

RADIO SPECTRUM AND TECHNICAL STANDARDS ADVISORY COMMITTEE

Proposed Spectrum Release Plan for 2014-16

Introduction

This paper proposes the updates on the spectrum release plan (“SRP”) for its coming release that covers 2014 – 2016.

Background

2. An SRP is published by the Communications Authority (“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 is updated every year on a rolling basis or as required taking into account the latest developments. The last SRP was published in February 2013 to cover the potential supply of spectrum for 2013 – 2015.

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.

Trend of Spectrum Allocations

1900 – 2200 MHz Band

4. In Australia, the frequency assignments in the 2 GHz band, including the paired band 1920 – 1980 MHz / 2110 – 2170 MHz and the unpaired band 1900 – 1920 MHz, will expire in October 2017. According to the Australian Communications and Media Authority (“ACMA”), a review of the re-assignment of this spectrum is expected to commence in 2015.

5. In Hong Kong, the existing term of assignments to the operators in the 1900 – 2200 MHz band for the provision of 3G mobile services will expire in October 2016. After public consultation, the CA and the Secretary for Commerce and Economic Development issued a statement¹ (“the Statement”) on 15 November 2013 announcing the arrangements for re-assignment of the frequency spectrum in the aforesaid band upon expiry of the existing assignments. In accordance with the Statement, 2×19.6 MHz of spectrum in the paired bands 1930.2 – 1940.0 MHz / 2120.2 – 2130.0 MHz and 1960.0 – 1969.8 MHz / 2150.0 – 2159.8 MHz will be made available for auction after completion of the necessary legislative amendments. The earliest release date of these paired bands for auction is 2014Q4. For the unpaired bands assigned to the operators, i.e. 1904.9 – 1919.9 MHz and 2019.7 – 2024.7 MHz, they will be put back to reserve upon expiry of the existing term of assignments. Subject to the market demand and availability of IMT equipment operating in these bands, this 20 MHz of unpaired spectrum may be considered for assignment to IMT services in future.

2500 – 2690 MHz Band

6. In the UK, the Office of Communications auctioned the 2500 – 2690 MHz band which is suitable for mobile broadband services in January 2013. 2×70 MHz of spectrum in the paired band 2500 – 2570 MHz / 2620 – 2690 MHz was assigned to three operators. Two of these operators also obtained 25 MHz spectrum each in the unpaired band 2570 – 2620 MHz.

7. In Australia, ACMA assigned 2×70 MHz of spectrum in the paired band 2500 – 2570 MHz / 2620 – 2690 MHz to three operators for the provision of wireless broadband services in April/May 2013. For the mid-band gap, i.e. 2570 – 2620 MHz which is not available for auction, existing outside broadcast applications are allowed to continue operation in this band.

8. In Hong Kong, 2×70 MHz of spectrum in the paired band 2500 – 2570 MHz / 2620 – 2690 MHz was assigned to mobile network operators through two rounds of auctions –

- (a) 2×45 MHz of spectrum in the paired bands, i.e. 2500 – 2515 MHz / 2620 – 2635 MHz and 2540 – 2570 MHz / 2660 – 2690 MHz, auctioned in January 2009;

¹ Statement of the Communications Authority and the Secretary for Commerce and Economic Development on Arrangements for the Frequency Spectrum in the 1.9 – 2.2 GHz band upon Expiry of the Existing Frequency Assignments for the Provision of 3G Mobile Services and the Spectrum Utilisation Fee is available at http://www.coms-auth.hk/filemanager/statement/en/upload/237/ca_statements20131115_en.pdf.

- (b) 2×25 MHz of spectrum in the paired bands, i.e. 2515 – 2540 MHz / 2635 – 2660 MHz, auctioned in March 2013.

Hong Kong Auction Progress

9. The SRP for 2013 – 2015 covers the auction of the 2515 – 2540 MHz / 2635 – 2660 MHz bands as scheduled for March 2013. These paired band have been assigned through auction as mentioned in paragraph 8(b) above.

Way Forward

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

- (a) the CA's decision on the 1900 – 2200 MHz band as mentioned in paragraph 5 above; and
- (b) the auction progress in respect of the supply of spectrum in the 2500 – 2690 MHz band as mentioned in paragraph 9 above.

11. The updated SRP (with changes compared with the last version highlighted in red colour) is given at the Annex and scheduled to be released in February/March 2014.

Advice Sought

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

Office of the Communications Authority
January 2014

Spectrum Release Plan for 2014 – 2016

Introduction

As part of the implementation of the Radio Spectrum Policy Framework announced by the Government in April 2007, the Communications Authority (“CA”) 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 is updated every year on a rolling basis, or as required, taking into account the latest developments.

Spectrum Release Plan for 2014 – 2016

Frequency Band (MHz)	Allocation	Earliest Release Date ²	Target Consultation Date	Remarks
1930.2 – 1940.0 1960.0 – 1969.8 2120.2 – 2130.0 2150.0 – 2159.8	Fixed Mobile	2014 Q4	Consultation completed	These bands are currently assigned to mobile network operators for the provision of 3G mobile services. The assignments will expire on 21 October 2016. In accordance with the decision of the CA made on 15 November 2013, ³ these bands will be auctioned in the fourth quarter of 2014 subject to the passage of the necessary legislative amendments. The successful bidders may start using the acquired band from 22 October 2016.

² 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.

³ See *Statement of the Communications Authority and the Secretary for Commerce and Economic Development on Arrangements for the Frequency Spectrum in the 1.9 – 2.2 GHz band upon Expiry of the Existing Frequency Assignments for the Provision of 3G Mobile Services and the Spectrum Utilisation Fee* (http://www.coms-auth.hk/filemanager/statement/en/upload/237/ca_statements20131115_en.pdf).

Frequency Band (MHz)	Allocation	Earliest Release Date ²	Target Consultation Date	Remarks
2515—2540 2635—2660	Fixed Mobile	Now	Consultation-completed	This band will be used for wireless broadband services. The auction will be conducted in March 2013.

Spectrum included in previous versions of Spectrum Release Plan

Frequency Band (MHz)	Allocation	Remarks
216 – 223	Broadcasting Fixed Mobile	<p>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.</p> <p>Channel 11C (219.584 – 221.120 MHz) has been assigned for DAB services.</p>
678 – 686 (UHF TV Channel No. 47)	Broadcasting Mobile	<p>This band was assigned through the auction of radio spectrum in the UHF band held in June 2010 for the provision of broadcast-type mobile TV services.</p>
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 services, 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 former Telecommunications Authority (“TA”) that RTHK has to make use of Channel 62, the only UHF TV frequency available for the provision of DTT services with territory-wide coverage, for the delivery of its DTT services. 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 from July 2012. After conducting a series of DTT trial transmission from July 2012 to January 2014, RTHK started its trial DTT service on Channel 62 in January 2014.</p>

Frequency Band (MHz)	Allocation	Remarks
832.5 – 837.5 877.5 – 882.5	Mobile	These bands were assigned through the auction of radio spectrum in the 850 MHz, 900 MHz and 2 GHz Bands held in February/March 2011 for the provision of public mobile telecommunications services.
885 – 890 930 – 935	Mobile	These bands were assigned through the auction of radio spectrum in the 850 MHz, 900 MHz and 2 GHz Bands held in February/March 2011 for the provision of public mobile telecommunications services.
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 has been reserved subject to further development of the worldwide market.
1780.1 – 1785 1875.1 – 1880	Mobile	These bands were assigned through the auction held in June 2009.
1904.9 – 1919.9 2019.7 – 2024.7	Fixed Mobile	These bands ⁴ are currently assigned to mobile network operators for the provision of 3G mobile services. The assignments will expire on 21 October 2016. In accordance with the decision of the CA made on 15 November 2013, ³ these bands will be put back to reserve upon expiry of the existing term of assignments in October 2016.
2010 – 2019.7	Fixed Mobile	This band was listed for the auction of radio spectrum in the 850 MHz, 900 MHz and 2 GHz Bands held in February/March 2011 for the provision of public mobile telecommunications services but was not acquired by any bidder in the auction. The CA will review the demand for this band.
2300 – 2390	Fixed Mobile	This band was assigned through the auction of spectrum for broadband wireless access service held in February 2012.

⁴ The frequency bands 1904.9 – 1919.9 MHz and 2019.7 – 2024.7 MHz have not been included in any previous versions of the Spectrum Release Plan because they were auctioned before the first release of the Spectrum Release Plan. These bands are nevertheless included in this section as they may be released in future.

Frequency Band (MHz)	Allocation	Remarks
2500 – 2515 2620 – 2635	Fixed Mobile	These bands were assigned through the auction of spectrum for broadband wireless access service held in January 2009.
2515 – 2540 2635 – 2660	Fixed Mobile	These bands were assigned through the auction of spectrum for broadband wireless access service held in March 2013.
2540 – 2570 2660 – 2690	Fixed Mobile	These bands were 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 of 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 assigned 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 CA in exercise of its discretion in the actual spectrum allocation and assignment. The 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 CA will also take into account all relevant matters of the case. The CA is entitled to depart or deviate from the Plan where the circumstances so warrant. The Plan is therefore not legally binding on the 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.