



Commission for
Communications Regulation

Information Notice

Progress update on DTT migration to below the 700 MHz band: International coordination of Ireland's DTT spectrum plan

Information Notice

Reference: ComReg 17/23

Date: 31/03/2017

An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation

Abbey Court Irish Life Centre Lower Abbey Street Dublin 1 Ireland

Telephone +353 1 804 9600 Fax +353 1 804 9680 Email info@comreg.ie Web www.comreg.ie

1 Progress update: DTT migration to below the 700MHz band

1. The 694 - 790 MHz radio spectrum band ("700 MHz band") has long been used to provide Digital Terrestrial Television ("DTT") services, in Ireland and internationally.
2. In 2012, the International Telecommunication Union ("ITU") decided that, in addition to being used to provide DTT services, the 700 MHz band may also be used to provide mobile services in "Region 1" (Europe, Africa and the Middle East).¹ The ongoing provision of DTT services will be provided for below the 700 MHz band, in the 470 – 694 MHz band.
3. The ITU decision was taken having regard to growing demand for wireless broadband services and it represents an opportunity for Europe to "repurpose" the 700 MHz band in order to ensure its efficient use. The 700 MHz band is important in addressing the continually growing demand in Ireland for wireless broadband services and increased connectivity. Given its favourable propagation characteristics, the 700 MHz band is suitable for wide area and indoor coverage. Further, the 700 MHz band will be used globally for mobile wireless broadband and so there will be economy of scale benefits, in terms of cheaper network equipment and consumer handsets.
4. The above factors, combined with the increasing use of mobile data services in Ireland (data use has increased by more than 600% in the past 4 years)², led to ComReg conducting a detailed Cost Benefit Analysis in 2015 which estimated that the "Net Present Value" - of the 700 MHz band being used to provide mobile services rather than DTT services - would be €91m.³
5. Since the ITU decision was taken, significant progress has been made in making the 700 MHz band available for technologies and services other than DTT, at the European and national level and in a coordinated manner.
6. At the European level, technical harmonisation measures⁴ are now in place to allow the use of mobile technologies (e.g. LTE) in the 700 MHz band. In addition,

¹ This decision was taken at International Telecommunication Union ("ITU") 2012 World Radiocommunication Conference of (WRC-12).

² ComReg quarterly review data

³ ComReg Documents [15/62](#), [15/62a](#) and [15/62b](#)

⁴ Commission Implementation [Decision \(EU\) 2016/687](#) on the harmonisation of the 694-790 MHz frequency band for terrestrial systems capable of providing wireless broadband electronic communications services and for flexible national use in the Union, 28 April 2016

an EU Decision is expected shortly which will require EU Member States to allow the 700 MHz band to be used for purposes other than DTT, by 30 June 2020.

7. Ireland is making progress towards repurposing the 700 MHz band by the deadline of 30 June 2020.
 - In December 2016, the Minister for Communications Climate Action & Environment entrusted⁵ RTÉ with the task of migrating its DTT network and services from the 700 MHz band, in sufficient time to meet Ireland's planned DTT migration dates which are:
 - **4 September 2019** for commencing a simulcast of DTT services on the old and new radio frequencies⁶; and
 - **4 March 2020** for ending the simulcast of DTT services and completing the full migration of DTT from the 700 MHz band.
 - 2RN⁷ has begun the process of tendering for the transmission equipment and services which it will require in order to migrate its DTT network from the 700 MHz band.
 - In March 2017, ComReg, on behalf of the State, completed the international coordination of its spectrum plans for DTT in the 470 - 694 MHz band with the equivalent regulatory bodies in the UK and in France. This was a significant milestone and was the result of four years of multilateral and bilateral negotiations between ComReg and those neighbouring regulatory bodies. The DTT spectrum plan provides for the ongoing provision of DTT services in the 470 – 694 MHz band *and* for the migration of DTT services from the 700 MHz band.
8. The future use of the 700 MHz band for services other than DTT, including mobile wireless broadband services, is expected to provide significant benefits to Irish users of electronic communications services. ComReg is therefore committed to working towards the earliest possible repurposing of the band.
9. In this regard, ComReg intends to progress its proposed process, or processes, for the award of new spectrum rights of use in the 700 MHz band alongside new rights of use in the 1.4 GHz, 2.3 GHz, and 2.6 GHz bands, together with any other substitutable or complementary bands such as the 2.1 GHz band. Further information on ComReg's proposals will be released in due course.

⁵ [Letter of Entrustment of 15 December 2016](#) from the Minister DCCAE to RTÉ

⁶ The [Letter of Entrustment of 15 December 2016](#) explains that the period of simulcast is being provided to allow for appropriate information, and if necessary, assistance to be given to DTT households prior to the final cessation of DTT services in the 700 MHz band.

⁷ 2RN built and operates the DTT transmission network in Ireland. 2RN is a wholly-owned subsidiary company of RTÉ though it operates independently of RTÉ and fully at commercial arms' length.

2 International coordination of DTT below the 700 MHz band

2.1 Requirement for coordination

10. Radio frequencies are not bound by political borders and so Ireland must coordinate its radio spectrum plans with neighbouring countries, in order to facilitate the efficient use of radio spectrum in all countries with a particular focus on preventing or minimising any cross-border interference.
11. Spectrum in the frequency range 470 - 694 MHz has favourable propagation characteristics – i.e. it travels far. Coupled with the fact that DTT networks utilise high masts with high power, this meant that it was necessary for Ireland, the UK and France to coordinate their respective DTT plans through a series of bilateral negotiations.
12. Further, although Ireland's DTT services do not directly impact on European countries other than our nearest neighbours, the UK and France, it was also necessary for Ireland to participate in a wider multilateral regional planning group. This is because the spectrum plans of European countries other than the UK and France could affect Ireland indirectly, in that those countries affect the spectrum plans of the UK and France.

2.2 Bilateral Negotiations with the UK and France

13. Since July 2013, Ireland's planning team⁸, led by ComReg, has engaged in a series of complex bilateral negotiations with the UK's team⁹ with the overall objective to re-plan the 470 – 694 MHz band in both jurisdictions, to include agreement on:¹⁰
 - a frequency plan for the continued provision of DTT services in both jurisdictions below the 700 MHz band; and
 - a transition plan to facilitate the migration of DTT out of the 700 MHz band.
14. The plan for the continued provision of DTT services below the 700 MHz band was finalised on 24 March 2017, with the signing of a Memorandum of

⁸ The Ireland planning team was led by ComReg with active participation and collaboration from the Broadcasting Authority of Ireland (BAI) and 2RN throughout the process. Policy advice and support was provided by the Department of Communications Climate Action & Environment (DCCA).

⁹ The UK planning team was led by Ofcom, and included Arqiva (the DTT transmission provider) and the BBC (the public service broadcaster).

¹⁰ Technical meetings between Ireland and the UK took place on 20 occasions over a four-year period.

Understanding (“MoU”) by Ofcom and ComReg.¹¹ The work to complete the migration of DTT from the 700 MHz band, in both jurisdictions, will continue until the migration has been completed.

15. In parallel with the negotiations with the UK, Ireland also negotiated a coordination agreement with France¹² on DTT services in the 470 – 694 MHz band¹³ and the agreement was finalised and entered into on 28 April 2016¹⁴.

2.3 Multilateral Negotiations

16. In the period from 2015 to 2016, ComReg participated in multilateral negotiations with the equivalent national regulatory authorities in Belgium, France, Germany, Luxembourg, the Netherlands, and the United Kingdom, in order to coordinate respective DTT frequency plans in the 470 - 694 MHz band. These multilateral negotiations were facilitated by the Western European Digital Dividend Implementation Platform group (“WEDDIP”).
17. On 29 April 2016, a multilateral agreement to coordinate the DTT plans for the 470-694 MHz band was signed by the relevant administrations of Belgium, France, Germany, Ireland, Luxembourg, the Netherlands and the United Kingdom.¹⁵

¹¹ [ComReg 17/23a](#)

¹² The French planning team was led by ANFR (Agence National Des Fréquences) and included TDF and CSA (Conseil Supérieur de l’Audiovisuel)

¹³ France’s DTT services in the 470-694 band can impact the southern coast of Ireland, while Ireland’s DTT services can impact the northwest of France (i.e. Brittany).

¹⁴ [ComReg 17/23c](#)

¹⁵ [ComReg 17/23d](#)