

RADIO SPECTRUM AND TECHNICAL STANDARDS ADVISORY COMMITTEE

Proposed Spectrum Release Plan for 2013 – 2015

Purpose

This paper proposes the updates on the spectrum release plan (SRP) for 2013 – 2015.

Background

2. According to the Radio Spectrum Policy Framework¹ issued by the then Commerce, Industry and Technology Bureau in April 2007, an SRP will be published by the Communications Authority² (CA) annually to inform the industry about the potential supply of spectrum through an open, competitive bidding or tendering process in the following three years. The SRP will be updated every year on a rolling basis or as required taking into account the latest developments. The last SRP was published in December 2011 to cover the potential supply of spectrum for 2012 – 2014.

3. To update the SRP in a timely manner, the Office of the Communications Authority (OFCA) monitors the availability of spectrum for assignment for non-government use, having regard to international development regarding spectrum allocation, regional spectrum allocation decisions, technology and equipment availability and proposals from the industry. The recent findings of OFCA are given below.

¹ The Radio Spectrum Policy Framework can be obtained at:
<http://www.cedb.gov.hk/ctb/eng/legco/pdf/spectrum.pdf>.

² Formerly Telecommunications Authority (TA). Pursuant to the Communications Authority Ordinance (Cap 616), with effect from 1 April 2012, all duties and powers of the TA are conferred on the Communications Authority (CA), and all duties and powers of the Office of the Telecommunications Authority (OFTA) are conferred on the Office of the Communications Authority (OFCA), the executive arm of the CA.

Trend of Spectrum Allocations

UHF Band

4. In the UK, the Office of Communications (Ofcom) has issued a Statement entitled “Assessment of future mobile competition and award of 800 MHz and 2.6 GHz” in July 2012 which set out its decisions on the auction of spectrum in the 790 – 862 MHz and 2500 – 2690 MHz bands. The auction of spectrum at these bands is scheduled to be conducted before end January 2013.

5. In Australia, as a result of switching from analogue to digital television broadcasting services to be completed by December 2013, the Australian Communications and Media Authority (ACMA) has announced the digital dividend spectrum auction covering the 703 – 748 MHz and 758 – 803 MHz spectrum to be conducted by April 2013.

6. In Hong Kong, the Government announced in June 2011 that the working target for analogue television broadcasting switch-off (ASO) would be deferred from end 2012 to end 2015 having regard to the actual implementation and market situation of DTT development. Subject to successful refarming of the band and frequency coordination with the Mainland authorities, ASO may release radio spectrum for broadcasting and telecommunications services.

2.3 GHz Band

7. In Australia, ACMA has assigned via auction some spectrum lots in the 2302 – 2400 MHz band in specified regional and remote areas of Australia in May 2012, which may be deployed for Wireless Access Services³. Spectrum in this band is currently deployed for the conveyance of audio and video signals (including subscription television signals) by Multi-point Distribution Stations primarily.

³ Wireless Access Services (WAS) encompasses a variety of ways that telecommunications carriers, internet service providers or other service providers deliver a radio connection from an end-user to a core network. WAS covers a range of other terms such as fixed wireless access, broadband wireless access, wireless local loop, multipoint distribution system and radio local area network.

8. In Hong Kong, the 90 MHz spectrum in the 2300 – 2390 MHz band has been included in the last SRP for provision of broadband wireless access services. This band has been assigned through the auction of radio spectrum in the 2.3 GHz band for the provision of broadband wireless access services held in February 2012.

2500 – 2690 MHz Band

9. In the UK, as mentioned in paragraph 4, Ofcom shall conduct the 2500 – 2690 MHz band auction before end January 2013.

10. In Australia, ACMA has conducted a review of the frequency range 2500 – 2690 MHz (the 2.5 GHz band) and concluded that the 2500 – 2570/2620 – 2690 MHz bands would be assigned via auction. Existing equipment operating in the 2.5 GHz band for outside broadcast applications would be allowed to continue their operation in the mid-band gap of 2.5 GHz band (i.e. 2570 – 2620 MHz which is not available for auction). The auction of 2500 – 2570/2620 – 2690 MHz bands is scheduled to be conducted in April 2013.

11. In Hong Kong, 2 x 45 MHz paired spectrum in the 2.5/2.6 GHz band (2500 – 2515 MHz paired with 2620 – 2635 MHz and 2540 – 2570 MHz paired with 2660 – 2690 MHz) was assigned by auction held in January 2009. The 2575 – 2615 MHz sub-band has been assigned for Government use while the 2570 – 2575 MHz and 2615 – 2620 MHz bands are guard bands which are not available for assignment. Regarding the remaining 2 x 25 MHz paired spectrum in sub-bands 2515 – 2540 MHz and 2635 – 2660 MHz, a public consultation paper entitled “Assignment of the Available Radio Spectrum in the 2.5/2.6 GHz Band for Wireless Broadband Services” was issued on 29 December 2011 to solicit views from the industry and interested parties on the arrangements of the radio spectrum assignment in the 2.5/2.6 GHz band and related licensing matters. Having considered the submissions and other relevant factors, the band will be used for wireless broadband services. The CA aims to conduct the auction in March 2013.

Hong Kong Auction Progress

12. The last SRP indicated that the auction of the 2300 – 2390 MHz band had been scheduled for February 2012. The band has been assigned through the auction of radio spectrum in the 2.3 GHz band for the provision of broadband wireless access services held in February 2012.

Way Forward

13. In the light of the above findings, it is proposed that the SRP be updated to reflect:

- (i) the consultation result and the CA's decision on the 2.5/2.6 GHz band in paragraphs 11 above; and
- (ii) the auction progress in respect of supply of spectrum in the 2.3 GHz band in paragraph 12 above.

14. The updated SRP is given at Annex 1 and scheduled to be released in April 2013.

Advice Sought

15. Members are invited to give their comments on the updated SRP at Annex 1.

Office of the Communications Authority
January 2013

Spectrum Release Plan for ~~2012-2013~~ – ~~2014~~2015

Introduction

As part of the implementation of the Radio Spectrum Policy Framework announced by the then Commerce, Industry and Technology Bureau in April 2007, the ~~Telecommunications~~-Communications Authority⁴ (~~TACA~~) will publish a spectrum release plan to inform the industry of the potential supply of radio spectrum through an open bidding or tendering process for the following three years. The plan will be updated every year on a rolling basis or as required taking into account the latest developments.

Spectrum Release Plan for ~~2012-2013~~ – ~~2014~~2015

Frequency Band (MHz)	Allocation	Earliest Release Date⁵	Target Consultation Date	Remarks
2300—2390	Fixed— Mobile—	Now	Invitation for Expression of Interest exercise completed⁶	This band will be used for broadband wireless access services. The TA aims to conduct the auction in February 2012.

⁴ Formerly Telecommunications Authority (TA). Pursuant to the Communications Authority Ordinance (Cap 616), with effect from 1 April 2012, all duties and powers of the TA are conferred on the Communications Authority (CA), and all duties and powers of the Office of the Telecommunications Authority (OFTA) are conferred on the Office of the Communications Authority (OFCA), the executive arm of the CA.

⁵ Earliest release date refers to the earliest date when the spectrum concerned is expected to be available for release to the market for auction or tendering, subject to the outcome of consultation and passing of the relevant subsidiary legislation. It does not however necessarily refer to the actual date when the auction or tendering will take place.

⁶ ~~A TA Statement, available at <http://www.ofca.gov.hk/en/tas/ftn/tas20110309.pdf>, was issued on 9 March 2011.~~

Frequency Band (MHz)	Allocation	Earliest Release Date ⁵	Target Consultation Date	Remarks
2515 – 2540 2635 – 2660	Fixed Mobile	Now	Consultation to be conducted shortly completed ⁷	This band may will be used for provision of public telecommunications wireless broadband services. <u>The OFCA aims to conduct the auction in March 2013.</u>

Spectrum included in previous versions of Spectrum Release Plan

Frequency Band (MHz)	Allocation	Remarks
216 – 223	Broadcasting Fixed Mobile	Channel 11A (216.160 – 217.696 MHz), Channel 11B (217.872 – 219.408 MHz) and Channel 11D (221.296 – 222.832 MHz) may be used for new digital broadcasting and telecommunications services, including broadcast-type mobile TV and digital audio broadcasting (DAB) services. Channel 11C (219.584 – 221.120 MHz) has been assigned for DAB services.
678 – 686 (UHF TV Channel No. 47)	Broadcasting Mobile	The band has been assigned through the auction of radio spectrum in the UHF band for the provision of broadcast-type mobile TV services held in June 2010.

⁷ A CA Statement, available at http://www.coms-auth.hk/filemanager/common/policies_regulations/ca_statements/07_2012.pdf, was issued on 4 July 2012.

Frequency Band (MHz)	Allocation	Remarks
798 – 806 (UHF TV Channel No. 62)	Broadcasting Mobile	<p>This band may be used for terrestrial broadcasting, digital broadcasting and telecommunications services, including broadcast-type mobile TV services.</p> <p>As a result of the second consultation on the development of mobile TV services⁸, this band would be reserved for future broadcasting or telecommunications services when technology further evolves.</p> <p>The Chief Executive in Council decided in September 2009 that Radio Television Hong Kong (RTHK) should be allocated resources and frequency spectrum to provide, inter alia, digital terrestrial TV (DTT) services as the public service broadcaster. In April 2011, Government indicated to the <u>former Telecommunications Authority (TA)</u> that RTHK has to make use of Channel 62, currently the only UHF TV frequency available for the provision of DTT services with territory-wide coverage <u>by that time</u>, for the delivery of its DTT services. On present indications, RTHK will be in a position to conduct trials for its transmission network around mid 2012, and it will need a formal assignment of Channel 62 to it by the TA before commencing its trial. <u>In view of the Government's decision and upon RTHK's application, the former TA assigned Channel 62 to RTHK in March 2012 for DTT services. RTHK has started DTT trial transmission on Channel 62 commencing July 2012.</u></p>
832.5 – 837.5 877.5 – 882.5	Mobile	The band has been assigned through the auction of radio spectrum in the 850 MHz, 900 MHz and 2 GHz Bands for Provision of Public Mobile Telecommunications Services held in February 2011 and March 2011.
885 – 890 930 – 935	Mobile	The band has been assigned through the auction of radio spectrum in the 850 MHz, 900 MHz and 2 GHz Bands for Provision of Public Mobile Telecommunications Services held in February 2011 and March 2011.

⁸ The Second Consultation on Development of Mobile Television Service was conducted in January 2008 (http://www.cedb.gov.hk/ctb/eng/paper/doc/mobile_TV2.pdf). Paragraph 3.10 of the consultation paper states that 798MHz – 806MHz (UHF TV Channel No. 62) would be reserved for future DTT services, either commercial or otherwise, or other broadcasting and telecommunications services when technology further evolves.

Frequency Band (MHz)	Allocation	Remarks
1466 – 1480	Broadcasting Mobile	This band may be used for new digital broadcasting and telecommunications services, including broadcast-type mobile TV and DAB services. As a result of the second consultation on the development of mobile TV services which took place in January 2008, this band would be reserved subject to further development of the worldwide market.
1780.1 – 1785 1875.1 – 1880	Mobile	This band has been assigned through the auction held in June 2009.
2010 – 2019.7	Fixed Mobile	The band was listed for the auction of radio spectrum in the 850 MHz, 900 MHz and 2 GHz Bands for Provision of Public Mobile Telecommunications Services held in February to March 2011 but was not acquired by any bidder in the auction. The TA-CA will review the demand for this band.
<u>2300 – 2390</u>	<u>Fixed</u> <u>Mobile</u>	<u>This band has been assigned through the auction of spectrum for broadband wireless access service held in February 2012.</u>
2500 – 2515 2620 – 2635	Fixed Mobile	The band has been assigned through the auction of spectrum for broadband wireless access service held in January 2009.
2540 – 2570 2660 – 2690	Fixed Mobile	The band has been assigned through the auction of spectrum for broadband wireless access service held in January 2009.
2570 – 2620	Fixed Mobile	The frequency band of 2600 – 2615 MHz was listed for the auction on spectrum for broadband wireless access service held in January 2009 but was not acquired by any bidder in the auction. The frequency band of 2575 – 2615 MHz has been reserved <u>assigned</u> for Government use. The frequency bands of 2570 – 2575 MHz and 2615 – 2620 MHz are reserved as guard bands and will not be made available for assignment.

This spectrum release plan (the Plan) is for information by the industry and public. Publication of the Plan does not constitute any allocation or assignment of the spectrum. The Plan does not bind the ~~TA-CA~~ in exercise of ~~his-its~~ discretion in the actual spectrum allocation

and assignment. The ~~TA CA~~ will conduct separate consultation exercises before exercising his powers under sections 32H(2)(a) and (b) and 32I(1) of the Telecommunications Ordinance (Cap 106) as is reasonable in all the circumstances of the case. In making a decision on spectrum allocation and/or assignment, the ~~TA-CA~~ will also take into account all relevant matters of the case. The ~~TA CA~~ is entitled to depart or deviate from the Plan where the circumstances so warrant. The Plan is therefore not legally binding on the ~~TA-CA~~ and is subject to annual review and may from time to time be amended, as and when it is considered necessary in the light of latest developments.

Office of the ~~Telecommunications-Communication~~ Authority
~~19 December 2014~~ April 2013