grouped in contiguous blocks.
- These blocks should be at a minimum harmonised with the UK and CEPT and possibly also the US in order to maximise the potential use of this valuable asset.

If the use of harmonised channels cannot be avoided in the transitional period, we consider it is vital that licensees should be made aware that they will need to change their broadcast channel in the future and it should be a licence condition that they should plan their networks accordingly.

This last point may impact on the licence duration, since 12 years may be seen as too short a period if broadcasters face, not only the initial investment, but the cost of having to change channels to release a harmonised digital dividend.

10 Feel The Benefit

Digital Terrestrial Television (DTT) Multiplex Licence Conditions

Reference: Submission re ComReg 07 / 65

Response by Feel The Benefit

October 12th, 2007

Introduction

Gerry Ellis, t/a Feel The Benefit, has been a Software Engineer for over 25 years and is a Fellow of the Irish Computer Society. Gerry has been involved in the area of access to society by people with disabilities for over 20 years and has spoken at conferences on the subject in over 15 countries. Gerry is also blind.

The Declaration resulting from the European Ministerial Conference “ICT for an inclusive society” of June 11th, 2006 in Riga Latvia states that people with disabilities “comprise some 15% of the EU population”. As People with disabilities live to be older than in the past and as older people acquire disabilities, the number of people who have difficulties in accessing television in its traditional format is very significant and growing.

Access to television was once considered simply entertainment. However, in latter years television has become a tool for delivering education, information and other aspects of social inclusion. In the near future as technologies converge, it will increasingly become a channel for interaction with many other technologies such as the Internet.

Access to television by people with disabilities and older people has always been a matter of hit and miss. Sub titling and audio description services exist, but are often not available to the consumer. One reason for this is opposition by those who do not require them as the consumer does not have the choice to turn them on or off as preferred. Another is that standards supporting these services have only recently emerged. However, the move to digital television presents an excellent opportunity to allow consumers choose if they wish to use these services or not without affecting the enjoyment of others.

This document presents some of the options that are required by people with disabilities and older people to ensure their enjoyment of television services and the resulting benefits in the near future and as new services develop.

Licence duration

Q. 1. Do you consider that the length of the licence period is appropriate? If not, how long do you consider the licence period should be for?

Please give reasons for your proposal?

No Comment. However, a review of services provided should be carried out after 3 years to ensure that all appropriate services are being provided by service providers.

Consumers should be involved in any such a review, including people with disabilities and older people.

Q. 2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal?

No Comment

Licence fees

Q. 3. Do you consider the proposed licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal?

No Comment

Q. 4. Do you consider that other factors, in addition to the range identified, should be taken in to account in deciding the licence fees? If so, indicate what they are and give the reasons for your proposal?

No comment. However, a proportion of the Licence Fee should be ring fenced to ensure accessibility to all relevant products and services by people with disabilities and older people. This could include, inter alia, research by ComReg or the BCI into ways of improving access. This kind of research is not likely to take place otherwise.

Q. 5. Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation? What alternative methods could be used in reviewing the licence fee?

No Comment

Rollout obligations

Q. 6. Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal?

No comment. However, The document states:

"ComReg does not therefore see a necessity in setting rollout obligations for RTÉ"

The Broadcasting (Amendment) Act 2007 does not take into account the requirements of the European Directives on Public Procurement (2004/17/EC and 2004/18/EC) or the Audiovisual Media Services Directive (Pending). These require that when significant public funds are spent that Design for All criteria be taken into account. This must be a key criterion for the roll-out of Digital services. Thus, ComReg must specify roll-out criteria for RTÉ as well as all other service providers.

Q. 7. Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

No Comment.

Sanctions for non-compliance with licence terms

Q. 8. Do you see merit in seeking voluntary sanctions for non compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer?

Voluntary penalties could be appropriate in the early years of this process as service providers come to terms with their obligations and acquire appropriate skills. These should only relate to areas not concerned with health and safety or to financial dealings/reporting. However, these should be reviewed after three years to ensure they lead to effective and prompt roll-out of services. If not, obligatory sanctions should be introduced.

Provision of information

Q. 9. Do you agree that the concept of a “telecoms data” cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

No Comment.

Q. 10. Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal?

Any proposal around a data cap should ensure that sufficient band width is always available to transmit services required by people with disabilities and older people including, but not limited to, sub titling and audio description. This band width should be available even if the sub titling and/or the audio description are not available for a particular programme.

Other relevant conditions

Q. 11. Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal?

Conditions should be in place to ensure that licencees provide access by people with disabilities and older people to:

- ❖ Set Top Boxes
- ❖ On-screen menu systems
- ❖ On-screen information such as teletext and scheduling information
- ❖ Support information for programmes (e.g. sub titling and audio description)
- ❖ One-way and two-way exchanges of information on web sites
- ❖ One-way and two-way exchanges of information by any other method, including technical support services to customers

The best way to ensure that this is done in an effective manner is using Design for All criteria when designing products and services. This means consulting with potential consumers at an early stage, including people with disabilities and older people.

Technical conditions

General

The document states:

"4.7.5.9.1 Permitted Additional Broadcasting Services

The transmission of a subtitling EPG or teletext service is permitted. Any data carried which is an integral part of the programme shall conform to the methods described in EN 301 192 and observe the guidelines referenced in TR101 202 and TR 101 211The subtitling system used must conform to EN 300 743 or any future European standard describing the implementation of such services. 'Over the air' software updates to set top boxes conforming to TS 102 006 are also permitted."

This should be a requirement, not an optional extra. The consumer should then have the option of displaying this information on their screen or not as they choose. If no information for a particular programme is available, the bandwidth should still be available for the purpose.

This, in effect, puts a cap on the amount of information available for programming as a specified bandwidth should be reserved for such transmissions.

A similar requirement should be present for transmitting and receiving audio descriptions or other similar information.

section 4.7.5.9.1 should specifically allow The inclusion of any technology, either currently available or developed in the future, used to support the needs of people with disabilities. This is because all other transmissions are subsequently stated to be prohibited without prior approval. Receiving such approval could prove to be an unnecessarily difficult and time-consuming process.

4.7.6.8.4 International Agreements

These should include the 2 European Directives on Public Procurement (2004/17/EC and 2004/18/EC) and The European Audiovisual Media Services Directive (Pending).

The Directives on Public Procurement came into force in 2006.

Political agreement was reached on the Audiovisual Media Services Directive in May 2007 and it will be enacted later this year.

11 Irish Broadband

Appendix B – Consultation Questions

List of Questions

Q.1. Do you consider that the length of the licence period is appropriate? If not, how long do you consider the licence period should be for? Please give reasons for your proposal?

A.1. In principle we agree that the license duration should be as long as possible to ensure adequate return on investment.

Q.2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal?

A.2. The primary driver for the license duration is the ability to make a return on capital employed. Should conditions change or future spectrum allocations threaten this market segment, then the license fee should be reviewed. On this basis Irish Broadband propose that the DTT license fee structure should be subject to a consultative review process after 5 years.

Q. 3. Do you consider the proposed licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal?

A.3. Yes.

Q. 4. Do you consider that other factors, in addition to the range identified, should be taken in to account in deciding the licence fees? If so, indicate what they are and give the reasons for your proposal?

A.4. The mix of services that the operator provides with the DTT multiplex allocation should be a material factor in determining the license fee. This could be used as an incentive for operators to provide data services in the very competitive broadband market.

Q. 5. Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation? What alternative methods could be used in reviewing the licence fee?

A.5. In a competitive market where the price of services is generally reducing rather than increasing a method that takes account of the price of telecoms or similar services should be used rather than CPI.

Q. 6. Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal?

A.6. Irish Broadband agrees that rollout obligations are an appropriate mechanism for ensuring that spectrum is utilized efficiently.

Q. 7. Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

A.7. Agreed, although the BCI should ideally not be permitted to devolve all responsibility to the contractor, considering that they will have a key role to play in facilitating the uptake of the license and the subsequent network rollout. The obligations of each party should be clearly delimited to ensure there is no ambiguity in this regard.

Q. 8. Do you see merit in seeking voluntary sanctions for non compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer?

A.8. Irish Broadband is not in favor of voluntary sanctions. These can be particularly iniquitous where one operator has agreed to a particular set of conditions that are less demanding than those conditions agreed by another. A common set of sanctions should be applied equally to all bidders for the BCI DTT multiplexes. This also allows a degree of predictability when evaluating the competitive positions of other bidders

Q. 9. Do you agree that the concept of a “telecoms data” cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

A.9. We agree that measures should be included to ensure the availability of enhanced and interactive DTT services. We believe that other technologies, including UMTS, WiMAX and other FWA may be more efficient in the delivery of telecoms data such as mobile multimedia and broadband services.

We believe that any discussion relating to the capping of one particular form of digital data versus another could be considered contrary to objectives of technology and service neutrality. Therefore we would like to see this issue discussed and addressed in the wider context of future plans and proposals for the VHF and UHF bands, resulting in the so called Digital Dividend. The release of analogue broadcast spectrum should not be dedicated solely to DTT services but also for a wide range of mobile and broadband services.

Q. 10. Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal?

A.10. Notwithstanding the answer to question 9, we believe further clarity is required in terms of defining:

a) what constitutes “telecoms data” in this context, would this for example include the transmission of programming services including television and radio via IP based technologies such as IPTV. How would services such as timeshift TV or other forms of streaming music or video based content be treated?

b) how the capacity of the multiplex is measured – i.e. does the capacity relate to the percentage of spectrum (or MHz) used or the relative amount of Mbit/s used for DTT versus Telecoms Data.

Q. 11. Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal?

A. 11. We consider that in the design and allocation of the channel arrangements full account needs to be taken of the goals of the i2010 initiative and the work being undertaken by the European Commission Radio Spectrum Committee and CEPT in relation to the implications of the Digital Dividend and the harmonization of sub bands for mobile and broadband services. In this regard, Irish Broadband believes that it would be beneficial to reconsider the channel arrangements in such a manner that maximises the Digital Dividend for additional wireless services and to facilitate international harmonisation.

12 National Disability Authority

NDA

National Disability Authority
Údarás Náisiúnta Míchumais

12th October 2007

Ms. Sinead Devey
Commission for Communications Regulation
Irish Life Centre
Abbey Street
Freepost
Dublin 1
IRELAND

Via e-mail and post

RE: Submission re ComReg 07/65

Dear Ms. Devey,

The NDA is pleased to make this submission to ComReg regarding the licensing of Digital Terrestrial Television. The following comments are confined within NDA's competency in the area of disability policy.

General considerations

NDA is of the view that any roll-out of digital television should be accessible to people with disabilities. There are two main areas of concern:

- ensuring that the transmission and reception of broadcasts enables interpretation services such as subtitling, audiodescription and Irish Sign Language interpretation
- ensuring that the equipment is accessible to people with disabilities so that they can avail of services. This includes having a remote control with universal accessibility features, having screen menus that are accessible in terms of their design, and having audio-described menu options, channel identifiers, etc.

In the event of a digital switchover it is also important to ensure effective communication of the switchover to people with disabilities. The issue of cost has been shown to be a factor in the related area of broadband and internet usage, as evidenced by ComReg's recent survey on telephone and broadband use by people with disabilities. Though the user costs for DTT are not known yet, this will be an area that the NDA will monitor in future.

NDA is also of the view that the roll-out of digital television should ensure the achievement of existing targets under the Broadcasting Commission of Ireland's Access Rules and support future development of these Rules. Digital Television has the potential to support increased targets for access services, especially for audiodescription and Irish Sign Language. It is therefore important that the licensing of Digital Terrestrial Television multiplexes maximises the potential for transmitting these access services.

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ComReg 07/92s

The Broadcasting Amendment Act 2007 provides that ComReg issue a license for multiplex operation directly to RTÉ, while licenses for privately-operated multiplexes will be issued to BCI for further licensing to the operators. In order to ensure that people with disabilities have equivalent access to services from both commercial multiplex operators and the national public service multiplex operator RTÉ, it is important that at a minimum, the technical and information provision requirements for RTÉ are equivalent to those set by BCI for the commercial operators. NDA therefore recommends that RTÉ be required to fulfil all the requirements set by BCI under BCI's competition for multiplex contracts.

Question 2

Do you consider that factors other than those included above should be taken into account in deciding the licence duration?

NDA considers that developments in digital terrestrial television technology should be taken into account when setting the licence duration. The licence duration should not deter development or incorporation of new technologies which would increase accessibility of DTT for people with disabilities. NDA therefore considers that enabling technological innovation should be a factor in determining license duration.

Question 9

Do you agree that the concept of a "telecoms data" cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

NDA seeks that ComReg ensure adequate spectrum is provided by all licensees to enable the provision of access services. We therefore support the concept of a "telecoms data" cap.

Question 11

Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal.

With reference to 'Draft Technical Consideration' number 4.7.4 regarding system transparency, NDA is of the view that this consideration should require that the Digital Multiplex be implemented in such a manner that it is capable of relaying audiodescription, Irish Sign Language interpretation and subtitling services.

With reference to 'Draft Technical Consideration' number 4.7.5.12.4, item 2, regarding the requirements for the Set Top Box, NDA is of the view that this consideration should require the licensee to ensure that set top boxes offered for sale, lease, rent or otherwise by the Licensee are built according to universal design principles such as the specifications of the UK Consumer Expert Group on Digital Television (**Digital TV Equipment: Vulnerable Consumer Requirements**, a report by the Consumer Expert Group to Government and Digital UK, March 2006). These specifications have been accepted by the UK Government as the specification for its vulnerable customer Help Scheme.

13 O2

Licensing Digital Terrestrial Television

Introduction

Broadcasting in Ireland has had a rich and unique history of development, and can trace its origin back to Marconi's early 20th century transmitter at Clifden. In more recent decades, the development of local cable TV operators in various towns throughout Ireland, and the local "deflectors" relaying UK television content has shown that Irish consumers demand a diverse choice of television programming. At the present time, Ireland has one of the highest penetrations of digital TV in Europe, even though Digital Terrestrial Television (DTT) services have not yet begun operation.

As the convergence of traditionally separate broadcasting and communication technologies continues, O2 believes that the successful launch of DTT will compliment and stimulate entertainment and information services delivered through other means, including fixed and mobile broadband services. The market for digital TV services is competitive, and consumer demands are increasing.

O2 is keen to see successful and competitive provision of DTT services, and is pleased to comment on ComReg's consultation. The following document contains some general comments on the market into which DTT will be launched, and specific responses to ComReg's questions.

General Market Context

Consumers in Ireland already avail of digital TV services, and demand a broad and diverse choice of programming. 73% of Irish consumers already subscribe to either Cable/MMDS or Satellite delivered TV services, making it one of the highest penetrations in Europe. 90% of all households in Ireland avail of multi-channel TV services including Freeview overspill from Wales and Northern Ireland as well as Freesat services. Over half of all households in Ireland have already switched over to Digital TV reception, which is a significant penetration considering no DTT services have launched yet. The trend in TV consumption is moving away from the traditional simple linear reception, towards a more diverse type of service, including non-linear and interactive services. Though it will always remain as the most used/viewed means of broadcasting, O2 believes that within the lifetime of the DTT licences, linear will have lost its position as the dominant form of TV reception.

These factors are very important in considering how to ensure that DTT is a success, and experience in other countries has shown that

Licensing Digital Terrestrial Television

DTT is not necessarily guaranteed to be a success. O2 believes ComReg and the BCI must take the broader market and competitive conditions into consideration when designing the licensing regime for DTT (the BCI in its selection process and contract, and ComReg in the Radio Licence Conditions).

When launched in Ireland (in 2008 or 2009), the DTT services will enter into an already competitive market. A wide variety of services will already be available to the majority of homes, and most consumers will already have made the switch over to digital TV. For the commercial operators of the three (eventually four) multiplexes competition will be provided by the RTE multiplex, Cable/MMDS, and Satellite. It is worth considering the different offerings that will be available from each provider:

RTE

- Initially 1 mux (2 by 2012)
- existing RTE content possibly supplemented by new digital only channels
- Free to air
- Up to 20 standard definition TV channels on 1 mux
- ~98% population coverage
- Licence fee income

SKY

- Broad range of content from sport to movies to niche programming, including SKY owned content
- Free and premium services
- >600 channels, mix of SD and HD
- Linear, non-linear, and interactive
- 100% population coverage

Cable & MMDS

- Access to broad range of content, including RTE, SKY and other
- Free and premium services
- 70+ channels on MMDS, 300+ on cable
- Linear, non-linear, and interactive
- Ancillary services on cable (e.g. broadband, telephony)
- >70% population coverage

O2 believes there is a place for DTT in the market, however if the commercial multiplex services are to be a success they will need to find a market position and compete against the existing services in availability and choice including the breadth of types of service provided. They will also need as far as is possible to have the same flexibility in the services delivered as the competing platforms.

Licensing Digital Terrestrial Television

The success of DTT is by no means guaranteed and valuable lessons can be learned from the UK and other markets. On digital and ITV digital in the UK failed, and it is only since the amalgamation of multiplexes into Freeview that DTT has become viable. Difficulties have also been seen in Spain, where Quiero TV also failed. In Ireland, DTT service providers will face additional difficulties as they enter a market that already has one of the highest penetrations of digital TV through cable and Satellite. The Commercial DTT multiplex operators will likely spend the early years of operation just building a feasible market penetration.

ComReg should include licence conditions that, to the extent that it is possible, give the DTT multiplex operators fair treatment when compared with the other services in the market. Consideration should also be given to whether it is likely to be more feasible and beneficial to have a number of separate commercial DTT services competing against each other with limited offerings, or a single operator of multiple multiplexes with a combined offering that is comparable to that available from cable and satellite.

Response to Questions

Q. 1. Do you consider that the length of the licence period is appropriate? If not, how long do you consider the licence period should be for? Please give reasons for your proposal?

As outlined above, O2 believes the commercial DTT multiplex operators face barriers to market entry that are significant. The operators will need to make a large capital investment to build out their service, and can expect to spend a number of years building a feasible customer base before net cash-flows are positive. There is a significant risk associated with this investment, and the return is unclear, therefore shorter licence durations would significantly increase the risk profile for the licensee. A 12 year to 15 year licence would appear appropriate.

Q. 2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal?

The pay-TV market in Ireland is mature with 73% of Irish homes paying for TV with a further 17% availing of overspill multi-channel services from UK DTT and Freesat. Therefore in addition to the capital requirement for network access, headend systems, set-top boxes, content, etc. a significant marketing investment will be

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required by the licensee to acquire customers. A shorter licence period will reduce the depreciation period and increase annualised costs. In addition, DTT is starting with a customer base of zero with the initial years focused on driving customer acquisition until a viable base is achieved. For the licensee, the benefit of a DTT licence will be during the period after the viable customer base has been achieved. If this period is too short then the risk profile of the investment is not balanced.

ComReg also needs to consider the need to give the DTT multiplex operator fair treatment in comparison to the main competing services insofar as that is possible. The duration of licence granted to MMDS/Cable operators should be used as a reference, though not necessarily an absolute guide.

Q. 3. Do you consider the proposed licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal?

In the consultation document ComReg has identified the most important factors that must be taken into consideration when setting the licence fee. The process of weighting these factors and translating them into a charge per MHz is the most difficult part of establishing the licence fee. O2 does not disagree with the fee as proposed by ComReg (€2375 per MHz), however does have some observations regarding weighting that should be applied.

The need to encourage fair competition between competing platforms should be the most significant criterion in setting the licence fee – this is critical for the success of the service and the development of maximum competition and choice in the market. However there is not a direct one-to-one comparison that can be made between DTT and the competing platforms, e.g. spectrum in the 450-470MHz band is not directly comparable with 2.6GHz or satellite spectrum for which the Irish exchequer receives no income. Other factors are also directly relevant including the investment required to feasibly provide services - the investment required to provide satellite services is wholly different to terrestrial services; and can only be viable on the basis of very large population coverage and penetration. The minimum roll-out obligations on DTT will increase the investment required vs MMDS.

O2 believes the need for the state to get a fair rent for the use of the radio spectrum, and the need to offset the opportunity cost other services that could use the spectrum should be secondary considerations if DTT is to be viable. The radio spectrum is a resource which is available to be used for the benefit of the state, and in this case greater benefit can be gained by the successful

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provision of competitive DTT services, than from the raising of an economic rent. O2 believes this is in line with policy objectives of ensuring that a broad range of entertainment and information services are available through competing platforms. For the same reason, a comparative evaluation or "beauty contest" rather than a straightforward auction is the preferred means to select successful applicants for the licences.

Q. 4. Do you consider that other factors, in addition to the range identified, should be taken in to account in deciding the licence fees? If so, indicate what they are and give the reasons for your proposal?

The nature of the spectrum that is, whether the allocation is on the more valuable 'primary basis' (as is the case with the national DTT multiplexes) or the less valuable non-interfering 'secondary basis' should be considered when determining licence fees. Encouraging the use of more efficient equipment could also be considered, e.g. as an incentive for using higher specification codecs.

Q. 5. Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation? What alternative methods could be used in reviewing the licence fee?

As outlined above, O2 believes the business case for DTT involves a number of risk factors. In this context, it is beneficial if ComReg can eliminate uncertainty around the licence terms as far as is possible. It is O2's understanding that ComReg proposes to fix the licence fee for the duration of the licence, subject only to an annual inflation adjustment of CPI. O2 agrees with the proposal to fix the licence fee over the term, as it gives applicants some certainty for their business planning, but questions whether it is necessary to include the CPI increase.

A CPI-X calculation as an alternative to CPI would help to reduce the potential for penalising the licensee against an increase in CPI due to economic conditions of which the licensee has neither control nor influence over, and which independently could have a negative impact on customer acquisition due to a reduction in consumer disposable income. ComReg should set CPI as an upper-bound for the annual adjustment, but maintain the flexibility to increase the fee by less than this if the situation merits it.

Q. 6. Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal?

Spectrum is a finite, national resource, and should be used in an effective and efficient manner therefore proper management and use of spectrum is an important consideration. A minimum rollout obligation equivalent to that achieved through the use of the twelve main RTE NL transmitters appears reasonable. However the imposition of rollout obligations on commercial multiplexes thereafter is unreasonable and it should be left to the licensee to balance the commercial considerations of customer acquisition with the additional transmission and distribution cost. In addition, ComReg should avoid the possibility that licence conditions could constitute State Aid under Article 87(1) of the EC Treaty through rollout obligations that go beyond that provided by the 12 main sites. In practice obligations beyond this could force commercial operators to contract for services from RTE NL over and above what is required for commercial service provision. Some degree of flexibility must be granted to the commercial multiplex operator even though network planning has been conducted and co-ordinated on a European basis during RRC-06 using the RTE NL site network.

RTE has a public service mandate and benefits from the receipt of annual income from television licence fees which in turn fund coverage obligations. The DTT licensee(s) will have no public or guaranteed income and should therefore not be subject to additional and possibly punitive roll out obligations.

In order to achieve an increase in population coverage from 91% to 98% RTE broadcasts from in excess of an additional 150 transmission sites. Any similar or partial obligation placed on the licensee should be viewed as damaging to the commercial prospects of DTT in Ireland as the capital and operational costs of utilising these additional sites is significant.

Q. 7. Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

The obligations imposed by ComReg in the Wireless Telegraphy licence should be the same as those imposed by the BCI in the multiplex contracts. ComReg's requirements that the radio spectrum is efficiently managed must coincide with the BCI requirements for successful broadcasting services. To ensure this, ComReg and the BCI should consult before the competition to ensure that ComReg's minimum requirements are included in the basic terms for operation of the multiplex. After that, the BCI

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should be given flexibility to determine if additional conditions should apply or be accepted during the competition. These additional conditions should then be included in the wireless Telegraphy licence and the multiplex contract.

Q. 8. Do you see merit in seeking voluntary sanctions for non compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer?

It should be the objective of ComReg and the BCI to develop a set of obligations for licensees which do not inhibit commercial development of the platform. The DTT licensees will be late entrants into a saturated market dominated by two pay-TV providers with substantial and loyal customer bases. To further restrict the DTT licensee's ability to compete on a fair and equal basis will have severely negative repercussions for the licensee. Introducing additional barriers to success for the DTT licensee that are not already in place for satellite and cable operators will undermine the potential of DTT in Ireland.

It is accepted that multiplexes will be offered through a comparative evaluation, and that as a result the successful applicant may be chosen on the basis of commitments given during the competition. It is necessary to ensure that the material commitments given are delivered, however a pragmatic approach should be taken.

If the successful applicant is to be chosen on the basis of commitments given in the application process, then it should be transparent which offers may influence the decision, and which ones will be consequently included as licence conditions and penalties. In order to avoid the situation whereby applicants offer excessive penalties, which in the event of hitting difficulties in delivery could prove to undermine the viability of their business, it is recommended that ComReg and the BCI should set out in advance a list of service characteristics against which penalties may be applied, and quantify the penalty. Applicants would still be free to offer different levels of achievement in order to differentiate their proposed service.

Q. 9. Do you agree that the concept of a "telecoms data" cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

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applicant proposing the greatest overall benefit, replacing it with the one that generates the highest fee.

Comments on Section 4.7, Draft Technical Conditions

Minimum programme bit rates 4.7.5.4.4.

No specific provision is made for variable bit rate encoding and statistical multiplexing – either of programme source feeds or on the final DTT multiplex output. Increasingly, statistical multiplexing is being used on satellite transponders (which will probably be used for some of the programme source feeds) and it is likely that this trend will accelerate over the next few years as broadcasters and satellite operators free up capacity for more HD services. It would represent very inefficient use of DTT UHF spectrum if source programme services with variable bit rate encoding¹ were allocated fixed bit rates in the DTT multiplex.

Statistical Multiplexing can also significantly reduce the cost per programme service of distribution and transmission. This is particularly so with MPEG4 where more programme services per multiplex can be accommodated without compromising on video or audio quality. The greater the number of programme services in a given multiplex the greater the effectiveness of Statistical Multiplexing without degradation of quality.

Not all technical implementations of COFDM demodulators and MPEG decoders produce the same subjective quality for the same baseband signal and DVB-TS for all picture sequences. Furthermore, the technical performance of the digital baseband and CRT/LCD/Plasma driver circuitry and the display devices themselves (in TV sets) can vary dramatically from one model to another. Accordingly, even if the entire encoding, multiplexing, distribution and transmission chain and all STBs approved by the national and commercial multiplex operators did meet very strict performance requirements there is no guarantee that the displayed pictures in the target 99% of homes covered would be free of artefacts. Increasingly it is the performance of the Plasma/LCD display that dominates the subjective picture quality.

¹ (and subsequently stat. muxed to form the baseband feed for broadcast)

Impairment Quality 4.7.5.10.1

In order to address the requirements in 4.7.5.10.1 it may be necessary to specify a reference receiver/demodulator/display device. It is impractical for reasons of cost to subjectively monitor all services to the extent of 99.99% of the time i.e. 1 sec of artefacts in a period of 2.7hours. Specialist MPEG TS test equipment is becoming available which is designed to simulate subjective testing – however it is just an approximation and does not include artefacts introduced in the display devices. Again, the specific equipment would need to be specified.

Note that there appears to be a conflict between the requirements set out in 4.7.5.10.1 –Impairment Quality and those in 4.7.6.5.1 – Impairment Quality.

14 RTÉ and RTÉNL

RTÉ and RTÉNL welcome the opportunity to respond to this ComReg Consultation on Licensing Digital Terrestrial Television in Ireland. These comments represent the views of RTÉNL as a of national, regional and local terrestrial broadcasting transmission and distribution services in Ireland, and reflect the opinion of RTÉ, Ireland's primary Public Service Broadcaster.

At the outset, RTÉ wishes to state that this *Consultation Document* has as its focus the multiplex licence conditions for digital terrestrial television (DVB-T or DTT) in Ireland, and make reference to the Broadcasting (Amendment) Act 2007 throughout in this regard. RTÉ suggests that cognisance must also be taken of the 2002 European Union Directive on a common regulatory framework for electronic communications networks and services (Framework Directive)⁷. The importance of ensuring that the introduction of DTT in Ireland follows best practice internationally with regard to open standards and interoperability is paramount. The Directive addresses this issue primarily in section 31 and later in Article 18 on 'interoperability of interactive digital television services' and RTÉ believes that the spirit of the new regulatory framework (including the recently agreed Audiovisual Media Services Directive) should be reflected in ComReg's approach to the licensing of DTT in Ireland.

Q. 1. Do you consider that the length of the licence period is appropriate? If not, how long do you consider the licence period should be for? Please give reasons for your proposal?

RTÉ and RTÉNL consider that a licence period of 10 to 12 years is appropriate when taking the factors listed in section 4.1 of the consultation document into consideration.

Q. 2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal?

Initial infrastructure construction, geographically phased introduction of DTT services and switch off of existing analogue television services are three major factors that have to be taken into account in deciding licence duration.

Infrastructure Construction

It may take between three and four years to construct the infrastructure necessary to provide coverage to c. 90% of the population. DTT infrastructure will have to be constructed in a manner that does not negatively impact on existing analogue services provided by current broadcasters and provided to existing television viewers

⁷ http://eur-lex.europa.eu/pri/en/oj/dat/2002/l_108/l_10820020424en00330050.pdf

and radio listeners. Specifically construction works on masts and antennae systems on high power broadcast infrastructure provide a significant timeline challenges as work has to be undertaken adjacent to live high power broadcast services and due to mountain top locations the weather is always a major factor. For example in 2007 no significant mast or antennae work was possible on mountain top transmission sites as the normal three to four month summer work window did not materialize due to poor weather.

In addition to construction difficulties there are also technical parameters associated with the protection of existing analogue television services in the UK and Northern Ireland. Protection of cross border analogue television services is central to the international radio spectrum agreements and it will only be possible to fully utilize the allocated DTT spectrum when all analogue services are switched off. In the simulcast period there will be a number of interim restrictions placed against various spectrum blocks. The largest impacts on Ireland are from England, Wales and Northern Ireland. Analogue switch off and the associated lifting of restrictions will be achieved on a phased basis over the next number of years and be complete analogue television services are switched off in the final UK area. This is currently scheduled to be Northern Ireland in 2012.

Geographically Phased Introduction of DTT Services

It will not be acceptable to Ireland that analogue television services are switched off until an alternative free to air television service is in place. This causes significant problems for the infrastructure construction as mentioned above and also for the DTT licensees as the DTT services will become available to the television population on a geographically phased basis. This phased basis, which is the only possible way of achieving the objective, will require the holders of these first four DTT licences to commit significant additional resources to ensure that the market is managed correctly to provide the best possible environment for a successful DTT platform. Consultation and communication with all stakeholders, including but not exclusively, television viewers, television licence holders, television and radio broadcasters, ComReg, BCI, DCENR, will be critical and resource intensive.

As the service will only become available to the population on a phased basis over three to four years the licence holders will not only have the burden of managing this but will also only gain access to its market and associated revenue on the same phased basis.

In the initial three to four years of DTT the costs associated with launching a new DTT platform on a phased basis will be significant while at the same time the access to revenue opportunities will be curtailed.

Analogue Switch-off

It will not be acceptable to Ireland that free to air analogue television is switched off until an alternative digital free to air service is in place and therefore this phased, simulcast, approach for the first four DTT multiplexes is the only way of achieving the objective. Unfortunately this creates the construction and service launch difficulties mentioned above. Analogue switch-off will free up significant sections of radio spectrum and the entities that utilise this spectrum in the future will not have to suffer the same infrastructure or service launch burden as the first four licensees.

To provide a balance between all the factors involved including the additional burdens mentioned above that will be placed on the licensees of the first four multiplexes, RTÉ and RTÉNL believes that the licence term for the first four multiplexes should be 10 to 12 years from the date of analogue switch-off.

Q. 3. Do you consider the proposed licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal?

RTÉNL seeks clarification as to whether there will be a separate charge by ComReg for the actual transmission/transmitter equipment, similar to the current ComReg charge per transmitter, or is the DTT multiplex licence all encompassing and the only fee that ComReg will be recovering will be from those associated with the transmission of the DTT multiplexes.

Q. 4. Do you consider that other factors, in addition to the range identified, should be taken in to account in deciding the licence fees? If so, indicate what they are and give the reasons for your proposal?

RTÉNL believes the following factors, in addition to the range identified, should be taken into account.

- 1) Full utilisation of the spectrum will not be possible for the first four or five years as there are a number of unavoidable impacting factors such as phased infrastructure construction, simulcast of analogue/DTT television services and international restrictions. It is only when analogue services in Northern Ireland are switched off in 2012 that it will be possible to fully utilize the allocated spectrum. This unavoidable inability to fully use the licenced spectrum for a substantial period of time should be taken into account in deciding the licence fee and the date from which it should be applied.
- 2) Participation by all four of the existing national free to air television services in the DTT platform will be essential to its success. A successful DTT platform is necessary to achieve analogue switch-off and the associated efficient use of radio spectrum. Every effort should be made to ensure that all the existing broadcasters are encouraged to be committed to the DTT platform. Excessive or premature application of fees could be counterproductive in this area.
- 3) Construction of DTT broadcast infrastructure will have a negative impact on transmission of the existing analogue television and radio services. Every effort will be made to minimise this negative impact but it is not possible to eliminate it completely. This unavoidable negative impact on existing services during the three to four year construction period should be taken into account in deciding the licence fee and the date from which it should apply.
- 4) Radio spectrum is a valuable national resource and therefore all parties should be encouraged to promote technical efficiency. For example at the moment MPEG4 video compression technology is significantly more efficient than its predecessor

MPEG2 and should be encouraged. In the short term it may be necessary to allow some MPEG2 services but there should be significant incentives or penalties to encourage the move to MPEG4 and ideally a fixed limit on the duration that MPEG2 would be allowed. A suitable penalty or incentive should be taken into account in deciding the licence fee and the date from which it should apply.

- 5) The licence fee and structure should reflect the high speed at which technology develops in the digital environment, especially in areas such as compression. This should be taken into account in deciding the licence fee and a mechanism to encourage their deployment so that future efficiencies are created.

Q. 5. Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation? What alternative methods could be used in reviewing the licence fee?

Annual increases based on movements in the prevailing Consumer Price Index is a reasonable approach to price indexation.

In addition, each licensee's use of spectrum should be audited to ensure optimal use. Multiplexes using more efficient technologies, such as compression, or less radio spectrum by using spectrum efficient network designs such as Single Frequency Networks (SFNs) should be subjected to a lower rate of increase or appropriate incentive.

Q. 6. Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal?

RTÉ and RTÉNL agree that roll-out obligations should be imposed on each multiplex licensee. It is important that services should be available to all of the citizens of Ireland insofar as is reasonably practicable. It is RTÉNL's view that thirteen sites are required to deliver c. 90% population coverage (we accept fully that predicting coverage is not an exact science). However this may not be achievable until analogue services in the UK and Northern Ireland are switched off. Service should be rolled out to these sites within a strict timetable in order to facilitate analogue switch-off in Ireland and thereby free up spectrum for further DTT multiplexes and other uses.

Q. 7. Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

RTÉ and RTÉNL agree that it is appropriate for a contract awarded by the BCI to be aligned with roll out obligations stipulated in a ComReg licence.

Radio spectrum is a valuable and limited natural resource and as stated by ComReg in section 3.2 “*ComReg’s role at this time is to ensure that the licensing framework for DTT multiplexes, and transmitter networks needed to carry them throughout Ireland, can be introduced efficiently and effectively*”. To ensure the efficient and effective use of this limited national resource RTÉNL believes that ComReg should set minimum rollout parameters in advance of the BCI process and should also state target rollout parameters.

For example; Minimum coverage 80% of population by 2010
 Target coverage 85% of population by 2010
 Minimum coverage 85% of population by 2012
 Target coverage 90% of population by 2012

This will help to ensure that the efficient and effective use of radio spectrum has a priority position in the BCI process and in the business cases of those responding to the BCI process.

Q. 8. Do you see merit in seeking voluntary sanctions for non compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer?

RTÉ and RTÉNL agree that ComReg must have the right to impose sanctions for non-compliance with licence terms. RTÉNL does not see merit in a voluntary sanction mechanism as the associated criteria could be undermined by changes in technology and the passing of time. RTÉNL believes that ComReg should retain full authority and control to impose sanctions for non-compliance with licence terms.

Q. 9. Do you agree that the concept of a “telecoms data” cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

Programme-related data services should not be included in any “data cap”. This includes electronic programme guide, programme descriptions, teletext, sub-titles etc. Software upgrades for set top boxes and integrated televisions should also be excluded from a data cap.

RTÉ and RTÉNL recommend a data cap of 25% of the capacity of each multiplex may be more suitable, without any qualification regarding a cumulative maximum figure in any 24 hour period (as proposed in section 4.6.1).

Q. 10. Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal?

RTÉ and RTÉNL agree with the principle and purpose of a data cap. RTÉNL believes that a mechanism should be retained within the licence to review this data cap at regular intervals during the term of the licence. Digital technology and services are evolving at a very rapid pace and controlled flexibility should be built

into the licence to make changes if necessary and practical during the 10 to 12 year period.

Q. 11. Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal?

If multiplex licences are awarded to a number of different operators by BCI, there may be a requirement to facilitate the adaptation of a single encryption system, middleware and EPG in order to achieve ComReg's stated aims of ensuring that the licence framework for the DTT multiplexes, and the transmitter networks needed to carry them throughout Ireland, can be introduced efficiently and effectively and the need to encourage fair competition between competing platforms for the benefit of Irish consumers.

Draft Technical Conditions – DTT Multiplex licence

RTÉ and RTÉNL notes that no question has been included in the Consultation document regarding the draft Technical Requirements, however, RTÉ and RTÉNL wish to raise certain questions in regard to these draft conditions:

- Sections 4.7.1.4 and 4.7.1.6: RTÉ notes the inclusion of a reference to the use of Band III for DTT, and wishes to re-state its position, as previously articulated, that while some use of Band III may be necessary during the transition phase from analogue to digital, that RTÉ does not foresee the use of Band III for DTT in the longer term. Instead RTÉ believes that Band III should be prioritised for radio services.

- Section 4.7.5.2.1 General
Clear labelling and appropriate access to equipment and controls are covered under technical, operational, health and safety standards and legislation. This section is unnecessary and is covered by the statement in section 4.7.5.1.1, *“The mechanical and electrical construction of the installation shall be in accordance with best practice.”*

- Section 4.7.5.2.2 Controls
As with Section 4.7.5.2.1, Clear labelling and appropriate access to equipment and controls are covered under technical, operational, health and safety standards and legislation. This section is unnecessary and is covered by the statement in section 4.7.5.1.1, *“The mechanical and electrical construction of the installation shall be in accordance with best practice.”*

- Section 4.7.5.2.3 Manufacturers Identification
As with Sections 4.7.5.2.1/2, Appropriate identification of equipment is covered under technical, operational, health and safety standards and legislation. This section is unnecessary and is covered by the statement in section 4.7.5.1.1, *“The mechanical and electrical construction of the installation shall be in accordance with best practice.”*

Without a detailed definition that matches or takes precedence over the existing best practice standards in relation this issue the section as it stands will cause confusion. For example at what point a does component, or number of components become 'equipment'. It may not be possible to comply.

- Section 4.7.5.3.1 Access and Personnel

Second paragraph:

It is not possible to physically restrict access to only authorised personnel. DTT equipment will be installed adjacent to other radio, television and telecommunications equipment as well as electrical power and cooling systems. It is not practical or pragmatic to physically restrict access, in most RTÉNL facilities it will not be possible. Also as with some equipment hosted for current analogue services the equipment for each multiples may be owned operated and maintained by different companies. For clarity the words 'have' and 'to' at each side of the word 'access' should be removed. Revised to 'Only authorised personnel shall access the Digital Multiplex System for the purpose of adjustment and/or maintenance.'

- Section 4.7.5.3.2 Examination and Testing

Please clarify who is the Digital Terrestrial Television Operator? and what role they have?

- Section 4.7.5.3.4 Weather Protection

Weather protection is covered under technical, operational, health and safety standards and legislation. This section is unnecessary and is covered by the statement in section 4.7.5.1.1, "*The mechanical and electrical construction of the installation shall be in accordance with best practice.*"

- Section 4.7.5.4.2 Encoding Standards

MPEG 4 Audio codec: Should include MPEG1.L2 and Dolby AC3, in addition to AAC.

- Section 4.7.5.4.4: Minimum Programme Bit rates

This restriction should be removed completely.

Radio spectrum is a valuable and limited natural resource and as stated by ComReg in section 3.2 "*ComReg's role at this time is to ensure that the licensing framework for DTT multiplexes, and transmitter networks needed to carry them throughout Ireland, can be introduced efficiently and effectively*".

Also in section 4.2 Comreg states that the fees will be set to provide a balance between a number of factors that included:

- The need to promote technical efficiency and encourage rollout of infrastructure in the areas specified in the licence
- The need to encourage fair competition between competing platforms for the benefit of Irish consumers.

Fixing the minimum bit rate in the manner suggested does not support either technical efficiency or fair competition between competing platforms.

Technical efficiency

Digital technology is a rapidly evolving technology and with each generation of software upgrade or component improvement there is advances in the system capabilities. MPEG 2 for example is far superior today than it was ten years ago. The advantages gained by these advances should not be curtailed in any way. An example would be statistical multiplexing which is used by most digital transmission systems and allows the capacity of the delivery systems to be efficiently and effectively maximised.

As statistical multiplexing is not specifically referred to in the Technical specifications, could ComReg confirm that statistical multiplexing will be permitted under the terms of the licensing agreement?

Having such a high bit-rate fixed would also remove any incentive for television and set top box manufacturers to improve efficiency.

Fair competition between competing platforms

Restricting multiplex licensees from fully utilising the capabilities of the available technologies will restrict the ability to compete in a fair manner. Imposing disproportionate standards and restrictions on multiplex licensees that are not imposed on other platforms in the market will restrict the ability to compete in a fair manner.

To enable all operators in the market to compete in an open and fair manner there should be no restrictions, minimum or maximum numbers in this area. The multiplex licensees and other platform operators should be allowed to compete based on the service that they decide to provide. The flexibility to adjust to meet market expectations and demands should be with multiplex licensee and their business model. This includes adjusting the balance between picture/sound quality and the volume of content.

Should this consultation process conclude that it is necessary to include restrictions in this area the restrictions should reflect, as a minimum, technology currently available and in use.

For standard definition in MPEG 2 an average statistical multiplexing rate of 3.5Mbps, with a minimum of 1Mbps, and a maximum of 8Mbps, should be used.

For standard definition in MPEG 4 and average statistical multiplexing rate of 2.3Mbps, with a minimum of 1Mbps, and a maximum of 8Mbps, should be used.

• Section 4.7.5.5 EIT

"Event transitions shall be accurate, matching the actual transmission on the Programme Service to within 1 second."

This sentence should be removed in its entirety, on the following grounds:

- 1) Imposing such an onerous requirement on DTT operators is contrary to ComReg's stated policy goal of enhancing competition between platforms.
- 2) Meeting such a requirement would be technically complex and cost prohibitive in any case.

- Section 4.7.5.10.1 Impairment Quality

It is not possible to have an interference free signal present for 99.99% of the time, as scheduled. The nature and high cost of broadcast infrastructure requires it to be shared by a number of services to make it efficient and environmentally friendly manner. Radio, television, emergency services, fixed telephone, mobile telephone, broadband, etc. share common infrastructure such as transmission masts many most locations. While every practical effort is made to ensure that installation, maintenance and repair works on one service causes minimum interference with the others, for health and safety reasons in some cases adjacent systems have to be reduced in power and in some cases switched off. Commercially and technically it would be extremely difficult to justify and fully redundant broadcast system as for example it would require two masts and associated antennae systems at every location. While the design and construction of masts and antenna systems is undertaken in a manner that has built in security there are still a number of single points of failure.

RTÉNL would not be in a position to offer 99.99% for distribution and transmission services to multiplex licensees.

Can ComReg clarify what it means by “*should be free from all interference*”? Is this in relation to EBU BPN 005 “Terrestrial Digital Television Planning and Implementation Considerations” where a location (0.5x0.5m in size) is considered covered if the signal is not interfered for with 99% of the time.

- Section 4.7.5.13 Standards

Section 4.7.5.13 paragraph 1 should be removed.

Choice of conditional access system is primarily a commercial decision by the operator deploying the service. To require that the system used adheres to a particular standard is not necessary, and appears contrary to ComReg's stated goal of enhancing competition between platforms.

- Section 4.7.6.1.1 Weather Protection

As previously mentioned under section 4.7.5.3.4. Weather protection is covered under technical, operational and health and safety standards and legislation. This section is unnecessary and is covered by the statement in section 4.7.5.1.1, “*The mechanical and electrical construction of the installation shall be in accordance with best practice.*”

- Section 4.7.6.3.1 Modulation

The proposed guard interval for SFN is 1/8. This would limit the size of an SFN to c. 33km. This is too restrictive and will make achieving coverage in some areas more difficult and expensive. A guard interval of 1/4 would cater for an SFN up to 65km in size.

- Section 4.7.6.5.1 Impairment Quality
As per section 4.7.5.10.1. Can ComReg clarify what it means by “*should be free from all such interference for 99% of the time.....*”.

- Section 4.7.6.5.1 Impairment Quality
Within the international DTT planning environment DTT is normally planned for 95% of the locations (in the UK for example this figure is sometimes as low as 70%). This figure of 99% is too high and excessive.

15 Silicon & Software Systems Ltd. (S3)

1 Introduction

This document has been written by Silicon & Software Systems (S3) in response to the Consultation Paper published by the Commission for Communications Regulation describing the Digital Terrestrial television (DTT) Multiplex Licence Conditions for Licensing Digital Terrestrial Television in Ireland [1]

The answers and comments provided in this document are a direct response to the questions asked in the consultation paper, and will use the same question naming conventions.

1.1 S3 Response to Specific Questions

Q.1 Do you consider that the length of the licence period is appropriate?

If not, how long do you consider the licence period should be for?

Please give reasons for your proposal?

A.1 S3 Believe that 10 years is an appropriate term for the license duration.

Q.2 Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal?

A.2 No Comment

Q.3 Do you consider the proposed licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal?

A.3 No Comment.

Q.4 Do you consider that other factors, in addition to the range identified, should be taken in to account in deciding the licence fees? If so, indicate what they are and give the reasons for your proposal?

A.4 S3 accept the direct comparison with MMDS. As an observation, ComReg have stated that the DTT service be competitive with MMDS, Digital Cable and Digital Satellite. The above licensing only addresses competition with MMDS. Will the proposed license fee drive fair competition with the other Distribution media, namely Cable, Digital Satellite and wired IPTV services?

Q.5 Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation? What alternative methods could be used in reviewing the licence fee?

A.5 No Comment

Q.6 Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal?

A.6 S3 agree with the concept of rollout obligations although feel that they should be no more restrictive than those applied currently to MMDS, Cable or Digital Satellite.

Our position would be to promote fair competition of Digital TV (and associated services) between all of the proposed delivery mechanisms.

Q.7 Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

A.7 S3 believe that this is appropriate, although would like to see a timescale to achieve agreed rollout included in the conditions. A commercial operator must have the flexibility to grow their network at an agreed rate reflecting the state of the Digital TV market and business climate, all of which can be agreed at the time of awarding the licence from BCI.

Q.8 Do you see merit in seeking voluntary sanctions for non compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer?

A.8 No Comment

Q.9 Do you agree that the concept of a "telecoms data" cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

A.9 S3 understand the principle that ComReg is trying to enforce based on the existing linear TV market and agree to the principle of a cap on non-TV related material. However the definition of what "non-TV" material means in the context of the next 10 years is difficult to define. S3 strongly believe that non-linear TV, VOD services, Interactive TV (and Radio), and new as yet undefined services will require the broadcast of TV, Audio and Data services. S3 is concerned that poor definition of the "telecoms data" cap could cripple a DTT service and make it uncompetitive with the other distribution media listed above. An example of a failed cap is the failure of the recent BT Movio Mobile TV service in the UK, which arguably failed due to the bandwidth cap imposed on non-audio services on a DAB network. If a commercial operator successfully wins the multiplex to deliver TV, then the license terms should not restrict the operator in the delivery of a compelling interactive TV service.

Q.10 Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal?

A.10 S3 believe that if a suitable cap definition can be defined, then the following proposal would allow for more flexible use of the four BCI. S3 propose that either (a) a different or (b), a variable cap be applied to each BCI multiplex in order that Ireland can achieve a balance between the existing mandate to deliver compelling TV services and the future requirements to deliver new and innovative converged services over next generation networks. S3 agrees that two multiplexes should be licensed to RTE in order to ensure that as a minimum, free-to-air services are continued post analogue switch-off. Considering the timing and allocation of the 4 multiplexes from BCI, S3 believe that the potential licensees should have to make a compelling case to BCI describing the types of service that they wish to deliver and the current and future benefits to Ireland Inc. of those services. Ireland is in an excellent position to take a world-leading position in the technology and use of our valuable UHF resource that will shape future broadcast and multicast. S3 strongly believe we should not rule out new and innovative technologies in



order to meet the stated objective in this consultation document; namely to enable significant technological convergence in broadcasting, media and telecommunications.

Q.11 Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal?

A.11 No Comment

2.1 S3 Observations on Draft Technical Conditions

As a general observation on the technical conditions put forth in this consultation document, S3 understand the need to support legacy technologies for the rapid adoption of Digital TV services. However it believes that the technical specifications should include the provision of more forward-looking and state-of-the-art technologies. For example, by mandating MPEG-4 main profile and not H.264 (or AAC+), S3 believes that the specifications are limiting the number of devices which can ultimately be deployed on the network. From its position as a world leading set-top-box integrator, some of the boxes that we are enabling for production next year already exceed the specifications listed in the consultation document. In addition, IP based platforms are currently being evaluated in other countries to deliver the converged technology solutions, and we see this trend growing in the short-to-medium term. By mandating an MPEG transport stream oriented delivery, we believe that this proposal could restrict the success of the industry and Ireland Inc. in the next 10-12 years.

16 Sky

Licensing Digital Terrestrial Television

Digital Terrestrial Television (DTT) Multiplex Licence Conditions

Sky's response to ComReg's consultation

GENERAL COMMENTS

Sky is pleased to have the opportunity to provide its comments on the important issue of the terms on which multiplex licences will be licensed to the BCI (and RTE).

Comparative jurisdiction of ComReg and the BCI

In the consultation document, ComReg notes that the BCI will subsequently issue its own contracts and that it considers it appropriate for ComReg and the BCI's relevant regulatory instruments to be consistent (for example, by having similar durations or roll-out commitments).

Sky very much agrees with the need for consistency between these regulatory instruments, to ensure that multiplex operators are not subject to inconsistent regulatory regimes or, on the other hand, subject to any form of duplicative regulatory jurisdiction or "double jeopardy".

At this stage, the BCI has not yet commenced consultation on its proposed multiplex contract terms and there, therefore, remains uncertainty as to the likely overall terms of regulation for multiplex operators. Sky would therefore encourage ComReg (and the BCI) to co-operate fully, to ensure that a regulatory environment is created which is consistent, certain and transparent. Failure to do so risks resulting in a regulatory regime which is (at "best") overly burdensome and far from being "light touch" and (at "worst") inconsistent, thereby raising significant compliance issues for multiplex operators.

Mobile television

In paragraph 3.1.1 of the consultation document, whilst the paragraph refers to "*fixed and portable reception of DTT multiplexes*", ComReg has indicated that it is its "*intention to carry out a separate consultation regarding the licensing of a multiplex for mobile television*". Sky therefore assumes that this reference to "*portable*" refers to portable TVs that are not connected to a roof-mounted aerial, to the exclusion of broadcasting for "handheld" mobile devices. There raises a lack of certainty at this stage as to ComReg's proposals concerning the development of mobile television services.

For example, is it ComReg's intention to restrict the use of capacity on the current multiplexes absolutely such that their use for mobile TV broadcasting would actually be prevented (and so only permitted at some future point on a separate multiplex, for example on a potential fourth multiplex (as referred to in section 3.1.2) which is "*not likely to be available*" until DSO?

ComReg has not provided any further details (at this stage) in its consultation document of when any such separate consultation will take place, and so when broadcasters could expect mobile television services to be commenced or, indeed, any reasons for wanting to maintain such restrictions. It is Sky's view that the launch of mobile TV services in Ireland should not be contingent on the availability of a fourth multiplex post DSO (given that is unlikely to occur before 2012) and there is no reason to put in place a regulatory environment which precludes the launch of mobile TV services earlier than DSO.

Any such restrictions on mobile TV would need to be justifiable; it would appear that such a position (if adopted) risks being inconsistent with the concepts of technological neutrality and allowing the market to decide the most appropriate use of spectrum. It is therefore incumbent on ComReg to provide a clear explanation of its position (at this stage, as part of this first consultation on DTT multiplex licences) on mobile TV services. This position should also be made subject to, and therefore take into account, stakeholder representations, before implementation.

The risk otherwise is that ComReg itself determines the balance of services to be provided to consumers using DTT capacity, rather than establishing a system which has sufficient flexibility to ensure that DTT capacity is used in a way that enables industry itself to determine the most efficient use of spectrum, based on consumer demand for different types of service (whilst still ensuring that certain (traditional) television services have, for public interest reasons, assured access to DTT capacity).

Consultation process

ComReg has elected to consult on the basis of a list of issues rather than on an actual draft licence. It therefore remains unclear whether the current consultation document contains an exhaustive list of issues which will become conditions in the relevant licences (and BCI contracts).

If there are conditions which ComReg already or subsequently considers appropriate for inclusion in its final licences, but which are not mentioned, in the consultation document, stakeholders should be provided with an opportunity to comment on them too. For example, UK multiplex licences contain a number of conditions on which Sky (and other stakeholders) are likely to have views and so may want to make representations.

If this is the case, it would be appropriate for ComReg to consult on an actual draft (complete) licence – notably at a time when the BCI has also published its (complete) draft contract, to ensure that stakeholders can provide comments on all proposed conditions at the same time. Otherwise this consultation risks being insufficient to generate comprehensive responses and, accordingly, risks being deficient in that respect. Such a comprehensive approach would also assist stakeholders in better understanding the allocation of jurisdiction/responsibility for regulation of the DTT platform between ComReg and the BCI.

RESPONSES TO COMREG QUESTIONS

Q. 1. Do you consider that the length of the licence period is appropriate? If not, how long do you consider the licence period should be for? Please give reasons for your proposal?

Q. 2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal?

Sky considers that a 12 year term proposed by ComReg is an appropriate length of time.

ComReg does not give any consideration in the consultation document to the possibility of licensees to have rights of renewal of the multiplex licence (at the end of the stated licence term), or the basis on which any such right of renewal would be exercisable.

Given that the expected life of transmission networks tends to be between 20-25 years' duration, in order for multiplex licensees to be able to generate a return on investment, and be confident in achieving a reasonable return, it would be appropriate for ComReg to consider the inclusion of a right of renewal in the licence. This right should provide the licensee with sufficient confidence in its ability to exercise successfully such right in due course (i.e. the ability of ComReg being limited to specified, discrete circumstances concerning, for example, the licensee's ability to continue to hold the licence without breaching any of its terms).

Q. 8. Do you see merit in seeking voluntary sanctions for non compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer?

ComReg does not explain what it means by the term "voluntary sanctions" and the extent to which this would vary from other forms of sanction.

Whilst Sky considers it appropriate for licence holders to comply with, and be held to, the conditions of their multiplex licence, enforcement of such (reasonable and appropriate) conditions and the application of any penalty or sanction must be undertaken in a manner which is transparent, proportionate and targeted only at cases where intervention is justified. Any action must be objectively justifiable, based on evidence, and applied in a clear and consistent manner to ensure certainty.

Q. 9. Do you agree that the concept of a "telecoms data" cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

Q. 10. Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal?

Whilst Sky recognises the legitimate public policy objective of reinforcing "*the primacy of broadcast services in a DTT multiplex*", Sky considers that, as outlined in our comments on mobile TV services above, sufficient flexibility should remain to

ensure that DTT capacity is used in a way that enables industry itself to determine the most efficient use of spectrum, based on consumer demand for different types of service.

Q. 11. Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal?

Use of capacity

Sky would encourage ComReg (and the BCI) to ensure that licensees have the freedom to use capacity (including to sub-lease capacity) on their multiplexes in a manner which allowed the most efficient use that capacity. In order to create a certain regulatory environment for licensees to have the confidence that ComReg (and/or the BCI) will allow such sub-leasing and flexibility in the use of capacity, inclusion of a condition in multiplex licences which envisages such flexibility would be appropriate. For example, UK multiplex licences contain the following condition (Condition 17(2)) which could provide a suitable precedent:

“If the Licensee applies to Ofcom for the variation of Conditions in the Annexes which relate to the characteristics of the digital television programme services to be broadcast in the Licensed Service, Ofcom shall permit the variation requested unless it appears to Ofcom that, if the application were granted, the capacity of so much of what is broadcast under the Licence as consists of digital television programme services or of such services together with digital sound programme services, to appeal to a variety of tastes and interests would be unacceptably diminished provided that in deciding whether or not to permit such variation, Ofcom may have regard to the digital television programme services broadcast in all the television multiplex services for the time being provided by the Licensee or any person connected with the Licensee and provided further that any variation to the Conditions of the Annexes which would have the result that a digital television programme service may be provided otherwise than on a free to air basis shall not be deemed to be a variation relating to the characteristics of such service.”

Provision of information

In paragraph 4.5 of the consultation document, ComReg indicates that a “*standard*” condition will be included in multiplex licences concerning the provision to ComReg of information. Such a condition should extend only to relevant information and to reasonable requests made by ComReg.

DRAFT TECHNICAL CONDITIONS

ComReg has not specifically requested comments on the Draft Technical Conditions that it proposes to include in the multiplex licences. Given the importance of these conditions to the decision to become (and thus the commercial viability of being) a multiplex operator, it would be inappropriate for ComReg to assume that these conditions do not merit discussion in the forum of this present consultation (notwithstanding their inclusion in the consultation document). Sky has therefore set out its comments on these draft technical conditions below.

Paragraph 3.1.1 – “portable reception”

The support of portable reception (i.e. portable TVs that are not connected to a roof-mounted aerial but to a low height internal, loop antenna) risks increasing the cost of the DTT network roll-out, due to the increased power required to address reception via such antennae. ComReg needs to take this into account when assessing the roll-out and power requirements of the platform, to ensure (fixed and portable) reception to a specified proportion of the public.

Paragraph 4.7.5.3.1 – Access and Personnel

All requests for inspection by ComReg should be reasonable and (where appropriate) on notice to the multiplex operator.

Paragraph 4.7.5.3.2 – Examination and Testing

ComReg has not defined the term “*Digital Terrestrial Television Operator*” used in this paragraph.

Paragraph 4.7.5.3.3 – Maintenance

Any request for a copy of any maintenance programme should, again, be reasonable.

Paragraph 4.7.5.4.3 – Other Video and Audio Parameters

MPEG only specifies a video frame of 16:9 for HD broadcasts, and therefore aspect ratios of 14:9 and 4:3 are not relevant for such transmission.

Further, it is not clear why the HD Resolution is specified as 1080i when all set top boxes should be capable of handling both 720p and 1080i resolutions. It would be appropriate for the decision as to which resolution to broadcast to be left to broadcasters.

Paragraph 4.7.5.4.4 – Minimum Programme Bit rates

It is also inappropriate to specify the video and audio bit rates, as proposed, given that encoder efficiencies can still be improved. Again, this is an issue that is best left to broadcasters to decide, to encourage the most efficient use of multiplex capacity (which could be supported with a general requirement that signals must be (subjectively) as good as ITU-R Grade 4 or better).

Further the stipulation proposed by ComReg does not indicate whether or not the bit rates relate to a statistically multiplexed signal, and the figures proposed are not necessarily the most appropriate levels (demonstrating that it is not appropriate for such levels to be prescribed, but that it is appropriate for broadcasters to determine, and continually improve on, the bit rates required for each broadcast signal).

In addition, ComReg states that “*if the original Programme Service has an Encoded Video bit rate of less than 2.2 Mbps, then that Programme service must be relayed at the supplied rate*”, which is both (i) unlikely to encourage a minimum quality of signal and (ii) inconsistent with ComReg’s proposal to stipulate actual bit rates. Again, it would be appropriate to allow broadcasters to decide their own bit rates

(given that it will be in all broadcasters' interests to ensure that the quality of their broadcast signals are sufficient to provide their viewers with attractive viewing experiences), and so unnecessary and inappropriate for ComReg to stipulate any such levels.

Paragraph 4.7.5.5 – Programme Specific Information

Paragraph 4.7.5.6 – Service Information

Paragraph 4.7.5.11 – Information to be submitted to ComReg

ComReg makes no reference in these sections to a broadcast HD descriptor (DVB or otherwise).

Further, ComReg specifies that, in relation to EIT, "*Event transitions shall be accurate, matching the actual transmission on the Programme Service to within 1 second*". The specified 1 second period is inappropriately short (particularly in relation to signals sourced from another transmission system such as cable or satellite, which require processing and reconstitution). A period of less than 10 seconds would be more appropriate (which is the level that Ofcom suggests in its relevant code).

Paragraph 4.7.5.10.1 - Impairment Quality

Paragraph 4.7.5.10.1 states that "*the signal should be free from all such interference [i.e. any artefacts] and be present for 99.9% of the time, as scheduled*".

In contrast, paragraph 4.7.6.5.1 states that "*the signal should be free from all such interference for 99% of the time at 99% of locations served*".

These two requirements should be consistent. However, ComReg should recognise that all digital broadcast are unlikely to be completely free of artefacts for more than 99% time; the issue that ComReg is presumably aiming to deal with is picture quality and viewer experience, and therefore these requirements should be set with those aims in mind, and be consistent with generally accepted standards that already exist, for example the established ITU-R grading scale.

Paragraph 4.7.5.12 – 16 – Conditions for the Operation of Conditional Access Systems

ComReg is proposing that conditions related to the provision of Conditional Access Services are included in the multiplex licence.

It appears the ComReg has taken the decision that it is necessary and appropriate for conditions to be applied to the provision of "Technical Services" on the DTT platform without explaining the basis for such a decision.

Sky reserves its position on the necessity or appropriateness of the inclusion of conditional access-related conditions in multiplex licences. ComReg should therefore make the positive case for the application of such conditions, especially for their inclusion in the multiplex licence itself (as opposed to a separate regulatory instrument, as is usual, particularly since the balance of pay and free –to-air services has not yet been determined across multiplexes) rather than including them in the licences following this consultation.

Nonetheless Sky has the following comments on the current drafting of the proposed conditions. Were such conditions to be imposed on a relevant party (including, even though apparently inappropriately, incorporated into multiplex licences), Sky considers that such conditions would benefit from a comprehensive redraft to ensure that they are both consistent with the underlying EC-derived regulatory regime and with the actual, ultimate operation of encryption systems employed on the DTT platform.

The wording of these conditions appears to reflect the conditions that have been applied to Sky in the UK in relation to the provision of CA services on the DSat platform. It would not be appropriate to import these definitions into conditions relevant to the DTT platform, not least since this wording, notably the definition of the different “*Conditional Access Services*” does not accurately reflect the CA-related services Sky currently provides in relation to the DSat platform (and so is also unlikely to reflect any such services offered on the DTT platform). ComReg would therefore need to redraft these definitions further, in light of any CA systems used on the DTT platform; Sky would be willing to assist ComReg in this exercise.

The current drafting of these conditions also raises a number of more specific issues:

- ComReg proposes their application to “*programme service multiplex providers*” without explanation as to why this is appropriate or necessary, particularly the EC-derived CA regulatory regime intends that such conditions to be applied only to broadcasters.
- The consultation contemplates the need for “*interconnection and/or interoperability*” (draft condition 2(2)) yet fails to explain what steps would be required to achieve this, and why this is necessary or appropriate.
- Draft condition 2(3) establishes a link between the costs or incremental expenditure faced by a broadcaster (or multiplex operator) and charges for “*interfacing with the licensee’s apparatus or systems*”:
 - Such an approach would be inappropriate for inclusion in a condition, given that compliance with underlying fair, reasonable and non-discriminatory (FRND) requirement would not necessarily require such an approach (given that a range of alternatives could equally be considered consistent with the FRND requirement). Unless ComReg can demonstrate (and justify) that one such approach should be the only approach to charging such that it is, in effect, mandated, it should delete this condition.
 - In any event, it would appear inappropriate for ComReg to include this level of detail in an actual licence condition, as opposed to in associated guidance on the appropriate interpretation of the conditions (with such guidance being subject to prior consultation). Licence conditions should reflect the underlying legal requirements, rather than interpretation of those requirements and suggestions as to an appropriate manner for compliance. As indicated above, given that it is fundamental to the concept that there is not necessarily only one way in which to comply with FRND obligations, to the extent necessary, it would be better placed for inclusion in any guidance issued by ComReg (following consultation).

- ComReg has not defined the term “*digital video services*” in draft condition 3(a). It is therefore unclear to which exact services this definition is intended to apply, and whether it is different from the term “*programme service*” and “*digital television service*” also used in the draft conditions. The draft conditions would benefit from revision in this regard, to provide improved certainty and consistency.
- Likewise, there is no definition of the term “*programme redistribution operator*” used in condition 3, and so it is not clear to whom this definition is intended to apply. (It is not clear whether the definition in paragraph 4.7.1.13 of the consultation document should be used in this condition, even though it appears in a separate part of ComReg’s document.)
- Given the scope of conditional access related conditions set out in the Access Directive, it is not clear whether ComReg has the jurisdiction to impose condition 3(2) on “*programme service multiplex providers*” or “*programme redistribution operator*”, given that CA conditions are intended only to apply to CA providers, and extend rights to broadcasters.
- ComReg has proposed, in draft condition 4(2), requirements concerning the availability of “*bulk discounts*”. As with the wording of draft condition 2(3), this level of detail is inappropriate for a condition and, to the extent that ComReg can justify such an approach as being consistent with (and the only way to comply with) the FRND obligation, it should instead be set out in applicable guidance.

Sky remains available to discuss these comments further with ComReg.

Sky

October 2007

17 TG4



Deireadh Fómhair 2007

TG4 Response to Comreg

Consultation on DTT Mux Licence Conditions

Background

Teilifís na Gaeilge (TG4) is the Irish language public service broadcaster, established under the various provisions of the Broadcasting Act 2001 and charged with providing a national public service television service that is universally available. While TG4 is platform neutral and is currently available on all platforms that operate in the State, it does agree the need for and advantages of a national DTT platform.

TG4 on DTT

TG4 notes that the ComReg Consultative Document under discussion here (Ref 07/65) makes no reference at all to TG4. This is very surprising to us, particularly in view of the specific provisions for TG4 on DTT that are made in Section 3 (2) (a) (ii) of the Broadcasting (Amendment) Act 2007. In this section of the Act and subsequently TG4 is directed to make available to RTÉ and RTÉ is directed to carry on the primary DTT multiplex, the programme content that comprises the TG4 service. Put simply, Government has legislated a provision that TG4 be carried on Multiplex 1. ComReg's consultative document should state this clearly and consistently throughout all publications and pronouncements on the matter.

Universal Coverage

The key DTT objectives for TG4 as a free to air Public Service Broadcaster are universal coverage, a smooth transition, prominent position and user-friendliness. No household that currently enjoys analogue terrestrial reception must be left without digital reception.

Serving Gaeltacht and other remote rural areas

Ireland has a challenging topography for DTT particularly the mountainous areas of the west and the many populated islands off the coast. Many of the Gaeltacht communities are located in such areas and TG4 knows of the many challenges that are posed in attempting to provide analogue terrestrial television coverage of all of these areas. We are in no doubt but that these challenges will increase for DTT and that it will require significant innovation and dexterity to extend DTT coverage to all of these areas to match the current analogue coverage on VHF/UHF.

Digital Dividend.

TG4 believes that frequency planning for DTT and the subsequent spectrum that is freed up upon analogue switch off, must take place with a view towards frequency harmonisation. This will allow efficient and effective use of said spectrum for implementation of other future TV and non TV broadcast services.

Need for Public Information Campaign

Public service broadcasting is a requirement in any modern democracy. To ensure a smooth transition to the digital TV era for all viewers, the State must be prepared to make a significant investment in both the infrastructure and the information campaign. Some of the costs may be recouped by the proceeds from the disposal of the freed-up spectrum, the so-called Digital Dividend.

All stakeholders have a duty to cooperate to devise and deliver an early, user-friendly, honest and fair information campaign about the change-over to DTT and to ensure that all viewers are made aware of their choices and of the cost implications for the end-user

Specification Issues

TG4 believes that an Mpeg 4 based box with Mpeg2 backwards compatibility is the best option.

TG4 is very much in favour of a return path/channel to enable inter-activity etc. as part of the DTT Ireland specification, However the cost of STB production for different types of Return Channels could initially be very high and must be taken into account for DTT in the early phases.

The most obvious effect of analogue switch off will be felt in the border counties and in some parts of the east coast where spill over from UK transmission is currently receivable. However if a STB with UK compatibility, ie MPEG 2 compatible, MHEG or MHP with MHEG plug-in for Middleware, is chosen this difficulty probably will be overcome.

Roll out

TG4 would favour a fast roll out of DTT services with as short a simulcast as possible. For TG4 as a broadcaster, however, the over-riding priority is the viewer. Analogue switch-off cannot occur until DTT is rolled out to the extent that it fulfils the PSB remit of TG4 by reaching 98% of the population.

18 TV3



Ms. Sinead Devey,
Commission for Communications Regulation
Abbey Court
Irish Life Centre
Lower Abbey Street
Dublin 1

8th October 2007.

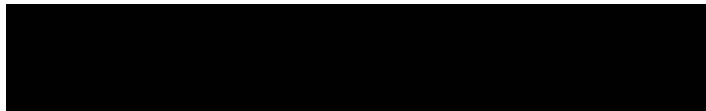
**TV3 RESPONSE
COMREG CONSULTATION ON DTT MULTIPLEX LICENCES
CONDITIONS (07/65)**

Dear Ms. Devey,

TV3 welcomes this opportunity to comment upon the licensing framework of the DTT Multiplexes. TV3 will comment on the specific questions raised as set out below. TV3 believes it appropriate to make some general comments in the first instance which relate primarily to Section 3 (the Introduction) of the Consultation.

1. TV3 notes in Section 3.1.1 a reference to the first national multiplex ensuring the availability of RTE 1 and 2 Television. The Broadcast (Amendment) Act 2007 (2007 Act) actually makes reference to both TG4 and also the Programme Service Contractor (TV3) being made available on the first multiplex (Section 3.5 of the 2007 Act). This means that RTE will be carrying services other than its own on this multiplex and as ComReg are well aware, this will give rise to obligations on both ComReg and also RTE in regard to the carriage of TV3 in accordance with the 2003 EU Regulatory Package as transposed into Irish Law by the 2002 Commission for Communications Regulation Act (2002 Act).

2. TV3 notes that there is no specific reference to the requirements of the Articles 9 and 13 of the Framework Directive and the requirements that national frequencies are allocated on objective, transparent, non discriminatory, proportionate criteria and as set out in Article 13 accounting separation and transparency requirements.





3. TV3 would also refer ComReg to the provisions of the Authorisation Directive which directly impact upon the granting of licences such as those the subject matter of the Consultation Process and would ask that ComReg take particular cognisance of Articles 5 and 7 in relation to the use of open, transparent and non discriminatory procedures and the need to be proportionate.

4.. TV3 notes in section 31.3 of the Consultation that specific reference is made to the ComReg General Authorisations and the guidelines surrounding these General Authorisations. TV3 would ask that particular attention be paid to the terms of General Condition 4 and 14 as set out in ComReg Document No. 03/81 in relation to "Conditions for the provision of Electronic Communication Networks and Services".

Question 1. Do you consider the length of the Licence period appropriate? If not, how long do you consider the Licence period should be? Give reasons.

TV3 Answer

TV3 believes that 10 years is an appropriate length of time for the licence.

Question 2. Do you consider the factors other than those included above should be taken into account?

TV3 Answer

No. TV3 believes that the factors outlined by ComReg, particular in relation to return on investment and facilitating a national roll-out, are appropriate.

Question 3. Do you consider the proposed Licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal?

TV3 Answer

TV3 does not believe the proposed Licence Fee to be reasonable. Broadcaster's use of spectrum should be considered a means to an end. The end in this case is the presentation and dissemination of different ideas and material to both entertain and educate and as such encourage both plurality and diversity. This is essential in any democratic state and should be zealously guarded. Broadcasters have significant and onerous obligations placed upon them by regulators (in the Irish case the BCI) and government. Commercial communication providers do not have this kind of obligation placed upon them.

The reality is that in Europe, in countries such as Sweden, France and the UK, Spectrum Fees to the extent that they currently exist on traditional analogue broadcasters are being phased out. Certain other territories such as Germany and Italy have provided direct assistance to broadcasters so that they may utilise DTT. The reality is that DTT will result in a wide array of services being made available and that as such, spectrum will no longer have the value that it has had in the past.

Question 4. Do you consider that other factors in addition to those identified should be taken into account in deciding the Licence fee? If so, what are they and give reasons.

TV3 Answer

TV3 believes that ComReg has not taken sufficient cognisance of the impact that Digital broadcasting generally is taking on terrestrial broadcasters. The EU Commission itself has made it clear that Public Services Broadcasting, to the extent that television broadcast services "...pursu[e] general interest objectives in conformity with Community Law" (Art. 5.2 Authorisation Directive), is a special case. In regard to DTT in particular, the decision of the EU in relation to the "Brandenburg" case and also the Italian "Set Top Box" case make this clear.

Article 8 of the Framework Directive and both the preamble and Article 6 in particular of the Access Directive make it clear that terrestrial broadcasting does have a specific role within the context of conditions and charges for spectrum usage generally.

Question 5. Do you agree with the principle of reviewing and indexing Licence Fees using CPI as a proxy for inflation? What alternative methods could be used in reviewing the Licence Fee?

TV3 Answer

To the extent that any fees would apply, TV3 believes that CPI would be an appropriate way to review them.

Question 6. Do you agree with the concept of roll-out obligation in relation to effective frequency spectrum use? If not, indicate an alternative concept.

TV3 Answer

TV3 would make the comment that different regulations applicable to RTE and the Commercial licences as issued via the BCI, do leave open the possibility of ComReg infringing either the general state aid

rules in relation to any form of aid (as preferential regulatory treatment can be state aid). Furthermore, as stated above in our general introduction section, there is a particular need to be non-discriminatory.



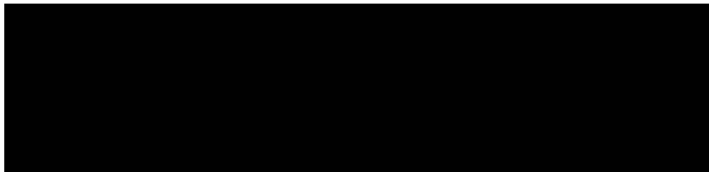
Question 7. Do you consider it appropriate in the case of Licences issued to the BCI for ComReg to set roll-out obligations aligned to those resulting from the BCI competition for multiplex contracts?

TV3 Answer



On the basis that all licensees including RTE were treated equally, such a condition would be appropriate.

Question 8. Do you see merit in seeking voluntary sanctions for non-compliance with Licence conditions, for example, failure to meet roll-out obligations? If yes, please indicate what voluntary penalties might be appropriate and give reasons for your answer.



Question 9. Do you agree that the concept of a "Telecoms Data Cap" reflects the primacy of programming services in DTT multiplexes?

TV3 Answer

TV3 believes it is essential that the primacy of programming services be retained.

Question 10. Do you agree with the structure of the Data Cap proposed? Of not, what alternatives would you suggest?

TV3 Answer

TV3 has no particular view on this matter.

Question 11. Do you consider that any other relevant conditions should apply? If so please specify and give reasons for your proposal?

TV3 Answer

TV3 believes it appropriate that the licence should make it clear that the possession of a Multiplex Licence in no way vitiates the need for a multiplex operator to ensure that that any content provided is in accordance with all appropriate legislation, particular concerning rights.

19 UPC

**UPC Ireland response to ComReg consultation:
DTT Multiplex Licence conditions 07/65**

Executive Summary

1. UPC Ireland is wholly supportive of efforts to digitise the existing FTA services and underlying FTA platform so as to facilitate analogue switchover and the establishment of a DTT platform in Ireland. Liberty Global, our parent company, through its subsidiaries, already competes with DTT in a number of other European markets and UPC Ireland in turn looks forward to competing with DTT in this country on a fair and equitable basis and in accordance with applicable competition rules.
2. As a current provider of Pay TV (including multichannel TV) in Ireland) we would remind ComReg of the finding of the Irish Competition Authority in 2005 that the offer of these services is 'vigorously competitive'. We do not understand why ComReg has concluded that in addition to facilitating the introduction of DTT, its other stated regulatory objective should be "the enhancement of competition in the delivery of digital television". As previously mentioned, we have no issue with the digitising of the existing FTA offering and the creation of a new platform for digital multichannel services. However, the Pay TV market in Ireland is competitive; no regulatory intervention is required ComReg has not any identified any factual or economic evidence supporting its conclusion that, despite the attested existence of vigorous competition, regulatory intervention is required to stimulate competition in the offer of a Pay TV (including multichannel TV) DTT offering. We therefore do not agree that this should be a "policy goal" of ComReg to "enhance competition between digital TV platforms whether cable/MMDS satellite or terrestrial".
3. We have serious concerns over the proposed conditions for the RTE and commercial licences. In particular we strongly disagree with basing the cost model for the licences on that for MMDS and the proposal that licences and the amount of spectrum being granted in order to achieve a single national 8MHz channel.
4. In particular we note that in granting four national 8 MHz channels ComReg are proposing to use 320 MHz of the most valuable national spectrum. It is clear that that the rationale for this is to pay heed to the legacy analogue network issues however there is no technical reason why DVB-T cannot be a single frequency network with one channel used for each multiplex utilising just 32MHz.
5. We would question whether adequate attention has been paid to the true opportunity cost of granting so much spectrum for this purpose. Based upon recent US benchmarks (and factoring in all relevant variables such as size of market, population etc), a single 8 MHz channel in less valuable spectrum is worth conservatively \$17m putting the entire value of the spectrum being granted at a value close to \$700m. Further if we look to ComReg's recent granting of the 3G licence to Eircom this was for 15MHz in less valuable spectrum (2100 range) at a cost of €127m implying a conservative value in excess of €2.7bn assuming the same price per MHz (which would presumably not be the case given the proposal is for spectrum that has even greater propagation than that granted under the 3G licence).
6. Allocation of a scarce and valuable resource at an undervalued rate raises State aid issues under Articles 87 to 89 of the EC Treaty. In this regard, ComReg might like to look at (and be guided by analogy with) the 1997 Communication from the European Commission on State aid elements in sales of land, the text of which is available at the following Internet location: [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997Y0710\(01\):EN:HTML](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997Y0710(01):EN:HTML).
7. In particular, UPC believes that using MMDS as a benchmark is wholly inappropriate. There are the differences in the nature of the spectrum used, the licensees and given the circumstances that prevailed MMDS licences were granted (which had consequences in

terms of the services which could be offered at that time). We would draw your attention in particular to the fact that the licence spectrum being granted is double the amount granted under the MMDS licences scheme, the MMDS spectrum is at a significantly higher frequency (2500) and allows for only one way services versus the 20% telecoms allowance provided under the current proposal. In addition, the current proposal is for national licences whereas MMDS licences are regional. Finally, the MMDS network had to be built from scratch whereas this proposal is based upon an upgrade to an existing network with commercial operators seeking transmission services on this network.

8. UPC suggests that no further steps should be taken towards the issuing of licences on the fee basis described in the Consultation Paper until the European Commission has confirmed, in a publicly available document, that the fee arrangements do not involve State aid or, that if aid is present, the aid is compatible with the common market.
9. While we can see that there may be a social and cultural value to having a DVB-T service up and running with minimal interference to existing services, the current proposal is at the detriment of future crucial wireless services, is out of synch with both the CEPT and Ofcom's "digital dividend", is an inefficient use of one of our most valuable natural resources and seriously undervalues the spectrum being granted.
10. Finally we would advocate that no licence is granted until more time is spent investigating the possibility of a single frequency network and that this is properly costed and compared to the above benchmarks and the impact of future services in order to understand the true opportunity cost of your proposal. This should be a wide consultation with industry particularly given the proposed term of these licences of 12 years, the amount of spectrum being granted and taking in the context of the ongoing NGN debates, Ireland Inc's' telecom's future and the digital dividend. We strongly believe it would be remiss of ComReg to move forward on these licence grants as currently proposed without addressing these critical points.
11. We are happy to address the specific points below for the benefit of ComReg but we re-iterate that until resolution can be found on the issues raised above in points 3&4 that no licence should be granted.

A. Comments on specific sections

Section 1

12. UPC takes issue with the comment that ComReg's policy goal in facilitating the establishment of DTT in Ireland should extend to "*enhancing competition between digital TV platforms whether cable/MMDS/satellite or terrestrial*".
13. In its review of the Pay TV market in Ireland conducted in November 2005 in the context of UPC's acquisition of NTI's Irish operations, the Irish Competition Authority found that there was "vigorous competition" between cable platform and BSkyB. (Para 114)¹.
14. This echoes the finding of ComReg itself in its own market analysis on wholesale broadcast transmission services where it concluded effective competition existed between the cable, MMDS and satellite networks and therefore no party was deemed to have SMP².
15. Since both reviews were conducted, competition in this market has become even more intense with UPC loosing a small portion of subscribers, BSkyB gaining more subscribers thus reducing the difference in market share between both platforms.

¹ The Authority's findings can be accessed at http://www.tca.ie/MergersAcquisitions/MergerNotifications/MergerNotifications.aspx?selected_item=153.

² <http://www.comreg.ie/fileupload/publications/ComReg0447.pdf>

16. Indeed this increase in competition is not limited to the Pay TV market since the introduction of FreeSat has presumably also increased competition in the offer of multichannel FTA services.
17. We question the need for ComReg to concern itself with the objective of further enhancing competition between platforms. We submit that intervention on this basis is not necessary and should not have any role in ComReg's thinking on how DTT should be licensed. Taking irrelevant factors into account may not only lead ComReg to take the wrong decision but also affect the legality of the decision.
18. ComReg's announcement that it will be guided in the DTT licensing process by the necessity to enhance competition is disturbing because ComReg has not explained, in the Consultation Paper or elsewhere, how or why it concluded that the enhancement of competition should be one of its dual regulatory objectives in the licensing of DTT. In particular, ComReg has also not explained how it has reached the conclusion that there is some type of market failure that requires its intervention. On the contrary, it seems to have reached this decision in direct contradiction of the existing studies of the market in question. ComReg has not explained why it has overlooked the Competition Authority's November 2005 finding that the inter-platform Pay TV market in Ireland is 'vigorously competitive'. The Authority, as ComReg knows, is a specialised body with particular expertise in assessing the competitiveness of markets. ComReg should have particular regard to the Authority's findings or at least, if it intends to disregard those findings, explain its reason for doing so. ComReg also seems, for reasons that it has not explained, to have changed its mind since it conducted its own market review, mentioned above. We submit that ComReg cannot lawfully take the enhancement of competition into account as an objective of its licensing policy without having explained why it believes that competition needs to be enhanced by regulatory intervention. This is especially the case where recent studies have confirmed the competitiveness of the market and the absence of market failure.

Section 3

3.1.2

19. With regards key points in the legislation, ComReg is required to operate its licensing system in accordance with the Authorisation Directive, in particular, Article 5(2). That provision imposes a duty on ComReg to ensure that *"rights of use of radio frequencies to providers of radio or television broadcast content services shall be granted through open, transparent and non-discriminatory procedures"*. It would therefore follow that ComReg must impose the same licence conditions on the RTE multiplex as it imposes on the BCI multiplexes. This would imply that RTE cannot benefit from more favourable terms than those applied to commercial multiplexes.
20. While it is true that Ireland may adopt *"specific criteria and procedures to grant rights of use of radio frequencies to providers of radio or television broadcast content services with a view to pursuing general interest objectives"* this must be done *"in conformity with Community law"*. ComReg will be aware that this provision in favour of "general interest" broadcasters is an exception to the basic rule contained in Article 5(2). Accordingly it must be interpreted narrowly and may be relied upon only where all the conditions specified are satisfied. UPC submits that ComReg must carefully consider whether the conditions for the application of the exception are satisfied in respect of any preferential treatment it accords to RTE.
21. In this regard, UPC submits that grants of rights of use that involve unauthorised State aid are not in conformity with Community law. For this reason, ComReg must satisfy itself that the statutory framework under which it is operating (namely, the Broadcasting (Amendment) Act, 2007 ("the 2007 Act")) is in all respects compliant with Community law, including Articles 87 to 89, EC Treaty, before issuing any licences pursuant to that legislation to RTE or the BCI. UPC has been advised that Section 5(1) and (2) of the 2007 Act, to the extent that it requires ComReg to grant licences to RTE in respect of the

spectrum required for two multiplexes, is a State aid measure; as far as UPC is aware, this measure has not been notified to the European Commission. Accordingly, the grant of the licences to RTE will not be in conformity with Community law and ComReg should refrain from granting those licences until Ireland has complied with the State aid rules.

22. Furthermore, UPC notes that there is no provision in Irish legislation that clearly states that RTE's proposed activity of establishing, maintaining and operating multiplexes has the character of a public service. RTE is also not limited to public service broadcasting on the multiplexes guaranteed to it and may conceivably use the multiplexes to compete directly with the BCI multiplexes. Before relying on the "general interest" exception in Article 5(2) of the Authorisation Directive, ComReg must be satisfied that RTE satisfies the conditions for its application. UPC submits that those conditions are not satisfied.

3.2

23. DVB-H and IPTV should be added to this.

3.3

24. UPC Ireland would wholly reject the notion that ComReg can consult on point 3 without any due consideration of points 1 and 2. All three items are inter-dependent and of consequence to any potential party that may be interested in pursuing the commercial multiplexes.
25. With reference to ongoing work between RTE, ComReg and the BCI, UPC we would advocate that third parties should also be included in this consultation and this takes into account the true opportunity cost of granting this spectrum on the basis of a legacy terrestrial network. To have exclusive pre-consultation discussions with RTE not only grants an unfair starting advantage to RTE and its network divisions, it attributes a greater importance to RTE over and above other parties and while we can understand the need to ensure minimum interference to legacy services, this should not be at the detriment of Irish society as a whole through the squandering of the digital dividend. In addition, pre-consultation with RTE also infers that it, ComReg, more or less assumes that RTE NL will be the default platform provider, not only of its own multiplex but also those of the commercial multiplexes. All this despite neither the BCI nor ComReg will have any oversight of RTE or RTE NL when its own DTT multiplex is up and running.

B. Response to specific questions on DTT multiplex licence conditions:

General comments:

26. Any decision on conditions for commercial licences needs to be linked to financial outlay incurred by licence holders. For example a licensee that invests in a new network build should have more favourable terms than a licensee who merely offers services over a third party network, the latter not incurring the same financial risk, cost, or necessary return on investment as the former.
27. In addition, due consideration should also be given to issues such as proven track record in the establishment and management of multiplexes and proven track record of the same (or similar (competing) services). We would therefore advocate for a graduated approach in conditions applied depending on the above and this approach should apply to all terms listed in Section 4.
28. RTE too needs to be factored into this scaled approach. As owner of a network that was originally built with state funding, presumably it will (continue to) have to source funding for the upgrade of its network to be in a position to carry and offer DTT services. As ComReg is aware, UPC has in the past engaged with both the State and RTE to determine the cost and source of funding for such an upgrade and is no closer to obtaining further clarity on this. Without prejudice to any future action on the same, UPC is of the opinion that funding of RTE NL needs to be factored in terms applied to the RTE multiplex licence.

29. Other conditions:

- o Where RTE NL offers carriage to third party multiplexes, this too needs to be factored in RTE's licence conditions. To the extent it is entirely plausible RTE NL will have SMP in the digital transmission network (in a similar fashion to current SMP in the analogue domain), ComReg will need to ensure regulatory oversight and transparency in carriage fees applied to third parties.
- o No licensee should benefit from subsidised transmission.

Q. 1. Do you consider that the length of the licence period is appropriate? If not, how long do you consider the licence period should be for? Please give reasons for your proposal?

Q. 2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what they are and give the reasons for your proposal?

30. Further to the general comments above, where a party has invested in building a DTT platform, duration of 10-12 years would seem to suffice. Those that do not invest in a network build should have a shorter licence period of four years.

31. Other factors that could be considered are whether issues such as solvency, change of ownership would affect licence duration. In addition, due consideration in the competition process (and licence duration) should be given where there is a proven track record in the provision of audiovisual services.

Q. 3. Do you consider the proposed licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal?

Q. 4. Do you consider that other factors, in addition to the range identified, should be taken in to account in deciding the licence fees? If so, indicate what they are and give the reasons for your proposal?

Q. 5. Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation? What alternative methods could be used in reviewing the licence fee?

32. Please see points 3-7 as outlined in the Executive Summary section.

33. UPC takes issue with ComReg's position that the licence fee should be modelled on that used for MMDS licences given the amount of spectrum 320MHz being used in order to allocate four national 8MHz multiplexes.

34. As a holder of MMDS licences, both Ntl and chorus would have originally incurred significant costs in building the underlying network before being in a position to offer services as granted under the licence.

35. ComReg are now proposing to grant multiplex licences to RTE and third parties that are based upon existing legacy infrastructure resulting in the squandering of national spectrum and the grant of 10X the actual amount of spectrum required should a new efficient architecture be adopted. In over- granting the amount of spectrum required ComReg is allowing the multiplex operators to avoid the cost of a new network build and thus placing these operators in a stronger competitive position without incurring the same financial costs (i.e. a new efficient single frequency network build) as the existing multichannel operators who compete in this "vigorously" competitive market.

36. Notwithstanding this, the spectrum reserved for DTT is a much more valuable resource than that currently used by MMDS. Much lower down in the frequency range it is vastly superior to MMDS given its lower propagation.

37. To equate licence fees for the DTT commercial multiplexes to those of MMDS is therefore not only misguided but is indirectly "state support" of competition in an existing competitive market and wholly ignores the need to offset the value of a national resource with the societal benefits that can be gained from the digital dividend.

Q. 6. Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal?

Q. 7. Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

Q. 8. Do you see merit in seeking voluntary sanctions for non compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer?

38. Specific to Question 6 : We agree with there being roll out obligations in place in order to maximise the use of the spectrum granted.

39. Specific to Question 7 : Yes

40. Specific to Question 8 : Pre-defined penalties including reduction in capacity, term or financial penalties.

41. Roll out obligations for RTE should be linked to the continued offer of existing FTA analogue services and any other services that fulfil a clearly defined public service remit at penetration levels equivalent already achieved for analogue today.

42. Finally and to reiterate arguments previously made (points 2, 11-17), competition between existing digital TV platforms is already more than effect, therefore we do not see any cause for concern on ComReg's part on the need to ensure competition between these platforms for the end consumer.

Q. 9. Do you agree that the concept of a "telecoms data" cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

Q. 10. Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal?

43. Further to comments already made under Questions 3, 4, 5 and points 3-10 under the Executive Summary, UPC wholly rejects the notion that the RTE or commercial multiplexes should be allowed to offer two way services.

[REDACTED], this is currently prohibited under the terms of our licences. We do not accept that services that will directly compete with ours on much more valuable frequency range, potentially available on a much lower cost base, will be allowed offer two way services.

45. Without prejudice to previous comments on the need for DTT spectrum to be priced at fair market value, if ComReg is to pursue with the provision of allowing DTT licensees offer two-way services, we would request the immediate grant of a similar concession on our MMDS licences so as to ensure we are not unfairly disadvantaged.

Submissions Received, Licensing Digital Terrestrial Television

Q. 11. Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal?

46. We have no further comment to those already outlined above.

20 Vodafone

Vodafone Response – ComReg 07/65

Licensing Digital Terrestrial Television

Introduction

Vodafone welcomes the opportunity to respond to this ComReg consultation document on licensing Digital Terrestrial Television (DTT). The spectrum under 1GHz for which DTT multiplex licences are to be issued offers potentially enormous benefits to consumers and to the Irish economy. The favourable propagation characteristics of this spectrum and the level of bandwidth available make spectrum in these bands an optimum frequency range not only for DTT, but also for a range of other services such as mobile or wireless broadband and mobile television, among others. The switch-off of analogue television following the completion of the transition to full digital transmission of terrestrial television broadcast services will lead to the release of a large amount of this important spectrum (The Digital Dividend) for the potential provision of a range of services more efficiently and effectively than would be possible in other spectrum bands. As outlined further in this consultation response, Vodafone considers that the licensing and regulatory regime for DTT broadcasting services must be designed so as to accommodate the potential designation of common spectrum bands on a pan-European or international basis for the delivery of other services of major economic and social value.

Vodafone's views on other issues, for example in relation to mobile reception of DTT, and the areas that are the subject of ComReg's consultation questions (licence duration, fees, and roll-out targets), are set out fully below.

Accommodation of Services other than DTT

The Digital Dividend represents an exceptional opportunity for regulators to facilitate innovation and the delivery of new and advanced services on harmonised spectrum across Europe or internationally. Vodafone believes that ComReg must, in determining the licence terms and allocation of spectrum channels for DTT, take account of the work of CEPT and other standards bodies. In particular ComReg must seek to ensure that its licensing and regulatory approach to DTT is consistent with the probable future designation of harmonised spectrum sub-bands within the UHF band for the delivery of other services such as mobile applications.

To ensure that conflicts do not arise between the provision of new services delivered using pan-European harmonised spectrum and the provision of DTT services by licensees, Vodafone considers that it is necessary that it be a condition of DTT licences awarded that licensees would have to alter the frequency channels on which they operate, if notified to do so by ComReg, to the extent that this would be required to accommodate the delivery of other services using such harmonised frequency channels as may be designated going forward. To minimise any costs associated with a possible adjustment of the frequency channels used by DTT licence holders it may be beneficial to set out in the licence a reasonable notice period to be provided by ComReg to DTT licensees for any required future adjustment of their spectrum assignment, together with an undertaking by the regulator that in this eventuality all reasonable measures would be taken to make satisfactory alternative spectrum arrangements for the affected parties.

Proposed Mobile Reception of DTT Multiplexes

In section 3.1.1 of the consultation document, ComReg states that mobile reception of DTT multiplexes may support mobile TV services and applications targeted at small handheld or similar mobile devices. ComReg also indicates that it intends to licence these services as provided for in the legislation and that an appropriate set of licence and technical conditions to specifically support mobile reception of DTT multiplexes will be developed before mobile TV is licensed.

Vodafone acknowledges that it is technically possible for mobile handheld devices to receive DTT, however the provision of mobile TV services and applications using DTT multiplexes would be notably inferior to the provision of these services using alternative technology (eg. DVB-H etc.) in terms of the power consumption required of the handset, with a resulting impact on battery life. ComReg must consult further on any proposal to issue licences for the purpose of providing mobile TV services to handheld devices using DTT multiplexes and must set out its detailed rationale for such a proposal.

It is not clear whether, on foot of the issuance of licences for operators to provide DTT broadcasting services to handheld devices, a TV licence would be required for individual hand held mobile devices capable of reception of DTT multiplexes. Vodafone contends that a requirement for handheld devices to obtain a TV licence where they are capable of receiving content and services from DTT multiplexes is neither desirable nor necessary. It is our view that where the provision of mobile TV services and applications to handheld devices using DTT multiplexes was licensed, the viability of the provision of these services would likely be fatally undermined from the outset by any obligation to obtain a TV licence for their use. Aside from the practical administrative complications that would arise, the prospect of a large up-front licence fee for at least some prospective users where their mobile phone was capable of reception of DTT multiplexes would not only choke off any demand for such emerging services but could also undermine demand for existing mobile communications services.

Given the relatively small size of the Irish market a large up-front TV licence fee is much more likely to render the provision of mobile TV services using DTT multiplexes unviable. The service penetration and usage of such services would have to reach a much higher level to achieve break even in Ireland than other larger national markets given the proportionately much higher costs of infrastructure roll-out here.

Response to Consultation Questions

Q. 1. Do you consider that the length of the licence period is appropriate? If not, how long do you consider the licence period should be for? Please give reasons for your proposal.

Vodafone believes that the proposed 10 to 12 year duration of the DTT multiplex licences is appropriate as it should provide sufficient time for the efficient licensee to complete network rollout, recover the costs of its infrastructure investment, and earn an appropriate rate of return on that investment. Licensees would also have regulatory certainty around their ability to provide DTT broadcasting services to customers over an extended time period.

Q. 2. Do you consider that factors other than those included above should be taken into account in deciding the licence duration? If so, indicate what are they and give the reasons for your proposal.

Q. 3. Do you consider the proposed licence fee to be reasonable? If not, indicate an alternative fee and give the reasons for your proposal.

Vodafone agrees that it is appropriate that the annual fees for DTT multiplex licences should be broadly in line with the fee for radio spectrum licensed for MMDS given that both MMDS and DTT will be competing platforms for the provision of digital TV. It is important that licence fees for spectrum for competing platforms in the provision of the same or comparable services should not be set at very different levels as this would risk distorting competition by conferring an artificial cost advantage on operators providing services over one platform at the expense of competitors offering services on other platforms. Some variation between the licence fees charged for spectrum use by different platforms is justified where technologies differ in terms of the number of frequency channels utilised and the efficiency with which spectrum is used.

Vodafone does not have sufficient information to determine whether the level of the proposed licence fee is reasonable. While ComReg presents the formula underlying the proposed initial annual licence fee of €114,000 per multiplex, no detailed rationale for the specific base charge of €2,375 per MHz (the €1,905 per MHz fee set for MMDS adjusted for a proxy of CPI change since 2003) is provided. It is possible that the variables underlying the determination of the level of the per MHz fee for MMDS in 2003, which is not presented, may have changed so as to require a significant amendment to the fee.

Q. 4. Do you consider that other factors, in addition to the range identified, should be taken into account in deciding the licence fees? If so, indicate what they are and give the reasons for your proposal.

Vodafone considers that ComReg has identified all the significant factors that should be taken into account in deciding the level and structure of DTT licence fees.

Q. 5. Do you agree with the principle of reviewing and indexing the licence fee using CPI as a proxy for inflation? What alternative methods could be used in reviewing the licence fee?

Vodafone agrees with the principle of reviewing the licence fee periodically, however ComReg should provide some degree of regulatory certainty around the licence fees that will be charged over the duration of the licence period. It is important that the licence fees are set appropriately at the outset and that the underlying methodology for calculation of the fee is not fundamentally changed in the course of the licence. There should be a high degree of transparency for licensees in terms of how changes in the various factors taken into account by ComReg in setting the licence fee would change its level and structure. Reasonable notice should also be given to license holders of any proposed licence fee changes.

As the opportunity cost of the spectrum to be used by DTT licensees is likely to rise over time in line with changes in prices and economic growth, among other factors, it is appropriate that the DTT licence fee should increase annually. Indexing the licence fee to the CPI is a reasonable approach to use in this regard.

Q. 6. Do you agree with the concept of rollout obligations in relation to effective frequency spectrum use? If not, indicate an alternative concept and give the reasons for your proposal.

Vodafone considers that spectrum licence requirements to meet rollout targets are generally appropriate in the interests of effective radio spectrum use. Rollout targets are particularly appropriate where undertakings obtain their licenses on the basis of licence allocation mechanisms that are not price or market based, or where licensees are not primarily concerned with commercial objectives (eg. public or not-for-profit organisations). In these situations the incentive to take account of the opportunity cost of delaying rollout in the absence of explicit rollout targets may be weak.

Q. 7. Do you consider it is appropriate in the case of licences issued to the BCI, for ComReg to set roll out obligations aligned to those resulting from the BCI competition for multiplex contracts?

It appears that the roll-out obligations resulting from the BCI competition for multiplex contracts may be to a significant degree a function of the level of demand for obtaining the available licences. If demand for DTT licences exceeds the available supply then it is more likely that the BCI will be able to negotiate more comprehensive network coverage and roll-out obligations than if the number of licence applicants is equal to, or below, the number of licences being offered. If it is anticipated that the demand for DTT licences to be awarded by the BCI is likely to be high then it would be appropriate that the roll-out obligations set by ComReg be aligned with those resulting from the BCI competition. Alternatively, if it is considered that there is a significant probability that demand for licences will not be strong then it may be appropriate for ComReg to set certain minimum roll-out obligations as a condition of DTT licences.

Q. 8. Do you see merit in seeking voluntary sanctions for non compliance with licence conditions for example, failure to meet roll out obligations set down in the licence? If yes, please indicate what sort of voluntary penalties might be appropriate and give reasons for your answer.

Alternative sanctions for non-compliance with licence conditions may be appropriate to supplement the standard range of sanctions set out in the licence. Alternative sanctions could include monetary fines or penalties agreed with ComReg and/or the BCI. In situations where failure to comply with licence conditions causes harm to other parties, for example where failure to comply with technical conditions causes significant interference to other spectrum users, the licensee in breach of its licence could be required to compensate those adversely affected commensurate with the harm caused.

The availability of alternative sanctions should be an important influence on the overall decision regarding the appropriate penalties for specific breaches of licence conditions. At ComReg's

discretion, alternative sanctions could in particular cases reduce the role of, or fully substitute for, standard sanctions such as licence suspension or licence duration reduction. Vodafone notes that the standard sanctions would not only be disproportionate as a response to minor breaches of licence conditions, but in the case of sanctions such as licence termination or reduction in the geographical area served, may adversely impact consumers using services provided by the non-compliant licensee. Vodafone believes that alternative sanctions should be considered to complement existing penalties that ComReg can impose.

Q. 9. Do you agree that the concept of a “telecoms data” cap reflects the primacy of programming services, both television and radio, in DTT multiplexes?

The concept of a telecoms data cap reflects the policy of ensuring the primacy of programming services in DTT multiplexes. The practicability of monitoring and enforcing a “telecoms data cap” is however questionable given that it is not clear how data as envisaged here is defined in a world of time-based multimedia.

Q. 10. Do you agree with the structure of the data cap as proposed? If not, what structure would be appropriate and give the reasons for your proposal?

As the reasoning underlying the specific level of the data cap proposed (20% of multiplex capacity and a cumulative maximum of 15% of capacity) is not explicitly set out in the consultation document, Vodafone has insufficient basis to determine whether or not it is appropriate. While it is clear that the data cap is driven by a policy to ensure the primacy of digital broadcasting service delivery via the DTT licences to be issued, the exact proportion of the capacity of each multiplex that can be used to provide non-broadcast services should not be determined arbitrarily.

Q. 11. Do you consider that any other relevant conditions should apply? If so, please specify and give the reasons for your proposal?

Vodafone agrees with ComReg that the conditions proposed in paragraphs 4.6.3 and 4.6.4, allowing variation or amendment of the licence and in respect of non-ionising radiation emissions, should be included in any DTT licences that are issued. The condition in section 4.6.3 of the consultation document allowing ComReg to amend or vary the terms of the licence following public consultation is particularly important in terms of providing flexibility, for example in addressing any future need to accommodate the provision of services other than DTT using pan-European harmonised spectrum in the UHF band.

As set out earlier in this consultation submission, Vodafone considers that there must also be an explicit condition included in DTT licences awarded that licensees would have to alter the frequency channels on which they operate, if notified to do so by ComReg, to the extent that this would be required to accommodate the delivery of other services using such harmonised frequency channels as may be designated going forward. Vodafone considers that the inclusion of this condition in DTT licences will ensure that the licensing regime for DTT broadcasting services will be designed so as to accommodate the potential future designation of common spectrum

bands on a pan-European or international basis for the delivery of other services of major economic and social value such as mobile broadband.