

**4G AND IMT-ADVANCED SPECTRUM RIGHT (2017)**

**GRANTED BY THE INFO-COMMUNICATIONS  
MEDIA DEVELOPMENT AUTHORITY  
UNDER REGULATION 6 OF THE TELECOMMUNICATIONS (RADIO-  
COMMUNICATION) REGULATIONS  
TO  
TPG TELECOM PTE LTD**

**ISSUED ON 1 JULY 2017  
(REVISED ON 9 JULY 2020)**

## **PART I: THE 4G AND IMT-ADVANCED SPECTRUM RIGHT (2017)**

### **1. Grant of 4G and IMT-Advanced Spectrum Right (2017)**

- 1.1 The Info-communications Media Development Authority (hereinafter referred to as the "Authority"), in exercise of the powers conferred on it pursuant to Regulation 6 of the Telecommunications (Radio-communication) Regulations and the Telecommunications Act (Cap. 323) (hereinafter referred to as "the Act") hereby grants to TPG Telecom Pte Ltd (hereinafter referred to as "the Grantee"), subject to the conditions herein, the right to use the radio frequency spectrum which has been allocated to the Grantee by the Authority and which is more particularly described in Schedule A (hereinafter referred to as "the Assigned Radio Frequency Spectrum") for the purposes of operating public cellular mobile telecommunication systems (hereinafter referred to as "the Systems") for the provision of fourth-generation telecommunication services (hereinafter referred to as "4G") and/or International Mobile Telecommunications-Advanced telecommunication services (hereinafter referred to as "IMT-Advanced"), and other telecommunication services (if approved by the Authority), as specified in the Facilities-Based Operator's Licence to Provide Facilities-Based Operations dated 1 April 2017 granted by the Authority to the Grantee pursuant to Section 5 of the Act (hereinafter referred to as the "4G and IMT-Advanced Spectrum Right (2017)").
- 1.2 The Grantee acknowledges that this 4G and IMT-Advanced Spectrum Right (2017) was granted to the Grantee on the basis of allocation specified in the procedures and conditions of participation issued by the Authority pursuant to Regulation 7 of the Telecommunications (Radio-communication) Regulations, and as amended or varied by the Authority from time to time (hereinafter referred to as the "Auction Rules"). The Grantee hereby represents and warrants that it has complied with the Auction Rules and has not been involved in any act or omission of any act, constituting a breach of the Auction Rules, and shall fully comply with all requirements as the Authority may determine for the grant of this 4G and IMT-Advanced Spectrum Right (2017).
- 1.3 The Grantee acknowledges and agrees that in the event the Authority determines that the Grantee has breached any of the Auction Rules, or used the Assigned Radio Frequency Spectrum for any purpose other than to operate the Systems for the provision of 4G and/or IMT-Advanced, and other telecommunication services (if approved by the Authority and as specified in the Grantee's FBO Licence referred to in Condition 1.1), or breached any of the terms and conditions of this 4G and IMT-Advanced Spectrum Right

(2017), the Authority shall be entitled to cancel or suspend this 4G and IMT-Advanced Spectrum Right (2017) or any part thereof, and/or impose a financial penalty, in accordance with Condition 16 of this 4G and IMT-Advanced Spectrum Right (2017).

## **2. Duration of 4G and IMT-Advanced Spectrum Right (2017)**

2.1 This 4G and IMT-Advanced Spectrum Right (2017) shall come into force on 1 July 2017, and shall be valid until 30 June 2033 unless suspended or cancelled by the Authority in accordance with Condition 16 or terminated in accordance with Condition 15.

2.2 This 4G and IMT-Advanced Spectrum Right (2017) may be extended or further renewed for such period as the Authority thinks fit and subject to such terms and conditions as may be specified by the Authority in its absolute discretion.

## **3. Geographic Area**

3.1 The geographic area in which the Grantee is permitted to use the Assigned Radio Frequency Spectrum for the purposes of operating the Systems is for the whole island of Singapore (including MRT underground stations/lines and road tunnels), the offshore islands and the territorial waters up to 15km from the coastline of the island of Singapore<sup>i</sup>.

## **4. Payment for Grant of 4G and IMT-Advanced Spectrum Right (2017)**

4.1 The Grantee shall pay to the Authority the amount(s) specified in Schedule B of this 4G and IMT-Advanced Spectrum Right (2017) by such mode or modes of payment as the Authority may determine, without set-off or counter-claim, on the date(s) specified therein, failing which the Authority shall be entitled to cancel or suspend this 4G and IMT-Advanced Spectrum Right (2017) or part thereof in accordance with Condition 16.

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<sup>i</sup> Except where limitations in service coverage are due to technical requirements imposed by the Authority, such as that to limit interference with neighbouring countries.

## **PART II: 4G AND IMT-ADVANCED SPECTRUM RIGHT (2017) REQUIREMENTS**

### **5. Additional licences required**

- 5.1 The Grantee shall not use the Assigned Radio Frequency Spectrum for the purposes of operating the Systems for the provision of 4G and/or IMT-Advanced, and other telecommunication services (if approved by the Authority), unless the Grantee holds:-
- (a) a valid and current licence issued pursuant to Section 5 of the Act for the establishment, installation, operation and maintenance of telecommunication systems and the provision of the telecommunication services thereunder; and
  - (b) a valid and current licence issued pursuant to Regulation 23 and/or Regulation 28 of the Telecommunications (Radio-communication) Regulations, as the case may be, for the establishment, installation and operation of radio-communication stations and/or networks comprising the Systems.

### **PART III: OBLIGATIONS OF THE GRANTEE**

#### **6. Statutory Compliance**

6.1 The Grantee shall observe and comply with the Act, the Info-communications Media Development Authority Act (the “IMDA Act”), the Telecommunications (Radio-communication) Regulations, the International Telecommunications Convention and any other relevant treaty or convention to which Singapore is a party.

6.2 Nothing in this 4G and IMT-Advanced Spectrum Right (2017) shall be taken as discharging the Grantee from its obligation to obtain any other rights, licences, permits or approvals that may be required under any written law in force in Singapore.

#### **7. International Obligations**

7.1 The Grantee shall exercise its rights and powers and perform its duties and obligations under this 4G and IMT-Advanced Spectrum Right (2017) in a manner, which is not inconsistent with or derogates from the Government of Singapore's obligations under any relevant convention, agreement, arrangement or treaty to which Singapore is a party.

7.2 The Authority may notify the Grantee from time to time of any such convention, agreement, arrangement or treaty to which Condition 7.1 applies for its compliance.

#### **8. Codes of Practice and Directions issued by the Authority**

8.1 The Grantee shall comply with all relevant Codes of Practice issued by the Authority as well as any additional or supplemental guidelines, which the Authority may issue from time to time as may be applicable to the Grantee.

8.2 The Grantee shall strictly and without any undue delay comply with any and all directions, which the Authority may from time to time issue in exercise of its powers, functions or duties under the Act, the IMDA Act, the Telecommunications (Radio-communication) Regulations or this 4G and IMT-Advanced Spectrum Right (2017).

8.3 The Authority may, by notice in writing to the Grantee, amend, vary or revoke wholly or in part any directions issued by it pursuant to Condition 8.2.

8.4 Unless otherwise expressly specified, the Grantee shall safeguard the secrecy of all directions issued by the Authority. The Grantee shall neither during the currency nor after the expiry, termination, suspension or cancellation of this 4G and IMT-Advanced Spectrum Right (2017) disclose, or aid or permit the disclosure of any of the said directions to any person not authorised to receive the same without the prior written consent of the Chief Executive Officer of the Authority. The Grantee shall further take all reasonable precautions in dealing with the said directions so as to prevent any unauthorised person from having access to the same.

## **9. Provision of Information to the Authority**

9.1 The Grantee shall provide the Authority with any and all documents and/or information within its knowledge, custody or control that the Authority may by notice or direction require for the exercise of its powers, functions and duties under the Act, the IMDA Act, the Telecommunications (Radio-communication) Regulations, or in this 4G and IMT-Advanced Spectrum Right (2017).

9.2 In order to monitor the Grantee's compliance with the conditions of this 4G and IMT-Advanced Spectrum Right (2017), the Authority may also direct the Grantee to arrange at its own cost for a separate and independent audit of its activities. The Grantee shall, at the Authority's request, submit the audited accounts and reports prepared under this Condition 9 to the Authority for its inspection.

9.3 The Grantee shall, when expressly notified, keep in strict confidence any documents or information so required by the Authority pursuant to Condition 9.1 as well as the fact that the Authority has requested for such documents or information.

9.4 Subject to Condition 9.5, the Authority may use and disclose the documents and information required by the Authority pursuant to Condition 9.1 to such persons as the Authority deems fit.

9.5 Where the Authority proposes to disclose the documents and information obtained pursuant to Condition 9.1 and the Authority considers that the disclosure would result in the release of information concerning the business or commercial or financial affairs of the Grantee, which disclosure would or could reasonably be expected to adversely affect the Grantee's lawful business or commercial or financial affairs, the Authority will give the Grantee a reasonable opportunity to make representations on the proposed

disclosure before the Authority makes a final decision whether to disclose the information.

## **10. Ownership, Shareholding and Management Arrangements**

10.1 The Grantee shall obtain the Authority's approval for the appointment of its Chairman, Board of Directors and Chief Executive Officer and shall provide the Authority with details of its ownership, shareholding and management arrangements.

10.2 Any change in the ownership, shareholding and management arrangements of the Grantee as provided pursuant to Condition 10.1 above (including but not limited to changes in the Chairman, Board of Directors or Chief Executive Officer) shall be submitted to the Authority for approval at least one (1) calendar month before such change is intended to be implemented.

10.2A The Authority may, after considering all relevant facts and circumstances, including but not limited to considerations in the public interest, IMDA's regulatory objectives and other relevant circumstances pertaining to the allocation of the Assigned Radio Frequency Spectrum to the Grantee, impose conditions for approving such change in the ownership, shareholding and management arrangements of the Grantee, which may include, without limitation:

- (a) the Grantee's return of the whole or any part of the spectrum in the Assigned Radio Frequency Spectrum to the Authority; and/or
- (b) the Grantee's payment to the Authority of such sum pertaining to the grant of spectrum rights for the provision of 4G and/or IMT-Advanced telecommunication services as may be determined by the Authority.

## **11. Use of Radio Frequencies**

11.1 The Grantee shall take all necessary steps to ensure that the use of the Assigned Radio Frequency Spectrum for the purposes of operating the Systems for the provision of 4G and/or IMT-Advanced, and other telecommunication services (if approved by the Authority), is safe and does not cause interference to the other existing radio-communication stations, networks and systems operating in the same area or radio frequency band or in other areas or radio frequency bands. The Grantee shall also take all appropriate measures to ensure that its Systems and the radio-communication stations and equipment comprised therein are adequately

protected from interference that may be caused by radio-communication stations and networks operating in the same area or radio frequency band or in other areas or radio frequency bands.

- 11.2 The Grantee shall co-operate fully with and provide all necessary assistance to (including providing such information as may be requested by) the Authority for the purposes of co-ordinating and managing the use of radio frequencies in relation to neighbouring countries and within Singapore, including but not limited to the reduction of emission levels of any radio-communication stations comprised in the Systems.
- 11.3 Subject to the Act, the IMDA Act, the Telecommunications (Radio-communication) Regulations and this Condition 11, the use of any part of the Assigned Radio Frequency Spectrum for the purposes of managing interference (including the provisioning for a guard band(s)) shall be at the discretion of the Grantee.
- 11.4 The Grantee must provide 4G and/or IMT-Advanced telecommunication services using all or part of the Assigned Radio Frequency Spectrum in accordance with the following:
- (a) Nationwide outdoor coverage by 31 December 2018;
  - (b) Coverage in all road tunnels and in-building areas by 31 December 2019; and
  - (c) Coverage in all MRT underground stations/ lines by 31 December 2021.
- 11.5 The Grantee shall use the Assigned Radio Frequency Spectrum to provide 4G and/or IMT-Advanced, and other telecommunication services (if approved by the Authority), directly to that Grantee's own retail customers as end-users of the services.
- 11.6 The Grantee shall not use the Assigned Radio Frequency Spectrum to provide any wholesale telecommunication service to any mobile operators who hold a facilities-based operator licence issued by the Authority to operate public cellular mobile telecommunication systems, unless it has obtained prior written approval from the Authority.



**12. Operation of the Systems, Radio-communication Stations and Equipment**

12.1 The Grantee shall ensure that the Systems and the radio-communication stations and equipment comprised therein that are operated within the Assigned Radio Frequency Spectrum shall at all times comply with all applicable emission standards and technical specifications or requirements specified by the Authority, from time to time, in relation thereto.

12.2 The Grantee shall ensure that the Systems and the radio-communication stations and equipment comprised therein that are operated within the Assigned Radio Frequency Spectrum are not used for unlawful purposes or misused in any way.

12.3 The height of the transmitter antenna of a radio-communication station comprised in the Systems shall not exceed 50 metres above mean sea level ("AMSL"). Where justified, the Authority may grant conditional approval for the Grantee to exceed the prescribed height provided that the Grantee shall take all necessary steps at its own cost, to ensure that the Systems will not cause interference to or receive interference from other telecommunication systems, operating within or outside of Singapore.

## **PART IV: SPECTRUM TRADING AND SHARING**

### **13. Spectrum Trading**

13.1 The Grantee shall not assign, transfer, trade, deal with or otherwise dispose of the whole or any part of the rights, privileges, duties and/or obligations under this 4G and IMT-Advanced Spectrum Right (2017) to any person or persons:

- (a) except with the prior written approval of the Authority;
- (b) except in accordance with the Act, the IMDA Act, the Telecommunications (Radio-communication) Regulations, the Code of Practice for Competition in the Provision of Telecommunication Services, and the rules and procedures relating to spectrum trading published by the Authority from time to time; and
- (c) unless the Grantee has used the Assigned Radio Frequency Spectrum to provide nationwide 4G and/or IMT-Advanced telecommunication services coverage in accordance with Condition 11.4.

13.2 Any such written approval may be given subject to such conditions that the Authority may in its discretion impose.

13.3 No assignment, transfer, trading, dealing with or disposal of the whole or any part of the rights, privileges, duties and/or obligations under this 4G and IMT-Advanced Spectrum Right (2017) shall take effect until the conditions in Condition 13.1 are satisfied.

13.4 The Grantee shall, and shall procure that the other party to the assignment, transfer, trade, deal or disposal, give to the Authority such information about the assignment, transfer, trade, deal or disposal under Condition 13.1 as the Authority requires for the purpose of giving its approval (if any) under Condition 13.1(a).

### **14. Spectrum Sharing**

14.1 The Grantee may, with the Authority's prior written approval and subject to such conditions as the Authority may in its discretion impose, enter into a commercial agreement with another person for the use of the Assigned Radio Frequency Spectrum, in accordance with the conditions of this 4G and IMT-Advanced Spectrum Right (2017), for the purpose of operating a station

and/or network subject to that person obtaining a station (spectrum) licence or a network (spectrum) licence, as the case may be (hereinafter referred to as “spectrum sharing agreement”).

- 14.2 Without prejudice to Condition 14.1, the Grantee shall, where directed by the Authority, negotiate in good faith and in a commercially reasonable manner with such person as the Authority may direct for the purpose of entering into a spectrum sharing agreement.
- 14.3 The Grantee shall, where required by the Authority, allow the shared use of the Assigned Radio Frequency Spectrum (or part thereof) with another operator for short term usage during national events or where such use is in the public interest, including the suspension and/or cessation of its operations during such events to enable such shared use.
- 14.4 The Grantee shall not authorise any person or persons (the “Authorised Person”) to operate a radio-communication station and/or network within the Assigned Radio Frequency Spectrum except in accordance with the Act, the IMDA Act, the Telecommunications (Radio-communication) Regulations, and the rules and procedures relating to spectrum sharing published by the Authority from time to time.
- 14.5 The Grantee will at all times remain liable for the acts, omissions, defaults and neglects of the Authorised Person as if they were the acts, omissions, defaults and neglects of the Grantee.

**14A. Conditions of Approval**

- 14A.1 Pursuant to Condition 13.2 and Condition 14.1 of this 4G and IMT-Advanced Spectrum Right (2017), the Authority may, after considering all relevant facts and circumstances, including but not limited to considerations in the public interest, IMDA’s regulatory objectives and other relevant circumstances pertaining to the allocation of the Assigned Radio Frequency Spectrum to the Grantee, impose such conditions, which may include, without limitation:
- (a) the Grantee’s return of the whole or any part of the spectrum in the Assigned Radio Frequency Spectrum to the Authority; and/or
  - (b) the Grantee’s payment to the Authority of such sum pertaining to the grant of spectrum rights for the provision of 4G and/or IMT-Advanced telecommunication services as may be determined by the Authority.

## **PART V: TERMINATION, SUSPENSION, CANCELLATION, VARIATION AND RESUMPTION**

### **15. Termination of 4G and IMT-Advanced Spectrum Right (2017)**

15.1 In the event that the Grantee desires to terminate this 4G and IMT-Advanced Spectrum Right (2017), the Grantee must obtain the Authority's approval in writing at least six months in advance.

15.2 No termination of this 4G and IMT-Advanced Spectrum Right (2017) shall take effect until the Authority's approval in writing is obtained under Condition 15.1.

### **16. Suspension and Cancellation of 4G and IMT-Advanced Spectrum Right (2017)**

16.1 The Authority may suspend or cancel the 4G and IMT-Advanced Spectrum Right (2017) in whole or in part, and/or impose a financial penalty of such amount as the Authority thinks fit, in accordance with Regulation 16 of the Telecommunications (Radio-communication) Regulations.

### **17. Rights upon Termination, Suspension or Cancellation**

17.1 Any termination, suspension or cancellation of this 4G and IMT-Advanced Spectrum Right (2017) shall be without prejudice to the rights and remedies which may accrue to the Grantee or the Authority under this 4G and IMT-Advanced Spectrum Right (2017) or any written law as at the date of termination, suspension or cancellation, except that the Grantee shall not have the right to seek compensation or refund of the 4G and IMT-Advanced Spectrum Right (2017) fee paid under Condition 4.1 or any other fee paid in advance, whether in whole or in part.

### **18. Variation of 4G and IMT-Advanced Spectrum Right (2017)**

18.1 The Authority may vary the conditions of this 4G and IMT-Advanced Spectrum Right (2017) in accordance with the Telecommunications (Radio-communication) Regulations.

**19. Resumption of 4G and IMT-Advanced Spectrum Right (2017)**

19.1 The Authority may, in accordance with Regulations 17 and 18 of the Telecommunications (Radio-communication) Regulations, resume this 4G and IMT-Advanced Spectrum Right (2017) in whole or in part.

**20. Exceptions and Limitations on Obligations**

20.1 The Grantee shall not be held to have failed to comply with its obligations in this 4G and IMT-Advanced Spectrum Right (2017) if and to the extent that the Authority is satisfied that it is prevented from complying with those obligations for the following reasons:-

- (a) malfunction or failure of any equipment where the Authority determines that reasonable measures were taken beforehand to prevent such malfunction or failure;
- (b) the act or omission of any national authority, local authority or international organisation; or
- (c) any other factor, which, in the opinion of the Authority is beyond the Grantee's reasonable control and which notwithstanding the exercise by it of reasonable diligence and foresight, the Grantee was unable to prevent or overcome,

Provided always that the Grantee shall use all reasonable endeavours to resolve with all reasonable speed the factor(s) preventing compliance of its obligations and shall resume complying with its obligations as soon as the factor(s) which prevented such compliance thereof is resolved.

## **PART VI: MISCELLANEOUS CONDITIONS**

### **21. Governing Law**

21.1 This 4G and IMT-Advanced Spectrum Right (2017) shall be governed by and construed according to the laws of Singapore.

### **22. Service of Notices**

22.1 All notices under this 4G and IMT-Advanced Spectrum Right (2017) shall be in writing and shall be deemed to have been given if sent by hand or pre-paid post or by facsimile to the Grantee's registered address as lodged with the Accounting and Corporate Regulatory Authority of Singapore.

### **23. Severability**

23.1 Every condition and part thereof shall be construed as a separate and severable provision so that if any condition and part thereof is held invalid, unenforceable or illegal for any reason, the remainder of this 4G and IMT-Advanced Spectrum Right (2017) shall remain in full force in every respect.

**Issued on 1 July 2017**



**Director-General (Telecoms & Post),  
Asst. CE (Connectivity & Competition Development)  
Info-communications Media Development Authority**

## **SCHEDULE OF INTERPRETATION**

In this 4G and IMT-Advanced Spectrum Right (2017), unless the context otherwise requires:

- (a) Words importing the singular or plural shall be deemed to include the plural or singular respectively;
- (b) The titles to the provisions of this 4G and IMT-Advanced Spectrum Right (2017) are for convenience of reference only and are not part of this 4G and IMT-Advanced Spectrum Right (2017) and shall not in any way affect the interpretation thereof;
- (c) Any word or expression used in this 4G and IMT-Advanced Spectrum Right (2017) shall have the same meaning as it has in the Act;
- (d) Any reference in this 4G and IMT-Advanced Spectrum Right (2017) to the Act shall include any regulations made thereunder;
- (e) Any reference in this 4G and IMT-Advanced Spectrum Right (2017) to any regulations made under the Act shall include any regulations made under any predecessor legislation until such regulations are revoked or repealed by subsidiary legislation made under the Act;
- (f) Any reference in this 4G and IMT-Advanced Spectrum Right (2017) to a person shall be deemed to include both corporations and natural and legal persons;
- (g) Any reference to monetary amounts in this 4G and IMT-Advanced Spectrum Right (2017) shall be deemed to be denominated in Singapore Dollars; and
- (h) Any reference to any Codes, guidelines or other rules or documents promulgated by the Authority shall be read as reference to such as may be amended from time to time.

## SCHEDULE A

### ASSIGNMENT OF RADIO FREQUENCY SPECTRUM

1. The Assigned Radio Frequency Spectrum means the radio frequency band(s) consisting of the range of radio frequencies between the upper and lower frequency limits of the radio frequency bands specified in the tables below:

LOWER BAND	
Lower Frequency Limit	Upper Frequency Limit
895 MHz	905 MHz

UPPER BAND	
Lower Frequency Limit	Upper Frequency Limit
940 MHz	950 MHz

Lower Frequency Limit	Upper Frequency Limit
2300 MHz	2340 MHz
2570 MHz	2580 MHz



## SCHEDULE B

### PAYMENT FOR THE GRANT OF 4G AND IMT-ADVANCED SPECTRUM RIGHT (2017)

Year	Payment Due Date	Payment Amounts Due <sup>ii</sup>
1 (Base Year)	16 January 2017	S\$105,000,000 <sup>iii</sup> + S\$3,600 <sup>iv</sup> + S\$92,400 <sup>v</sup> = S\$105,096,000
	20 June 2017	S\$23,800,000 <sup>vi</sup> + S\$501,000 <sup>vii</sup> + S\$600 <sup>iv</sup> + S\$15,400 <sup>v</sup> = S\$24,317,000
2	30 June 2018	S\$107,800 <sup>v</sup>
3	30 June 2019	S\$107,800 <sup>v</sup>
4	30 June 2020	S\$107,800 <sup>v</sup>
5	30 June 2021	S\$107,800 <sup>v</sup>
6	30 June 2022	S\$107,800 <sup>v</sup>
7	30 June 2023	S\$107,800 <sup>v</sup>
8	30 June 2024	S\$107,800 <sup>v</sup>
9	30 June 2025	S\$107,800 <sup>v</sup>
10	30 June 2026	S\$107,800 <sup>v</sup>
11	30 June 2027	S\$107,800 <sup>v</sup>
12	30 June 2028	S\$107,800 <sup>v</sup>
13	30 June 2029	S\$107,800 <sup>v</sup>
14	30 June 2030	S\$107,800 <sup>v</sup>
15	30 June 2031	S\$107,800 <sup>v</sup>
16	30 June 2032	S\$107,800 <sup>v</sup>

<sup>ii</sup> Excluding the applicable GST.

<sup>iii</sup> New Entrant Spectrum Lot fee.

<sup>iv</sup> Application and processing fee.

<sup>v</sup> Annual frequency management fee.

<sup>vi</sup> 2.5 GHz Spectrum Lot fee.

<sup>vii</sup> Winning assignment bid for the 2.5 GHz Spectrum Lot fee.