

APPENDIX B

Of

RAIDIÓ TEILIFÍS ÉIREANN

WHOLESALE ACCESS REFERENCE OFFER

MARKET B – DTT MULTIPLEXING SERVICES AGREEMENT

SUBJECT TO CONTRACT/CONTRACT DENIED

TARIFFS

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CHANGE CONTROL

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1. INTRODUCTION

The Service Provider is subject to an obligation of cost-orientation pursuant to ComReg Decision D11/13 and Final Decision Instrument – Market B (Appendix E of D11/13). The pricing model used by the Service Provider to derive cost-oriented charges for provision of carriage services has been developed to be consistent with the following core regulatory principles:

- **Causality:** Costs shall be ascribed in accordance with the activities that cause the cost (or revenue) to be incurred. This ensures that only those costs associated, either directly or indirectly, with providing a service are allocated to it. This reduces the potential for cross-subsidisation.
- **Objectivity:** Attribution must not benefit the access provider, any access seeker, service or business. It must be based on verifiable information, with the use of management estimates to calculate costs usually limited. As an example, any allocation of costs to digital services, rather than analogue services, will need to be clearly justified based on actual data that could be reviewed by external auditors.
- **Consistency:** Cost allocation methods, treatment of costs and the approach used to calculate tariffs need to be consistent from year to year.
- **Transparency:** Within a cost model, this implies that attributed items must be traceable back to their source and the elements that contribute to the cost of the service should be visible.

The inputs to the Service Provider's cost model are the costs incurred by the Service Provider in procuring the DTT Multiplexing, Distribution and Transmission Broadcast Service and costs associated with the management and promotion of the multiplexes to end-users (e.g., the maintenance of a help-desk, website development and technical support management).

The Service Provider is subject to the obligation of cost-orientation pursuant to ComReg Decision D11/13 and Final Decision Instrument – Market B (Appendix E of D11/13) and pursuant to the provisions of the EC (Electronic Communications Networks and Services) Access Regulations, 2011 and ComReg may require tariffs to be adjusted.

In addition to changes to the Tariffs which may be required from time to time and made in accordance with the principles set out below, ComReg may direct changes in which case the Client will be invoiced a Tariff calculated in accordance with ComReg's directions.

2. TARIFF CALCULATION PRINCIPLES

2.1 Calculation Basis

The Tariff charged to each Client is calculated so that the full costs from the Service Provider are recovered (including a return) on a non-discriminatory basis from all users of the DTT Multiplexing, Distribution and Transmission Broadcast Service in accordance with the requirements of ComReg Decision D11/13. Tariffs are derived from the Tariff Model constructed on the basis of assumptions as regards, without limitation, the overall costs of the Service Provider and/or the number, types and total average bit rate consumption per year of the Content Transport Streams. Using the Tariff Model, the calculation of the Tariff charged to a Client is based on:

- (i) the relative consumption of the multiplexes' bitrate by a Client's Content Transport Stream(s) (as compared to the Total Content Transport Stream(s));
- (ii) a cost per kbps, derived from the actual and estimated number and type of Content Transport Streams using the multiplexes during the Term; and
- (iii) The smoothing of the Tariff over a five year period from 1st April 2014 to 31st March 2019 ("the Smoothing Period") on the basis of the level of new or enhanced Content Transport Streams that the Service Provider reasonably believes will be contracted for during the Smoothing Period, with the Tariff being smoothed over such period on a pro rata basis of such estimates.

2.2 Relative Use

The Service Provider will invoice each Client on the basis of its Content Transport Stream(s) use of the multiplexes determined on the basis of its average bitrate used by the relevant Content Transport Stream of the total bitrate in use by all Content Transport Streams.

For example, if a Client's Content Transport Stream accounts for 10% of the total bitrate in use by all Content Transport Streams on the multiplexes the Client pays 10% of the full costs from the Network Operator for that Content Transport Stream.

If a Client's Content Transport Stream accounts for 30% of the total bitrate in use by all Content Transport Streams on the multiplexes then the Client pays 30% of the full costs from the Network Operator for that Content Transport Stream. If a Client Content Transport Stream accounts for 1% of the total bitrate in use by all Content Transport Streams on the multiplexes then the Client pays 1% of the full costs from the Network Operator for that Content Transport Stream.

The bitrate for each Content Transport Stream is available for 24 hours per day for the Term.

Should a Client choose to only provide a valid Content Transport Stream at certain times during a day or during a week:

- The fixed bitrate elements of any Content Transport Stream (audio, teletext, data, etc.) shall remain unchanged and chargeable in respect of that Content Transport Stream.
- The variable bitrate elements of any Content Transport Stream (statistically multiplexed element of video) shall be excluded and the minimum bitrate allocated for the video element of that Content Transport Stream will remain chargeable in respect of that Content Transport Stream.

2.3 Bitrate Measurement

The tariff calculation will be based on the actual measured bitrate that each service used in the preceding three month period (or estimated for a similar service where no preceding three month period is available). The static fixed bitrate elements of the Content Transport Stream will be constant across the period and the variable (statistical multiplexed video) element will be averaged across the period.

Measured bitrates during any period where short term temporary variations are made to enable the orderly management of the multiplexes (i. e. launch of new services, removal of a service, services enhancements (SD to HD), receiver rescans, change of

logical channel number and similar activities) shall be excluded for the purposes of calculation tariffs.

System Operation Data, engineering test channels/activities, empty channel(s) and any Saorview platform information channel(s) shall be excluded for the purposes of calculation tariffs.

Any party (television or radio service, competent authority, etc) may monitor the Service Provider multiplexes services off air and measure and record the actual bitrate capacity being used by each service.

3. CONFIGURATION OF CAPACITY USED

Television Service

Minimum audio bitrates (*fixed bitrate*)

- Main program - Client Defined (197 kbps, stereo, recommended)
- Secondary program – Client Defined (99 kbps, mono, recommended)
- Access Services – Client Defined (99 kbps, mono, recommended)

Video bitrates - Standard Definition (SD)

Statistical multiplexed (*variable bitrate*)

- Minimum of 0.8 Mbps
- Maximum of 8.0 Mbps
- Weighting 90%
- Resolution 544 x 576
at Average bit rate 2.2 Mbps
- Resolution 704 x 576
at Average bit rate 2.5 Mbps

Video bitrates - High Definition (HD)

Statistical multiplexed (*variable bitrate*)

- Minimum of 2.0 Mbps
- Maximum of 9.0 Mbps
- Weighting 90%
- Resolution 1440 x 1080i
at Average bit rate 5.8 Mbps

All video streams are part of a statistical multiplex pool and bit rate usage will vary within the channel minimum and maximum settings subject to the requirements of the content (fast moving sport - high demand, talking heads - low demand). The total size of the statistical pool is the sum of all the average bit rates from this table for that pool.

Teletext/Data (*fixed bitrate*)

EBU Teletext - Client Defined

Digital Teletext – Client Defined

EBU Subtitling – 75 kbps

Radio / Audio

Available audio bitrates – Client Defined (*fixed bitrates*)

- Stereo 197 kbps
- Stereo 164 kbps
- Stereo 132 kbps
- Mono 99 kbps
- Mono 66 kbps

4. MAIN ASSUMPTIONS

The Service Provider's current main assumptions are:

- Channels on the platform prior to 1 January 2015 will remain on the platform at the average bit rate usage for the Q1 2015 invoicing period, namely September, October & November 2014;
- The two SD TV Content Transport Streams remain on the platform at their average bit rate usage.
- If one of the existing SD Content Transport Streams were to upgrade to HD, this would have a similar impact as a new SD Content Transport Stream.
- The total of the estimated input costs in the Service Provider's cost model are in line with actual costs incurred over the Smoothing Period.

5. TARIFFS

The Tariffs set out below were calculated on the basis of the principles and assumptions set out in Clauses 1-4 of this Appendix B.

A quarterly channel Tariff is calculated by multiplying the Tariff Standard Fixed kbps Rate by the average kbps consumed by the channel as identified in clause 2.3 Bitrate Measurement above and dividing by 4.

The Tariff charge is subject to adjustment according to the Client's actual bitrate consumption.

SCHEDULE 001 – FINAL ANNUAL TARIFF	
Tariff Standard Fixed kbps Rate (kilo bit per second)	€388.47 per kbps

The following sample charges are given by way of guidance to broadcasters and are calculated for new services with a Start Date of Transmission of 1 July 2015.

SCHEDULE 002 – SAMPLE CHARGES	
Sample Average kbps Consumption	Sample Charges
Sample HD channel at an average of 6,000 kbps	€2,330,820 per year
Sample SD channel at an average of 2,400 kbps	€932,328 per year

The use of the Tariff Standard Fixed kbps Rate enables broadcaster to evaluate the impact on tariff of changes to their services. This is explained with the following example:

Example: if a broadcaster wished to increase its audio services (for a channel) from stereo to Dolby and as a result will consume an additional 384 kbps of audio, the additional cost of this change can be calculated by multiplying the additional kbps by the Tariff Standard Fixed kbps Rate.

So $384 \times €388.47 = €149,172$.

In accordance with Clause 5.7 of the Agreement, the maximum Annual Tariff payable in respect of Service will be capped in respect of the Initial Term defined in Appendix A (125% of the Tariff applicable at the Effective Date), namely at € [●].

6. **TARIFF AMENDMENTS**

The assumptions upon which the Tariff is derived, including without limitation the overall costs of the Service Provider and/or the number, types and total average bit rate consumption per year of the Content Transport Streams being carried over the Smoothed Period of the model will be revised at least annually by the Service Provider. Where changes are required to the assumptions upon which the Tariff is calculated which lead to changes to the Tariff, any such change will first be notified and reviewed by ComReg in accordance with the requirements of Clause 10.5 of Final Decision Instrument Market B at Appendix E to ComReg Decision 11/13.