



## Response to Consultation

### **Award of available UHF spectrum in the urban areas of Cork, Dublin, Galway, Limerick and Waterford**

#### **Mobile TV Wireless Telegraphy Licence Award**

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## **1 Foreword**

The Commission for Communications Regulation (ComReg) is pleased to set out its response to the consultation on the potential award, in the urban areas of Cork, Dublin, Galway, Limerick and Waterford, of a licence to use 8 MHz of spectrum in ultra high frequency (UHF) band (ComReg doc. no. 08/44, “the Consultation”). The Consultation set out two options for the use of this spectrum; the first being a licence for a Mobile TV service and the second being a licence on a service and technology neutral basis.

The majority of respondents to the Consultation favoured the Mobile TV licensing option. Mobile TV is an innovative new service that combines broadcasting and telecommunications products and services, and should be given the opportunity to develop in the interest of providing consumers with access to this new and converged service.

It is also important that the licensing regime promotes effective competition for Mobile TV services in Ireland for the benefit of consumers. This is particularly so given the current limited spectrum availability and the need to ensure that exclusive rights of use of radio frequencies for the provision of electronic communications services are not granted. While the paucity of radio spectrum available for this purpose might ultimately be addressed with the advent of the “Digital Dividend”, ComReg considers that effective competition will ensure that the maximum strategic, economic and social benefits are derived from the use of this single spectrum channel. In particular, effective competition will provide consumers with greater choices and lower prices in products and services. In order to achieve this ComReg considers that wholesale Mobile TV service commitments ought to be an element of the Wireless Telegraphy licence granted and will look to encourage prospective licensees to offer such commitments in their applications.

ComReg is now pleased to announce its intention to hold a comparative evaluation process for the award of a Mobile TV licence. It is envisaged that the evaluation criteria would include the nature and level of offered commitments relating to the provision of wholesale service on reasonable, transparent and non-discriminatory terms, and the speed by which applicants propose to rollout the Mobile TV service. Guidelines and other material to assist stakeholders to prepare for the comparative evaluation process will be published by ComReg in due course with an opportunity for stakeholders to consider and comment upon these matters.

The approach taken will help achieve the necessary balance between the needs of the electronic communications sector for access to suitable spectrum and the needs of consumers to have effective competition in the provision of communications products and services.

**Alex Chisholm**  
**Commissioner**

## 2 Executive Summary

This document sets out ComReg's response to its consultation on the award of available ultra high frequency (UHF) spectrum in the urban areas of Cork, Dublin, Galway, Limerick and Waterford (ComReg doc. No 08/44) ("the Consultation"). Although this response has been delayed, ComReg is satisfied that the consultation issues remain pertinent to this potential licence award process.

ComReg presented two licensing options for this radio spectrum in the Consultation; the first a Wireless Telegraphy licence for a Mobile TV service and the other a Wireless Telegraphy licence on a service and technology neutral basis. Based on responses to the Consultation, the technologies and/or applications which could potentially use the 8MHz of UHF spectrum would seem limited, with Mobile TV being viewed as the most likely type of service to be deployed using the spectrum. Accordingly, ComReg intends to adopt the Mobile TV licensing option.

Having given due consideration to the eleven consultation responses received on the potential award process, ComReg also intends to hold a comparative evaluation process to award the Mobile TV licence.

ComReg has also carefully considered respondents' views on potential Mobile TV licence conditions and believes that the following licence conditions should apply:

- licence duration of 10 years. For the avoidance of doubt the licensee's right to use the spectrum would expire at the end of this period;
- rollout obligations which would require access for end-users to the Mobile TV service in each of the five urban areas within 24 months of licence award;
- sanctions for non-compliance with licence obligations, including: term reduction, reduction of the geographical coverage area; and/or potential for re-allocation of any spectrum thus recovered;
- technical conditions permitting mobile reception of multiplexes;
- an annual licence fee of €340,000 indexed to increases in the consumer price index and subject to a review on the fifth anniversary of the commencement date of the licence, in light of any technological and/or market developments; and
- incorporation of commitments offered by the applicant in the course of the proposed comparative evaluation process.

Due to the limited availability of suitable spectrum at present, it is possible for only one Mobile TV network to be established. ComReg recognises that the prospect of a single licence for Mobile TV presents potential competition challenges which need to be addressed. While this might ultimately be addressed with the advent of the Digital Dividend, ComReg considers that it is important to provide the earliest opportunity for the market to use this spectrum for Mobile TV as it represents an innovative communications service for Irish consumers.

In these circumstances, and having careful regard to respondents' views to the Consultation, ComReg's proposal is to identify four primary aspects of wholesale

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Mobile TV service which it currently considers to be critical to promoting effective competition in Mobile TV service provision. These comprise commitments to provide the following to Other Mobile TV Service Providers (OMTSPs) in a timely, reasonable, non-discriminatory and transparent manner:

- access to common programme content for re-selling purposes by third parties (including access, for example, to subscriber authorisation and subscriber management services<sup>1</sup>);
- differentiation of the Mobile TV service through access to multiplex capacity for each of up to four OMTSPs to provide a programme content channel for distribution to their respective subscribers. Such differentiation might also include differentiation of electronic programme guides (for example, with the use of graphics provided in suitable format by OMTSPs);
- all information reasonably necessary to enable OMTSPs to obtain and maintain access and differentiation in a timely, reasonable and non-discriminatory manner; and
- recourse to negotiate and resolve disputes in a timely, reasonable and non-discriminatory manner.

As part of the proposed comparative evaluation process, ComReg also intends to consider commitments put forward by applicants regarding: “speed to market” proposals; voluntary “performance bonds”, in relation to commitments offered; and a “spectrum access price” which would be payable to ComReg.

It is also envisaged that a “marking scheme” would apply to the evaluation criteria, which would place more weight on some criteria over others. In particular, it is expected that commitments aimed at promoting effective competition for Mobile TV services will be a central focus.

ComReg will ensure that evaluation criteria adopted by it in the evaluation process will be objectively justified, non-discriminatory, proportionate and transparent.

ComReg intends to issue guidelines setting out in detail the procedure of the comparative evaluation process and the associated marking scheme and proposes to allow a period for stakeholders to reflect and comment on this material prior to the start of the comparative evaluation process, which is intended to be held in Q4/2009.

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<sup>1</sup> Subscriber authorisation services means to actuate or control remotely the decryption of the Mobile TV Service or the decryption of initial broadcast of messages connected with the service; Subscriber management services means the preparation and/or supply to subscribers of essential components or the preparation from subscribers orders of instruction for authorisation signals for transmission to decrypt the Mobile TV Service, or both.

### **3 Introduction**

#### **3.1 Background**

This document is ComReg's response on the consultation document entitled "*Award of available UHF spectrum in the urban areas of Cork, Dublin, Galway, Limerick and Waterford and related licensing options*" (ComReg doc. no. 08/44, "the Consultation"). The Consultation relates to two options for the award of a single licence to use a single 8MHz bandwidth channel in the UHF spectrum band, between 470 to 750MHz in the five main urban areas.

The Consultation discussed two alternative licensing options for the spectrum. One of the options discussed was a licence for a Mobile TV service and the other was a licence on a service and technology neutral basis.

The Consultation also set out the ComReg's proposal to award the licence using an auction mechanism.

Since the Consultation closed, the European Commission (EC) published guidelines on authorisation best practices for mobile television ("the EC guidelines").<sup>2</sup> Section 3.3 reviews the best practices set out in the EC guidelines.

This document sets out the positions arrived at by ComReg after consideration of the contributions made by the respondents and in light of the EC guidelines.

#### **3.2 List of Respondents**

Eleven responses were received by ComReg by the 30 July 2008 deadline and these respondents are listed below (in alphabetical order):

1. Arqiva;
2. Hutchison 3G Ireland Ltd;
3. Irdeto;
4. Meteor Mobile Communications Ltd;
5. O2 (Telefonica O2 Ireland);
6. Qualcomm;
7. Radio Telefís Éireann (RTÉ);
8. Sky (BSkyB Ltd);
9. Smart Telecoms Holding Ltd;
10. TG 4 (Telefís na Gaeilge); and
11. Vodafone.

ComReg is grateful to these respondents for their views.

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<sup>2</sup> COM (2008) 845 "Legal Framework for Mobile TV Networks and Services: Best Practice for Authorisation - The EU Model" COMMUNICATION FROM THE COMMUNICATION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE OF THE REGIONS.

### **3.3 EC Communication No. 845 (2008): Legal Framework for Mobile TV Networks and Services, Best Practice for Authorisation – The EU Model**

The EC Guidelines reviews three different authorisation approaches<sup>3</sup> used by Member States which have launched Mobile TV services and proposes the following eleven “best practice” guidelines:

1. Authorisation procedures should be open to all market players in order to ensure a level playing field for different actors in the mobile TV value chain;
2. Public consultation of citizens and all interested parties should be organised systematically;
3. Regular reporting by public authorities on market developments should take place, together with appropriate proposals to adapt existing rules;
4. The relationship between e-communications, spectrum and content rules should be clearly defined, in order to promote a clear and transparent authorisation regime;
5. The national regime for mobile TV should ensure a “one-stop-shop” approach or at least to the minimum number of public players in decisions to grant mobile TV authorisations. In Member States with a sub-national authorisation level, a similar or coordinated procedure for all federal/regional bodies should be put in place. “One-stop-shopping” is of particular importance when multiple clearance is required;
6. A clear schedule for the award procedure should be announced no later than the start of the commercial trials of mobile TV services;
7. Objective, transparent and non-discriminatory award criteria should be applied, in conformity with Community law. Award procedures should encourage a collaborative approach between the players, subject to compliance with competition rules. Requirements for quality of service, including indoor coverage, and optimal use of the spectrum should be part of the award conditions;
8. The possibility of withdrawing spectrum awarded for mobile TV that is not put to use within a reasonable time period should be included in the award conditions;
9. A discussion on “must-carry” rules for mobile TV services should be organised in every Member State and at EU level;
10. Network infrastructure sharing for mobile TV services should be encouraged, to the extent permitted by competition rules; and

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<sup>3</sup> The first approach in the EC Communication is given as the extended digital terrestrial television (DTT) rules approach. This was used in the UK and Italy to launch Mobile TV. Its advantages include swiftness and simplicity however, this is countered by the issue of DTT rules becoming insufficient and/or inadequate after an initial period. The second approach is given as the plain wholesale approach. This was used in Finland to launch Mobile TV. However, its main drawback is the potential for deadlocks to arise between the wholesaler and other key players in the value chain, e.g. content providers and thus delay the launch of services to consumers. The third and final approach is given as the integrated approach. This was used in Austria to launch Mobile TV. In this approach all players in the mobile TV value chain achieve agreement in advance of the licence award, thereby minimising the risk of deadlocks between market players.

11. Aspects related to interoperability and roaming for mobile TV should be given due consideration in light of the wireless nature of services.

### 3.4 Regulatory framework and legal basis

The Broadcasting Act 2009 (“the 2009 Act”)<sup>4</sup> sets out the legislative framework for future licensing of digital broadcasting services, in particular digital terrestrial television (DTT) services, and provides a mechanism for switch-off of analogue terrestrial television services in Ireland (ASO).

The 2009 Act provides for the licensing of two national digital multiplexes to Radio Telefís Éireann (RTÉ) and a minimum of four to the Broadcasting Commission of Ireland (BCI, soon to be renamed the Broadcasting Authority of Ireland) for DTT. A licence in respect of one digital multiplex was issued to RTÉ in December 2007. It is intended, if requested by the BCI, that ComReg will issue three national multiplex licences to the BCI prior to ASO. The benefits and obligations of these licences will be passed on to third parties in multiplex contracts offered by the BCI.

Additionally, and of particular importance in relation to this consultation, ComReg is empowered under the 2009 Act to issue, under the Wireless Telegraphy Acts, 1926 to 2009, multiplex licences, other than the national licences specified for RTÉ and BCI identified above, following consultation with the Minister for Communications, Energy and Natural Resources and the BCI, subject to such conditions as the BCI may consider necessary to impose in accordance with the 2009 Act.

It is on this basis that ComReg proposes to make available the single 8MHz channel, for which a single multiplex licence may be issued, using the limited spectrum which has been identified, between 470 MHz to 750 MHz, in each of the urban areas of Cork, Dublin, Galway, Limerick and Waterford. The rollout of mobile TV services to other parts of the country is one of the opportunities that may arise from spectrum released at ASO. Any such licences, however, would be awarded by means of a separate competition.

This consultation is also in line with the European Regulatory Framework for Electronic Communications<sup>5</sup>, introduced in Ireland in 2003, and in particular ensures that ComReg fulfils the important objectives set out in this framework, including:

- ensuring that the allocation and assignment of radio frequencies is based on objective, transparent, non-discriminatory and proportionate criteria;
- ensuring open, transparent and non-discriminatory procedures for the granting of licences under the Wireless Telegraphy Acts 1926 to 2009; and

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<sup>4</sup> The Broadcasting Act 2009 No. 18 of 2009, was signed by the President on 15 July 2009.

<sup>5</sup> European Communities (ELECTRONIC COMMUNICATIONS NETWORKS AND SERVICES)(FRAMEWORK) Regulations 2003 (S.I. No. 307 of 2003) (“Framework Regulations”); and, European Communities (ELECTRONIC COMMUNICATIONS NETWORKS AND SERVICES)(AUTHORISATION) Regulations 2003 (S.I. No. 306 of 2003) (“Authorisation Regulations”).



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- in the context of the proposed issue of a limited number of licences for a particular class or description of apparatus for wireless telegraphy, giving due weight to the need to maximise benefits for users and to facilitate the development of competition.

## **4 Consultation Issue: The Type of Licence**

### **4.1 The type of licence for award**

ComReg consulted on the issue of the type of licence to be awarded as follows:

#### *4.1.1 Consultation Questions*

- Q. 1. Do you agree with ComReg’s proposal that its auction should be exclusively for a Mobile TV Wireless Telegraphy Licence using the available spectrum? If not, please support your answer with reference, in particular, to the considerations given in Section 4.5 of this document and any other supporting evidence.**
- Q. 2. Do you consider there to be significant interest in the market for the available 8 MHz of spectrum on a technology and service neutral basis, having regard to the issues discussed in Section 4.5.3? If so, what services and applications do you consider could avail of this spectrum?**

Nine responses were received on this issue. Six of these respondents were in favour of the Mobile TV Wireless Telegraphy Licence as the preferred type of licence. In particular, these respondents highlighted the following points:

- that there is apparent demand for a Mobile TV Service and that a licence on a service and technology neutral basis might not meet such a demand. Concern was expressed that a licence on a service and technology neutral basis could potentially be used to provide a Mobile TV Service in an anti-competitive fashion;
- consumer trials indicated that there is a business case for a Mobile TV Service in this band. However, the DVB-H technology need not be mandated as it is unclear which of the alternative technologies would be the most commercially successful across Europe or the best suited for Ireland.
- the justifications given for a Mobile TV Licence award are consistent with the EC’s initiatives to strengthen the internal market for Mobile TV, ComReg’s objectives to promote choice for consumers, effective frequency management and competition given the inclusion of wholesale obligations;
- a Mobile TV Service is compatible with the current allocation of bands IV and V and for existing and future planned DTT services;
- the award should be for a Mobile TV licence once the proposed use of “available spectrum” in the UHF band can be guaranteed by ComReg not to interfere with planned national DVB-T networks. Furthermore, a licence on a service and technology neutral basis would not contain specific rollout or wholesale obligations, issues ComReg highlighted as important in this award in the context of the limited spectrum availability; and

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- the modest amount of spectrum available and the fact that the proposal does not include a paired spectrum option limits the potential for services other than Mobile TV. Allocation of spectrum on a technology and service neutral basis, subject to harmonisation and interference protection requirements, would be preferred in normal circumstances, however, an exception should be made for this licence award. Alternatively, a modification to the proposed licence on a service and technology neutral basis could be made and a binding statement of use applied such that conditions requiring the provision of wholesale access on commercial terms can be made.

Three respondents were in favour of a licence on a service and technology neutral basis. In particular, these respondents highlighted the following considerations:

- there are many different spectrum bands which can be used to deliver Mobile TV. In addition, there is no long term proven business case for Mobile TV. Many technologies can operate in smaller than 8MHz bandwidths e.g. in 1.25MHz bandwidths. A Mobile TV Wireless Telegraphy licensing option would be likely to bias the spectrum to mobile operators as opposed to the general market. While it is considered there is sufficient interest in spectrum below 1GHz it is difficult to say what applications could be supported at this time;
- although there is optimism for Mobile TV Services, a licence on a service and technology neutral basis would be more appropriate. In the case where the licence would be used to provide a Mobile TV Service the operator should be placed in a situation where the applicable regulatory conditions do not preclude it from innovating freely with regard to the distribution relationships for the service, the nature of the service, the technology standard deployed, content formats and nature of the content offered. The market should be allowed to decide the nature of the service and how the opportunity represented by Mobile TV should best be operated; and
- a licence on a service and technology neutral basis would provide flexibility regarding the business model used. It would still ensure sufficient technical certainty and interference protection based on the Geneva 2006 Plan. A licence on a service and technology neutral basis would also be fully aligned with EC proposals to achieve more flexible and efficient usage of the spectrum via market-based mechanisms.

### *4.1.2 ComReg's position*

In general, respondents believe that there is potential demand for a Mobile TV service. While market players may have access to more information in relation to future new products and services which require access to spectrum, ComReg notes that no other clear potential uses were suggested by respondents. Some respondents indicated that Mobile TV would support innovation and new uses of spectrum in the future.

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In addition, ComReg considers that a Mobile TV licensing option would be consistent with the EC initiative to drive innovation, grow mobile subscriptions and that it would complement third generation (3G) technology.<sup>6</sup>

Accordingly, ComReg intends to make the spectrum available for a Mobile TV service. The following sections deal with the consultation issues relating to that licensing option.

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<sup>6</sup> "Digital TV, Mobile TV: Let's push for open technologies in Europe and worldwide" key note address by Viviane Reding Member of the European Commission responsible for Information Society and Media at DVB World Conference March 2008.

## **5 Consultation Issue: Mobile TV Wireless Telegraphy Licence conditions**

ComReg considered that the following licence conditions could apply to a Mobile TV Licence:

1. licence duration;
2. rollout obligations;
3. wholesale Mobile TV commitments;
4. provision of information;
5. sanctions for non-compliance with licence conditions;
6. other authorisations and responsibilities;
7. variation of licence;
8. non-ionising radiation;
9. resolution of interference;
10. technical conditions; and
11. licence fees.

### **5.1 Licence duration**

On the matter of licence duration for a Mobile TV licence, ComReg consulted as follows:

#### *5.1.1 Consultation Questions*

**Q. 3. Do you consider that the proposed length of the Mobile TV Wireless Telegraphy Licence is appropriate? If not, how long should the licence period be for? Please give reasons for your proposal.**

**Q. 4. Do you consider that other factors might also need to be considered in determining the length of the licence?**

#### *5.1.2 Views of Respondents*

Nine responses were received on this issue.

Three respondents advocated a licence duration longer than ComReg's proposal. Specifically one suggested that if the licence duration were to be set at 10 years, a further 10 year renewal period should be applied. Another respondent suggested that a similar licence duration model be applied to this licence as to that which is applied to similar UK spectrum licences. This respondent proposed that there should be no hard end period to the licence and that a minimum licence duration of 10 years could be applied subject to a rolling term and reasonable notice period. The third respondent proposed that the licence duration be 15 years, as ComReg's 10 year proposal would not allow sufficient time for a return on investment. It also contended that wholesale obligations would mitigate concerns regarding retail competition thereby removing the potential need for a shorter licence duration.

Two other respondents advocated licence duration similar to that proposed by ComReg but with some particular qualifications. One respondent suggested that

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licence duration of 10 years would be agreeable but that some grace period (up to 12 months) should be applied to allow for initial network build and planning. Similarly, the second respondent considered that, at a minimum, the licence duration should be 10 years, and that the 10 year period should be measured from the completion of full network roll-out rather than the licence award. It also considered that a 15 year licence duration might be offered or that a provision for renewal for a second 10 year term be incorporated into the licence.

Four respondents agreed in principle with ComReg's proposal. Three respondents provided no additional comments in relation to ComReg's proposal and the fourth considered that, if the terms and conditions of the licence were to allow spectrum trading, a long term licence beyond 10 years may be appropriate. It also considered that if the licence requirements were overly specific then a shorter licence duration should be considered.

Respondents, in addition to these issues, suggested a number of additional factors which, in their views, should be considered in setting the licence duration. These include:

- issues relating to the scheduling of infrastructure construction given that DTT services will be rolled out on many of the high transmission sites in Ireland over the coming years;
- site planning and, *inter alia*, any antenna planning to control signal propagation;
- the level and cost of building a Mobile TV network;
- the potential competition from substitute products, such as portable stored media and video delivered over 3G networks, which could slow subscriber growth;
- issues relating to the embryonic nature of the market for Mobile TV services in Ireland; and
- issues relating to any future requirement to pay additional licence fees for any additional spectrum which might be awarded to expand the service should spectrum become available in areas beyond the five main urban areas.

### 5.1.3 ComReg's Position

Having regard to respondents' views, ComReg considers that the term of the licence should be 10 years from the award date of the licence. For the avoidance of doubt, the licensee's rights to use this spectrum would expire at the end of this period. In forming this view, ComReg acknowledges the following:

- four respondents support the proposed licence duration of 10 years;
- issues relating to the scheduling of infrastructure construction given that DTT services will be rolled out on the high sites should facilitate and not hinder the launch of the Mobile TV Service as construction work is likely to be prioritised on the main sites. There would be an opportunity for Mobile TV to benefit from work already completed at these sites, which provide significant wide area coverage;

- the level and cost of building a Mobile TV network, while not insignificant, would be offset against the favourable spectrum propagation characteristics of the spectrum being made available;
- although there may be initial costs to be incurred in capturing subscribers, ComReg considers that the Licensee together with any OMTSPs would likely have expertise in monetising audiences and growing subscriber bases so that they would achieve a return on the initial investment; and
- other media and technologies supporting video targeted at handheld, or similar terminals, lack the key advantage of broadcast Mobile TV, which is that the service is not capacity limited in terms of the number of receiving terminals which can pick up the signal at the same time.

ComReg has however, adjusted the award process, which might lessen the concerns of some respondents in regard to the timeframe for return on investment and the level of fees which might be incurred in an auction for the licence. These adjustments in the award process are described in section 6 of this document.

## **5.2 Rollout obligations**

In the Consultation, ComReg considered that there should be rollout obligations in any Mobile TV Licence in order to ensure efficient use of the spectrum and consulted as follows:

### *5.2.1 Consultation Questions*

**Q. 5. Do you consider that the Mobile TV Service should be accessible by end-users in the five urban areas within 24 months of the licence award? If not, what rollout schedule should apply?**

**Q. 6. Do you consider, as a means of measuring end-user accessibility that the main transmitter sites should be commissioned, on-air and transmitting the multiplex offering in accordance with effective radiated power characteristics as would be set down in the technical schedule attached to licence? If not, please explain how should rollout conditions be set and measured for compliance?**

### *5.2.2 Views of Respondents*

Nine responses were received on the issue of rollout obligations.

Seven respondents agreed in principle with ComReg's proposed rollout obligations and the proposed methodology for measuring rollout compliance. However, one of these respondents considered that it would not be necessary to set rollout as a condition of the licence as rollout would not be an issue given the approach of high

power high tower sites. The following additional comments were made by these respondents:

- Mobile TV should be accessible by end-users in each of the five urban areas but only when it can be assured that no interference will occur to DTT services;
- rollout obligations should be set having regard to potential requirements to change the licensed frequencies in the Mobile TV licence as a result of the frequency planning for DTT services;
- rollout is entirely dependent on access to third party sites and the licensee should not therefore be penalised for factors beyond its control; and
- rollout obligations would ensure effective radio spectrum use and maximise the benefits to end-users.

Two respondents disagreed with the proposed rollout obligations. One respondent argued that as an alternative to rollout requirements for example, consumer take-up levels and/or market value should be considered by ComReg in setting obligations. This respondent made this proposal on the basis that technical and cost challenges may hinder quality indoor mobile reception. The second respondent argued that the licensee may have difficulties in controlling or limiting the propagation of signals in the areas covered and therefore rollout obligations would not be suitable.

### 5.2.3 ComReg's Position

ComReg believes that rollout obligations are necessary to ensure the effective use of the radio spectrum and to ensure that the service and its benefits are available in a timely way to consumers in the five urban areas covered by the licence.

In this regard, ComReg notes the following:

- seven respondents agreed with the proposed rollout obligations;
- the available spectrum is compatible with existing and future DTT requirements, which reduces the risk of interference to DTT; and
- the rollout of the service would not be unduly affected by changes of frequencies to accommodate DTT as the frequency planning heretofore has been based on accommodating both types of services.

In developing its position, ComReg also considered the following:

- there is a principal of having main transmitter stations commissioned, on air and transmitting, in accordance with the effective radiated power characteristics as set down in the technical schedule attached to licences. This principal is a standard provision in most spectrum licences issued by ComReg;
- the proposed rollout obligations are reasonable when the deployment of the main transmission equipment is likely to be driven by high-tower, high-power transmitter sites, as indicated by some respondents given that there are only likely to be 5 main sites;



- the approach of using high-tower, high-power transmitter sites would allow approximately 5 months for rollout to occur at each such site if the launch were to be sequenced one site after another over the 2 year rollout period. Five months would seem a reasonable timeframe as it would enable a single commissioning team to travel between the main locations and carry out the necessary commissioning; and
- the need for any “gap-filler” stations, which may be required to boost indoor coverage levels in some areas, would be better understood once the licensee has achieved the rollout of the main transmitter stations. Therefore it would be important for the licensee to establish the main sites so that it could identify those areas and make commercial decisions regarding the priority of introducing gap-filler stations.

In light of the above, ComReg currently considers that commitments relating to the speed of the rollout of the main transmitter stations and any fill-in stations should form part of the evaluation criteria in the competitive selection procedure for the Mobile TV licence.

### **5.3 Provision of wholesale services**

ComReg consulted on its proposal to include wholesale conditions in any Mobile TV Wireless Telegraphy Licence as follows:

#### *5.3.1 Consultation Questions*

**Q. 7. Do you see merit in licence obligations that would seek to ensure wholesale service is provided on fair, reasonable and non-discriminatory terms? Do you consider that these obligations would ensure that wholesale service is effectively provided? If not, what additional obligations may be required?**

**Q. 8. Do you see merit in some multiplex capacity being reserved for providers of distribution services to end-users? In your opinion how many programme services should be reserved? Please refer to bit-rate, compression and other relevant technical compliance?**

#### *5.3.2 Views of Respondents*

Nine responses were received on the issue of wholesale service.

Five respondents supported ComReg’s proposal to include wholesale service obligations. One of these respondents, however, did not agree with the notion of reserving multiplex capacity in the absence of specific proposals as to the nature of the services to be offered. The other respondents who agreed with ComReg’s proposal provided some additional comments in relation to these issues:

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- reservation of sufficient multiplex capacity would ensure competition in mobile services is promoted and preserved;
- given that at this stage only a single licence is being made available, there is an understanding why wholesale service should be provided. However, any conditions should not be so stringent as to preclude the successful growth of the business. This respondent also argued that the reservation of multiplex capacity should be a matter for contract negotiation between the licensee and any third party providers of distribution services to end users;
- another respondent contended that although wholesale service is justified it should be reviewed following developments in the market. It also argued that wholesale conditions need to be flexible enough to cover other business models not only in the case where the licensee would be responsible for content management services but also in the case where it could be responsible for leasing transmission capacity to service providers. It contended that there should be sufficient flexibility in the wholesale obligations to permit this and allow the market determine the appropriate business model. This respondent proposed that 1000kbps multiplex capacity be reserved for each of up to four providers of distribution services to end users;
- the licensee should, where possible and technically feasible, facilitate the wholesale customer in the differentiation of their service through branded service guides and inter-working with other mobile video services such as 3G streaming. This respondent also highlighted that the level of reserved capacity would be dependent on technical criteria including the platform and possible use of statistical multiplexing; and
- reservation of multiplex capacity would allow competition of both price and non-price elements of the Mobile TV service.

One respondent noted that there may be some benefit in allowing a “closed period” in which no wholesale conditions would apply.

Two respondents did not support ComReg’s wholesale service obligations and provided the following views in support of their position:

- wholesale conditions could be counter-productive by hindering the flexibility of the licensee to decide how best to make the service available to consumers. While this respondent was of the view that the service would most likely succeed with a broad distribution it was concerned that the licensee would be obliged to wholesale to retailers no matter what the plans of those retailers for generating customers. It contended that this could be counterproductive to ComReg’s stated goals of maximising benefits to end-users and facilitating the development of competition; and
- wholesale conditions would be restrictive if the licensee was only allowed to wholesale the Mobile TV service. This respondent agreed that the Mobile TV service provider should provide its service in a fully transparent and non-discriminatory manner but that this should not be imposed. It also considered that the exact division of multiplex capacity should be left to the negotiations with the particular value chain stakeholder as it would be dependent on consumer take up.

### 5.3.3 ComReg's Position

As set out in the Consultation, due to the current limited availability of suitable spectrum, it is possible for only one Mobile TV network to be established in the five urban areas of Cork, Dublin, Galway, Limerick and Waterford.

ComReg recognises that the prospect of a single licence for Mobile TV poses competition challenges for the development of Mobile TV in Ireland and potential challenges to competition for mobile services generally. At the same time, ComReg considers that it is important to provide an opportunity for the market to use this spectrum for Mobile TV as it represents an innovative communications service for Irish consumers.

In this context, and having due regard to responses received on the issue of wholesale service and the following considerations, ComReg believes that appropriate commitments that would address these competition issues should be encouraged:

- Article 4 of European Commission Directive 2002/77/EC “*on competition in the markets for electronic communications networks and services*” – which prohibits Member States from granting exclusive or special rights of use of radio frequencies for the provision of electronic communications services;
- ComReg’s statutory objective to promote competition in the provision of the provision of electronic communications networks, services and associated facilities, including by:
  - ensuring that users, including disabled users, derive maximum benefits in terms of choice, price and quality;
  - ensuring that there is no distortion or restriction of competition in the electronic communications sector; and
  - encouraging the efficient use and ensuring the effective management of radio frequencies;
- the authorisation activities of other Member States in relation to Mobile TV (see, for example, Appendix 3.0 of the Consultation); and
- the EC’s communication<sup>7</sup> on “*Strengthening the Internal Market for Mobile TV and Legal Framework for Mobile TV Networks and Services: Best Practice for Authorisation - The EU Model.*”

At the same time, ComReg remains sensitive to the potential for inflexible wholesale service provisions to discourage efficient investment in infrastructure and hinder the optimal development of Mobile TV in Ireland. In the circumstances, ComReg recognises that there is a careful balance that needs to be struck in terms of the nature and level of wholesale service commitments that should be encouraged, and also the manner in which they are realised in the market.

In addition, ComReg recognises that, subject to appropriate and effective regulatory safeguards, commercial negotiation and agreements between market players is likely

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<sup>7</sup> See footnote 1.

to be the most efficient means by which to give rise to wholesale service arrangements and thus should be encouraged where possible.

At the same time, ComReg recognises the ability and incentive of the wholesale service provider to favour its own Mobile TV offering by unfairly discriminating against OMSTPs, in absolute or relative price and/or non-price terms. ComReg also recognises the information asymmetry that would exist in favour of the wholesale service provider when dealing with access seekers, whether in terms of negotiations over service provision or during wholesale service provision.

In light of these matters and respondents' views to the Consultation, ComReg's proposal is to identify four primary aspects of wholesale service which it presently considers to be critical to promoting effective competition in Mobile TV service provision. These comprise commitments to provide the following to OMTSPs in a timely, reasonable, non-discriminatory and transparent manner:

- access to common programme content and for reselling purposes by OMSTPs (including access, for example, to subscriber authorisation and subscriber management services). This would include commitments to properly consider all reasonable access requests from potential OMTSPs for access to the common programme content and providing wholesale services equivalent in function, quality and price to that supplied by the licensee to its own Mobile TV operation;
- differentiation of the Mobile TV service through access to multiplex capacity, for each of up to four OMTSPs to provide a programme content channel for distribution to their respective subscribers.<sup>8</sup> ComReg notes that such differentiation might also include differentiation of electronic programme guides for example with the use of graphics provided in suitable format by OMTSPs;
- all information reasonably necessary to enable OMTSPs to obtain and maintain access and differentiation in a timely, reasonable and non-discriminatory manner; and
- recourse to negotiate and resolve disputes with OMSTPs in a timely, reasonable and non-discriminatory manner.

Differentiation between potential services offered by OMTSPs was also highlighted during the Mobile TV trial to offer potential benefits for OMTSPs and consumers, for example, in branding and allowing a variation of content offerings. In general, respondents favoured some multiplex capacity being available for OMTSPs to carry a single unique programme content channel for their own subscribers. ComReg maintains that up to four OMTSPs should be able to avail of this facility and believes this to be a reasonable balance given that the multiplex could carry approximately 20 programme services (see also Appendix 3.0 of the Consultation). In addition, ComReg considers that after a reasonable period, for example three years following

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<sup>8</sup> ComReg notes that one respondent indicated that 1000kbps should be reserved for each of four OMTSPs. During the mobile TV trial in Dublin the total useable capacity was circa 4000kbps therefore we believe it would be unreasonable for the Licensee to effectively reserve 3/4s of the capacity for services of OMTSPs.

the licence award, any capacity not taken up by OMTSPs could be utilised for additional common programme content.

In relation to access to common programme content and differentiation, ComReg recognises that a framework is likely to be required to address how common programme content could be changed as well as how any programme content supplied by OMTSPs could be managed if changes were requested. ComReg recognises this as an area where the wholesale service provider could discriminate against OMTSPs.

ComReg recognises the importance of transparency in ensuring that wholesale service arrangements with OMTSPs are realised and maintained in and non-discriminatory terms and, in this regard, sees considerable merit in commitments relating to:

- developing appropriate service level agreements;
- developing a wholesale access price which it can demonstrate to OMTSPs, and to ComReg where necessary (see below), to be reasonable, non-discriminatory and objectively justified. ComReg believes that the wholesale price must be objectively justified in order to prevent margin squeeze and/or unreasonable bundling of costs by the licensee;<sup>9</sup>
- developing and publishing a wholesale Access Reference Offer (ARO) which it can demonstrate to OMTSPs, and to ComReg where necessary (see below), to be reasonable, non-discriminatory and objectively justified.

In addition, and in the event that commercial negotiations failed to deliver or maintain access in accordance with the above principles, ComReg would envisage the wholesale service provider committing to following an appropriate mediation or arbitration procedure. ComReg would also envisage that in the event of a failure to reach agreement by way of mediation or arbitration, it may put in place dispute resolution procedures, in accordance with ComReg's published dispute resolution procedure (see for example, ComReg document no. D11/99). To give effect to such procedures, it would be expected that the licensee would commit to providing all information, including accounting information, reasonably necessary to resolve the dispute.

In light of the above, ComReg intends to provide a schedule of potential commitments which would form the basis upon which it could evaluate applications and award marks to applicants in the comparative evaluation process. Although further details will be made available at the application stage, ComReg would welcome written views from stakeholders before the 11 September regarding:

- the nature and extent of the potential commitments referred to above;

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<sup>9</sup> ComReg expects commercial negotiations to result in appropriate access being achieved. It also considers that appropriate mediation and/or arbitration procedures should be followed where negotiations cannot be reached. It recognises, however, that as part of any dispute resolution procedure it may be necessary for commitments on the part of the licensee to comply with some form of pricing direction appropriately determined by ComReg.

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- whether there are additional potential commitments that would serve to promote effective competition; and
- the level of detail of the above and any other potential commitments that would be required to give regulatory certainty to the market and properly give effect to these commitments.

### 5.4 Mobile TV Wireless Telegraphy Licence fees

ComReg considered that the Mobile TV Wireless Telegraphy Licence fee should be set at €340,000 per annum and indexed to increases in the consumer price index. ComReg asked the following question:

#### 5.4.1 Consultation Questions

**Q. 9. Do you consider the proposed Mobile TV Wireless Telegraphy Licence fee to be appropriate? If not, please provide reasons for your view.**

#### 5.4.2 Views of Respondents

Eight responses were received on the issue of Mobile TV Wireless Telegraphy Licence fees. Seven respondents did not agree with the level of fee proposed and provided the following comments:

- the level of fees do not reflect the level of risks involved in the provision of Mobile TV services in Ireland;
- the spectrum charge should be set at a level to recoup the costs of spectrum regulation and not seek to maximise revenue for the Government;
- based on the limited coverage area, the lack of a proven long term business case for Mobile TV and the proposed wholesale obligation means that the fee is too high. This respondent also referred to the fee for spectrum in the 450MHz bands awarded to wideband digital mobile data services (WDMDS) and stated that while there are various research papers and studies on the potential value of this spectrum the proposed levels may not be the case in practice;
- the proposed fee bears no relationship to ComReg's ongoing administrative costs and this imposes pressure on the viability of the service and will likely have a knock on effect on the charges to be levied on the end consumer. This respondent also noted that the proposed fee was higher than that levied on digital terrestrial television ("DTT") multiplexes. It also considered that further expense would have to be incurred to extend coverage if spectrum became available and that the proposed fee in addition to the reserve price of €100,000 could be viewed as already incorporating the amount that successful bidders would pay for the licence;
- the methodology used to construct the licence fee, which was based on an estimate of consumer take-up levels, does not incorporate enough other factors and is therefore overly optimistic. Consumer churn, actual profitability, competition, price elasticity need to be taken into consideration;

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- the fee should not be set on anticipated revenue streams. The proposed licence allocation method, assuming that the type of auction chosen is the most efficient, means that the market value of the spectrum would be achieved and any annual recurring licence should be set so as to recover the ongoing administration cost to ComReg; and
- the overall network costs of Mobile TV and DTT are likely to be similar yet the subscriber bases are likely to be different - 90% population covered with national DTT multiplexes and only 40% with Mobile TV. This respondent proposed that if there was to be an auction to assign the licence then there should be no annual licence fee as this simply acts to raise the effective reserve price for entry into the auction.

No respondents suggested an alternative mechanism which could be used to derive an appropriate fee level. A single respondent agreed with ComReg's proposed annual licence fee of €340,000 per annum citing that the basis for it was reasonable given that the assumptions about take-up, likely subscription fees, and capital and operating costs were conservative.

### 5.4.3 ComReg's Position

As previously stated, ComReg intends to hold a comparative evaluation process rather than an auction to award the Mobile TV licence. This should greatly help to negate the main concerns regarding the risk of financial overexposure to auction participants.

Nevertheless, ComReg considers that its proposed spectrum fee is currently appropriate for Mobile TV. In developing its position, ComReg also considered the following:

- radio spectrum is a valuable natural resource. The level of the fee to be paid reflects the need for the spectrum user to provide a fair return to the State for gaining access to the spectrum for the licence period;
- no respondents suggested an alternative mechanism which could be used to determine an appropriate level of fee;
- the spectrum now being made available is not equivalent in terms of bandwidth or use as WDMDS;
- the fee applied for DTT multiplexes is based on a different licensing regime whereas this licensing regime sets out specific conditions necessary for mobile reception of multiplexes. The technical conditions for the Mobile TV Licence are intended to allow transmissions to smaller screen sizes for a mobile reception basis;
- ComReg also believes the projected consumer take-up levels it used in setting the level of the licence fee to be reasonable, if not conservative, given the amount of spectrum that is being made available. It also considers that the favourable propagation characteristics of the spectrum will minimise rollout costs;
- the fee level is not based on anticipated revenues, and ComReg already recognises that there may be no subscribers in the initial phases of the service; and

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- the overall network costs would depend on the network topology used and the level of coverage to be achieved and given the favourable propagation characteristics it is likely that high-tower high-power sites will be used which would reduce rollout costs over a low-power dense network topology.

Based on these factors, ComReg believes that the level of the licence fee would not prevent the licensee from achieving an adequate return on investment over the proposed 10 year duration of the licence. It considers that it would be prudent to review the level of the fee, in light of technological or market developments, on the fifth anniversary of the commencement date of the licence.

### **5.5 Other licence conditions including technical conditions**

ComReg considered that licence conditions in relation to the provision of information, sanctions for non-compliance (including the possibility of withdrawing spectrum awarded for mobile TV that is not put to use within a reasonable time period), other authorisations and responsibilities, variation of licence, non-ionising radiation, resolution of interference and technical conditions should also apply to the Mobile TV Wireless Telegraphy Licence. These are standard conditions in various spectrum licences issued by ComReg and will also be included in the Mobile TV Wireless Telegraphy Licence. No issues were raised with these conditions including the set of technical conditions and parameters for the operation of mobile TV services in Ireland on dedicated terrestrial networks.



## **6 Consultation Issue: The award process**

### **6.1 Award process**

ComReg had considered that the award process for the preferred licence type should be a single sealed bid first price auction with a reserve price of €100,000 and consulted as follows:

#### *6.1.1 Consultation Questions*

**Q. 10. Would you be interested in participating in a single sealed bid first price auction with a reserve price of €100,000 to assign either a Mobile TV Wireless Telegraphy Licence or a Service Neutral Wireless Telegraphy Licence. Please indicate which award option would be your preference.**

#### *6.1.2 Views of Respondents*

Eight responses were received on the issue of the award process. There was a wide level of differing interests in the proposed award. For example, two respondents indicated that they would prefer a comparative evaluation process (or a “beauty contest”) rather than an auction process and others raised concerns regarding ComReg’s proposed auction process, including:

- licence fees should arise out of the auction and it is not appropriate to combine annual licence fees and fees arising out of an auction. This respondent also noted that the proposed auction format may not provide an efficient auction outcome;
- beauty contests have been used in other European countries to assign licences for Mobile TV services not auction processes; and
- there is considerable risk of “winner’s curse” resulting from a sealed-bid, first price auction which might discourage bidding and depress prices.

#### *6.1.3 ComReg’s Position*

ComReg recognises the concerns raised by respondents in relation to its previously proposed licence award process and therefore considers that a comparative evaluation process, rather than an auction, should be applied to this spectrum award and would welcome comments in relation to this proposal.

ComReg currently considers that applications for the licence should be evaluated in relation to the following evaluation criteria:

- speed to market - where applicants could make proposals for rollout in advance of the 24 month rollout obligation;
- proposals in relation to wholesale Mobile TV service provision (as discussed in section 5.3.3);

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- voluntary performance bonds offered in relation to commitments made; and
- proposal regarding the level of spectrum access price.

It is also envisaged that a “marking scheme” would apply to the evaluation criteria, which would place more weight on some criteria over others.

Moreover, ComReg considers that having these various evaluation criteria should ease any concerns regarding the risk and uncertainty of financial over-exposure, which respondents indicated would be associated with an auction format.

In this regard, and in light of the matters set out in section 5.3, it is envisaged that the nature and level of commitments offered by applicants aimed at promoting and maintain effective competition for Mobile TV services will be a central focus in evaluating applications for this licence award.

ComReg will ensure that evaluation criteria adopted by it in the evaluation process will be objectively justified, non-discriminatory, proportionate and transparent. In this regard ComReg re-iterates that it would welcome views of stakeholders on issues raised in Section 5.3 and other Sections of the paper by 11 September 2009. While ComReg will have cognisance of any further comments received in relation to its proposals, it currently intends to issue guidelines for applicants that would set out in detail the procedure of the comparative evaluation process and the associated marking scheme. It proposes to allow a period for stakeholders to reflect and comment on this material prior to the start of the comparative evaluation process, which is intended to be held in Q4/2009.

## **7 Next Steps**

ComReg intends to issue guidelines setting out in detail the procedure of the comparative evaluation process and the associated marking scheme (including a schedule of potential commitments) and proposes to allow a reasonable period for stakeholders to reflect and comment on this material prior to the start of the comparative evaluation process, which is intended to be held in Q4/2009. ComReg would also be pleased to address any specific questions regarding the comparative evaluation process at that stage.