

Ooredoo Myanmar Limited
Myanmar Centre Tower 1,
192 Kaba Aye Pagoda Rd.
Bahan Township
Yangon
Republic of the Union of Myanmar

30 August 2018

THE UNION OF MYANMAR

Ministry of Planning and Finance
Republic of the Union of Myanmar
Office No (26)
Nay Pyi Taw, Myanmar
Kind Attention: Minister, H.E. U Soe Win

Ministry of Transport and Communications
Post and Telecommunications Department
Republic of the Union of Myanmar
Office No (2),
Nay Pyi Taw, Myanmar
Kind Attention: Minister, H.E. U Thant Sin Maung

Myanmar Investment Commission
Republic of the Union of Myanmar
No.1, Thitsar Road, Yankin Township, Yangon
Kind Attention: Chairman, H.E. U Thaung Tun

Nationwide Telecommunication License and Spectrum License with effect from 5 February 2014

Request for Consultations

Your Excellencies:

1. We refer to the Nationwide Telecommunication License and Spectrum License effective from 5 February 2014 (collectively, the "Licenses"), which were granted by the Union of Myanmar (the "State") to Ooredoo Myanmar Limited ("OML"), of which Ooredoo Asian Investments Pte Ltd and Ooredoo Asia Pte Ltd are shareholders. The Licenses were granted with an aim to allowing OML to operate a commercial 3G mobile network in the State's territory. Copies of the Licenses, as amended, are enclosed as Annex 1.
2. As you are aware, a dispute has arisen between ourselves in relation to the Licenses, particularly in relation to the illegal interference (the "Illegal Interference") encountered in the 900 MHz spectrum licensed to OML. Despite multiple attempts at engaging with your



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offices to resolve the dispute, this has not resulted in meaningful negotiations. In most cases, we received no response whatsoever to our efforts. These efforts include:

- 2.1. At least seven letters during 2014, 2015 and 2016 addressed to the Ministry of Finance and Planning and/or the Ministry of Transport and Communications, Post and Telecommunications Department ("PTD"), advising on the ongoing issue of interference causing loss and damage;
- 2.2. At least seven meetings between February 2015 and April 2016 between successive Union Ministers of Transport and Communications and variously, the Chairman of the Board of OML and/or OML's Chief Executive Officer during which the issue of the Illegal Interference was raised and discussed;
- 2.3. Numerous meetings between officials from the PTD and OML's representatives, during which the issue of the Illegal Interference was raised;
- 2.4. A request to the State that OML be granted additional spectrum and offering to pay for such additional spectrum in order to address the effects of the Illegal Interference – this request was regrettably denied;
- 2.5. Specific references to the problem of the Illegal Interference in each of the Annual Compliance Reports we have filed with the PTD for the past four years.
3. Despite our best efforts, we have not been able to reach a resolution on the matter of the Illegal Interference and the loss and damage we have suffered as a result of it.
4. Consequently, we find ourselves having no alternative but to hereby issue you this Request for Consultations, and ~~request that you meet us for such consultations within 30 days of the date hereto. For the avoidance of doubt, this Request is made pursuant to and for the purposes of, amongst others, the Association of Southeast Asian Nations ("ASEAN") Comprehensive Investment Agreement (the "ACIA") and the Foreign Investment Law (The Pyidaungsu Hluttaw Law No. 21, 2012).~~

I. Relevant Facts

5. Following a competitive bid in which we agreed to invest more than US\$1 billion for the initial grant of spectrum and for the Licenses themselves, and pursuant to which licences we have now invested close to US \$2.4 billion in order to meet the commitments made, the development of Myanmar's telecommunications services, we were awarded the Licenses that came into effect on 5 February 2014. Subsequently, on or around April 2014 at the latest, it came to our attention that OML experienced difficulty in using the assigned 900 MHz spectrum (the "Spectrum"). In particular, this was due to a large volume of interference in the Spectrum, which adversely affected signals in the Spectrum that was used for OML to operate its mobile network, especially in the commercial capital of Yangon.
6. In late 2015 the Parties agreed that the State, through the Post and Telecommunications Department, would engage a third party, Norconsult Telematics Ltd ("Norconsult"), to investigate the interference faced and report on the causes of the same. To this end,



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Norconsult produced a report dated 3 March 2016 (the "Norconsult Report"). To produce the Norconsult Report, Norconsult took instructions from and reported directly to the State while OML agreed to be responsible for the cost thereof. A copy of the Norconsult Report is enclosed as Annex 2.

7. The Norconsult Report confirmed that there was a significant volume of interference in the Spectrum, and that such interference is primarily the result of the use of third-party repeaters, which Norconsult suspected caused uplink interference on virtually 100% of the sites it investigated. Norconsult also found evidence of the use of third-party transmitters, possibly compounding the problem of interference. As you are fully aware, the use of such third-party repeaters and transmitters is illegal under the laws of Myanmar, including but not limited to under the Telecommunications Law (The Pyidaungsu Hluttaw Law No. 31, 2013).
8. In the Norconsult Report, it was recommended that the State implement a campaign to remove the use of illegal repeaters and transmitters, in order to deal with and eradicate the Illegal Interference.
9. Only after the Norconsult Report, and despite our prior repeated requests and reminders to the State, did the State undertake direct measures to address the Illegal Interference. Accordingly, the Illegal Interference continued to affect OML's operations and business well into 2017, and continues to do so. We suffered significant loss and damage as a result.

II. The State's breaches and defaults

10. The State, in granting the Licenses to OML, intended that OML would use the Spectrum to operate a mobile network for commercial profit. The State knew that OML's operations were dependent on the Spectrum being free of interference. The State knew that interference in the Spectrum would adversely affect OML's operations and that such interference would erode the quality of signals in the Spectrum. The State was aware that this in turn would adversely affect the quality of the network provided to end-users and therefore could diminish OML's business, profitability and reputation. Accordingly, it was at all times the parties' intention and expectation that the Spectrum would be free of the Illegal Interference. In any event, OML justifiably expected that the State would enforce its own laws, including those that prohibited the use of third-party repeaters and transmitters that were a significant cause of the Illegal Interference.
11. Further, the State has explicitly accepted responsibility for preventing the Illegal Interference. Ever since we first raised this issue of the Illegal Interference to the State, the State did not at any time take the position that it did not have to ensure that the Spectrum was free of the Illegal Interference nor did it take the position that it was not responsible for preventing the Illegal Interference. On the contrary, the State assured OML that it would be taking steps to address and eradicate the Illegal Interference. Indeed, notwithstanding the mitigation measures that it could and did take to combat the Illegal Interference, OML was not in any position to eradicate the Illegal Interference caused by private parties and therefore legitimately relied on the State to do so.



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12. However, despite the State's repeated assurances, it took around two years for the State to directly address the problem of the Illegal Interference in the Spectrum. Until well into 2017, OML's operations and business were adversely affected by the Illegal Interference. Once the State took direct action during 2016 by enforcing Myanmar laws regarding the use of illegal repeaters and transmitters, the problem of the Illegal Interference was gradually alleviated. Further, due to the length of time that the State took to start addressing this issue, we were constrained to take steps to attempt to mitigate the Illegal Interference as best as we could, for example, by installing hundreds of additional sites and filters. To-date, the problem of Illegal Interference continues to persist, albeit to a reduced extent.
13. Amongst others, OML's business and market share in Myanmar has been adversely affected. As a result of the Illegal Interference, OML's operations have been severely hampered and OML was handicapped in competing with other telecommunication service providers. Consequently, OML has not been able to grow its market share and profit as was intended at the time it invested in Myanmar. Given the high inertia present in consumer telecommunications industries, OML now faces an uphill task in reclaiming the share of the market that it has lost.
14. Accordingly, we consider that the State is in breach of its obligations under the Licenses to ensure that the Spectrum granted to OML was free of the Illegal Interference, as a result of which we have suffered loss and damage. We also consider that the State is in breach of its obligations under, amongst others, the ACIA, the Telecommunications Law, and the Foreign Investment Law.

III. Accrued and continuing loss and damage suffered

15. As a result of the State's breaches and defaults, as explained above, we have suffered loss and damage. Such loss and damage include, but is not limited to:
 - * 15.1. Loss of value in the Spectrum;
 - 15.2. Costs incurred in mitigating and/or reducing the Illegal Interference;
 - 15.3. Loss of reputation;
 - 15.4. Loss of profit and/or business;
 - 15.5. Loss of market share.
16. Currently, we estimate that the costs incurred in mitigating and/or reducing the Illegal Interference total around USD 100 million as a result of the State's breaches and defaults. For the avoidance of doubt, this figure is an estimate and we reserve the right to revise it as may be necessary. Other losses and damage are significant and are in the process of being quantified. We will provide you with interim quantifications in due course.

IV. Availability for consultations

17. In light of the above, we request for consultations with the State with a view to reaching an amicable resolution of the present dispute, in the best interests of all parties involved. To this



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end, please let us know your proposed date(s) and time(s) for such a meeting over the next 30 days, and we will endeavour to accommodate the schedules of the State's representatives. All material facts and information on this dispute are already within the State's possession and knowledge. Notwithstanding, please let us know if the State requires any further information for the purposes of the consultations.

18. We reserve the right to take all steps and measures necessary to protect our interests, including but not limited to commencing formal legal proceedings against the State under the applicable agreements, instruments and/or laws without further reference to the State.
19. Please promptly acknowledge receipt of this letter. All our rights are reserved in the meantime.

Ooredoo Myanmar Limited

Vikram Sinha, Chief Executive Officer

Ooredoo Asian Investments Pte Ltd

Guy Norman, Director

Ooredoo Asia Pte Ltd

Guy Norman, Director



30 November 2018

THE UNION OF MYANMAR

Ministry of Planning and Finance
Republic of the Union of Myanmar
Office No (26)
Nay Pyi Taw, Myanmar
Attention: Minister, H.E. Soe Win

Ministry of Transport and Communications
Post and Telecommunications Department
Republic of the Union of Myanmar
Office No (2)
Nay Pyi Taw, Myanmar
Attention: Minister, H.E. Thant Sin Maung

Ministry of Investment and Foreign Economic Relations
Myanmar Investment Commission
Republic of the Union of Myanmar
No.1, Thitsar Road, Yankin Township, Yangon, Myanmar
Attention: Minister and Chairman, H.E. U Thaung Tun

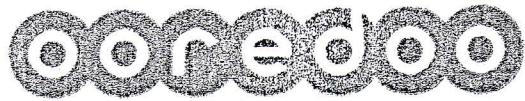
Dear Sirs,

Nationwide Telecommunication License and Spectrum License with effect from 5 February 2014

Notice of Intent to Commence Arbitration

1. We refer to the Request for Consultations dated 28 August 2018 ("Request for Consultations"), which we had submitted to you on 29 August 2018, a copy of which is enclosed.
2. Unless stated otherwise, we adopt herein the defined terms used in the Request for Consultations.
3. As you are aware, a dispute has arisen between ourselves in relation to the Licenses, particularly in relation to the Illegal Interference encountered in the 900 MHz spectrum licensed to OML. Consequently, we had submitted the Request for Consultations, and had requested that you meet us for such consultations within 30 days of the date hereto. To date, however, no such meeting has occurred.
4. Accordingly, we are now constrained to issue this Notice of Intent to Commence Arbitration. For the avoidance of doubt, this Notice of Intent to Commence Arbitration is made pursuant to and for the purposes of the ACIA.

5. The relevant facts of this dispute are stated in the Request for Consultations.
- I. Summary of the State's breaches and defaults
 6. The State's breaches and defaults have been set out in detail in the Request for Consultations. As explained at paragraphs 10 to 16 of the Request for Consultations, the State is in breach of its obligations under the Licenses to ensure that the Spectrum granted to OML was free of the Illegal Interference, as a result of which we have suffered loss and damage. Accordingly, the State is in breach of its obligations under, amongst others, the ACIA, the Telecommunications Law, and the Foreign Investment Law.
 7. Specifically, we consider that the State is in breach of the following provisions of the ACIA, amongst others:
 - 7.1. Article 5 (National Treatment);
 - 7.2. Article 6 (Most-Favoured-Nation Treatment);
 - 7.3. Article 11 (Treatment of Investment);
 - 7.4. Article 13 (Transfers);
 - 7.5. Article 14 (Expropriation and Compensation).
- II. Summary of loss and damage suffered
 8. As a result of the State's breaches and defaults we have suffered loss and damage, which has been set out in detail in the Request for Consultations. We reserve the right to add to, supplement and/or amend our claims for loss and damage as may be necessary.
- III. Intention to commence arbitration
 9. In light of the above and of our position as set out in the Request for Consultations, we consider that we are constrained to commence arbitration under the ACIA, no earlier than 90 days after the date of this Notice of Intention to Commence Arbitration, unless this dispute is otherwise amicably resolved.
 10. The ACIA, Article 33.1, provides that arbitration may be commenced under rules chosen by the disputing investor. Accordingly, we reserve the right to commence arbitration under:
 - 10.1. The Investment Arbitration Rules of the Singapore International Arbitration Centre (1st Edition, 1 January 2017) (the "SIAC IA Rules");
 - 10.2. The International Centre for Settlement of Investment Disputes ("ICSID") Additional Facility Rules ("ICSID AF Rules");
 - 10.3. The United Nations Commission on International Trade Law ("UNCITRAL") Arbitration Rules; or
 - 10.4. The auspices of any other regional centre for arbitration in ASEAN.
 11. For the avoidance of doubt, this Notice of Intention to Commence Arbitration is provided in compliance with the ACIA, Article 34.1(b).



IV. Conclusion

12. It is our clear preference that the Government engage with us to arrive at a constructive and amicable resolution of these matters. In default thereof we will be forced to commence arbitration under the ACIA against the State.
13. We reserve the right to take all steps and measures necessary to protect our interests, including but not limited to commencing formal legal proceedings against the State under the applicable agreements, instruments and/or laws without further reference to the State.
14. For the avoidance of doubt, we reserve the right to supplement and amend this Notice of Intention to Commence Arbitration as may be necessary.
15. Please promptly acknowledge receipt of this Notice of Intention to Commence Arbitration. All our rights are reserved in the meantime.

Ooredoo Myanmar Limited

Vikram Sinha, Chief Executive Officer

A handwritten signature in black ink, appearing to read "Vikram Sinha".

Ooredoo Asian Investments Pte Ltd

Guy Norman, Director

A handwritten signature in black ink, appearing to read "Guy Norman".

Ooredoo Asia Pte Ltd

Guy Norman, Director

A handwritten signature in black ink, appearing to read "Guy Norman".



ASEAN COMPREHENSIVE INVESTMENT AGREEMENT

The Governments of Brunei Darussalam, the Kingdom of Cambodia, the Republic of Indonesia, the Lao People's Democratic Republic, Malaysia, the Union of Myanmar, the Republic of the Philippines, the Republic of Singapore, the Kingdom of Thailand and the Socialist Republic of Viet Nam, Member States of the Association of Southeast Asian Nations ("ASEAN"), hereinafter collectively referred to as "Member States" or singularly as "Member State";

RECALLING the decisions of the 39th ASEAN Economic Ministers ("AEM") Meeting held in Makati City, Philippines on 23 August 2007 to revise the Framework Agreement on the ASEAN Investment Area signed in Makati City, Philippines on 7 October 1998 ("AIA Agreement"), as amended, into a comprehensive investment agreement which is forward-looking, with improved features and provisions, comparable to international best practices in order to increase intra-ASEAN investments and to enhance ASEAN's competitiveness in attracting inward investments into ASEAN;

RECOGNISING the different levels of development within ASEAN especially the least developed Member States which require some flexibility including special and differential treatment as ASEAN moves towards a more integrated and interdependent future;

REAFFIRMING the need to move forward from the AIA Agreement and the ASEAN Agreement for the Promotion and Protection of Investments signed in Manila, Philippines on 15 December 1987 ("ASEAN IGA"), as amended, in order to further enhance regional integration to realise the vision of the ASEAN Economic Community ("AEC");

CONVINCED that sustained inflows of new investments and reinvestments will promote and ensure dynamic development of ASEAN economies;

RECOGNISING that a conducive investment environment will enhance freer flow of capital, goods and services, technology and human resource and overall economic and social development in ASEAN; and

DETERMINED to further intensify economic cooperation between and among Member States,

HAVE AGREED as follows:

SECTION A

Article 1 Objective

The objective of this Agreement is to create a free and open investment regime in ASEAN in order to achieve the end goal of economic integration under the AEC in accordance with the AEC Blueprint, through the following:

- (a) progressive liberalisation of the investment regimes of Member States;
- (b) provision of enhanced protection to investors of all Member States and their investments;
- (c) improvement of transparency and predictability of investment rules, regulations and procedures conducive to increased investment among Member States;
- (d) joint promotion of the region as an integrated investment area; and

- (e) cooperation to create favourable conditions for investment by investors of a Member State in the territory of the other Member States.

Article 2 **Guiding Principles**

This Agreement shall create a liberal, facilitative, transparent and competitive investment environment in ASEAN by adhering to the following principles:

- (a) provide for investment liberalisation, protection, investment promotion and facilitation;
- (b) progressive liberalisation of investment with a view towards achieving a free and open investment environment in the region;
- (c) benefit investors and their investments based in ASEAN;
- (d) maintain and accord preferential treatment among Member States;
- (e) no back-tracking of commitments made under the AIA Agreement and the ASEAN IGA;
- (f) grant special and differential treatment and other flexibilities to Member States depending on their level of development and sectoral sensitivities;
- (g) reciprocal treatment in the enjoyment of concessions among Member States, where appropriate; and
- (h) accommodate expansion of scope of this Agreement to cover other sectors in the future.

Article 3

Scope of Application

1. This Agreement shall apply to measures adopted or maintained by a Member State relating to:
 - (a) investors of any other Member State; and
 - (b) investments, in its territory, of investors of any other Member State.
2. This Agreement shall apply to existing investments as at the date of entry into force of this Agreement as well as to investments made after the entry into force of this Agreement.
3. For the purpose of liberalisation and subject to Article 9 (Reservations), this Agreement shall apply to the following sectors:
 - (a) manufacturing;
 - (b) agriculture;
 - (c) fishery;
 - (d) forestry;
 - (e) mining and quarrying;
 - (f) services incidental to manufacturing, agriculture, fishery, forestry, mining and quarrying; and
 - (g) any other sectors, as may be agreed upon by all Member States.

4. This Agreement shall not apply to:
 - (a) any taxation measures, except for Articles 13 (Transfers) and 14 (Expropriation and Compensation);
 - (b) subsidies or grants provided by a Member State;
 - (c) government procurement;
 - (d) services supplied in the exercise of governmental authority by the relevant body or authority of a Member State. For the purposes of this Agreement, a service supplied in the exercise of governmental authority means any service, which is supplied neither on a commercial basis nor in competition with one or more service suppliers; and
 - (e) measures adopted or maintained by a Member State affecting trade in services under the ASEAN Framework Agreement on Services signed in Bangkok, Thailand on 15 December 1995 (“AFAS”).

5. Notwithstanding sub-paragraph 4 (e), for the purpose of protection of investment with respect to the commercial presence mode of service supply, Articles 11 (Treatment of Investment), 12 (Compensation in Cases of Strife), 13 (Transfers), 14 (Expropriation and Compensation) and 15 (Subrogation) and Section B (Investment Disputes Between an Investor and a Member State), shall apply, *mutatis mutandis*, to any measure affecting the supply of a service by a service supplier of a Member State through commercial presence in the territory of any other Member State but only to the extent that they relate to an investment and obligation under this Agreement regardless of whether or not such service sector is scheduled in the Member States' schedule of commitments made under AFAS.

6. Nothing in this Agreement shall affect the rights and obligations of any Member State under any tax convention. In the event of any inconsistency between this Agreement and any such convention, that convention shall prevail to the extent of the inconsistency.

Article 4 **Definitions**

For the purpose of this Agreement:

- (a) “**covered investment**” means, with respect to a Member State, an investment in its territory of an investor of any other Member State in existence as of the date of entry into force of this Agreement or established, acquired or expanded thereafter, and has been admitted according to its laws, regulations, and national policies, and where applicable, specifically approved in writing¹ by the competent authority of a Member State;
- (b) “**freely usable currency**” means a freely usable currency as determined by the International Monetary Fund (“IMF”) under its Articles of Agreement and any amendments thereto;

¹ For the purpose of protection, the procedures relating to specific approval in writing shall be as specified in Annex 1 (Approval in Writing).

- (c) “**investment**”² means every kind of asset, owned or controlled, by an investor, including but not limited to the following:
- (i) movable and immovable property and other property rights such as mortgages, liens or pledges;
 - (ii) shares, stocks, bonds and debentures and any other forms of participation in a juridical person and rights or interest derived therefrom;
 - (iii) intellectual property rights which are conferred pursuant to the laws and regulations of each Member State;
 - (iv) claims to money or to any contractual performance related to a business and having financial value;³
 - (v) rights under contracts, including turnkey, construction, management, production or revenue-sharing contracts; and

² Where an asset lacks the characteristics of an investment, that asset is not an investment regardless of the form it may take. The characteristics of an investment include the commitment of capital, the expectation of gain or profit, or the assumption of risk.

³ For greater certainty, investment does not mean claims to money that arise solely from:

- (a) commercial contracts for sale of goods or services; or
- (b) the extension of credit in connection with such commercial contracts.

- (vi) business concessions required to conduct economic activities and having financial value conferred by law or under a contract, including any concessions to search, cultivate, extract or exploit natural resources.

The term “investment” also includes amounts yielded by investments, in particular, profits, interest, capital gains, dividend, royalties and fees. Any alteration of the form in which assets are invested or reinvested shall not affect their classification as investment;

- (d) **“investor”** means a natural person of a Member State or a juridical person of a Member State that is making, or has made an investment in the territory of any other Member State;
- (e) **“juridical person”** means any legal entity duly constituted or otherwise organised under the applicable law of a Member State, whether for profit or otherwise, and whether privately-owned or governmentally-owned, including any enterprise, corporation, trust, partnership, joint venture, sole proprietorship, association, or organisation;
- (f) **“measures”** means any measure of a Member State, whether in the form of laws, regulations, rules, procedures, decisions, and administrative actions or practice, adopted or maintained by:
 - (i) central, regional or local government or authorities; or
 - (ii) non-governmental bodies in the exercise of powers delegated by central, regional or local governments or authorities;

- (g) "**natural person**" means any natural person possessing the nationality or citizenship of, or right of permanent residence in the Member State in accordance with its laws, regulations and national policies;
- (h) "**newer ASEAN Member States**" means the Kingdom of Cambodia, the Lao People's Democratic Republic, the Union of Myanmar and the Socialist Republic of Viet Nam;
- (i) "**WTO**" means the World Trade Organization; and
- (j) "**WTO Agreement**" means the Marrakesh Agreement Establishing the World Trade Organization, done at Marrakesh, Morocco on 15 April 1994, as may be amended.

Article 5 **National Treatment**

1. Each Member State shall accord to investors of any other Member State treatment no less favourable than that it accords, in like circumstances, to its own investors with respect to the admission, establishment, acquisition, expansion, management, conduct, operation and sale or other disposition of investments in its territory.
2. Each Member State shall accord to investments of investors of any other Member State treatment no less favourable than that it accords, in like circumstances, to investments in its territory of its own investors with respect to the admission, establishment, acquisition, expansion, management, conduct, operation and sale or other disposition of investments.

Article 6

Most-Favoured-Nation Treatment⁴

1. Each Member State shall accord to investors of another Member State treatment no less favourable than that it accords, in like circumstances, to investors of any other Member State or a non-Member State with respect to the admission, establishment, acquisition, expansion, management, conduct, operation and sale or other disposition of investments.
2. Each Member State shall accord to investments of investors of another Member State treatment no less favourable than that it accords, in like circumstances, to investments in its territory of investors of any other Member State or a non-Member State with respect to the admission, establishment, acquisition, expansion, management, conduct, operation and sale or other disposition of investments.
3. Paragraphs 1 and 2 shall not be construed so as to oblige a Member State to extend to investors or investments of other Member States the benefit of any treatment, preference or privilege resulting from:

⁴ For greater certainty:

- (a) this Article shall not apply to investor-State dispute settlement procedures that are available in other agreements to which Member States are party; and
- (b) in relation to investments falling within the scope of this Agreement, any preferential treatment granted by a Member State to investors of any other Member State or a non-Member State and to their investments, under any existing or future agreements or arrangements to which a Member State is a party shall be extended on a most-favoured-nation basis to all Member States.

- (a) any sub-regional arrangements between and among Member States;⁵ or
- (b) any existing agreement notified by Member States to the AIA Council pursuant to Article 8(3) of the AIA Agreement.⁶

Article 7 **Prohibition of Performance Requirements**

1. The provisions of the Agreement on Trade-Related Investment Measures in Annex 1A to the WTO Agreement (TRIMs), which are not specifically mentioned in or modified by this Agreement, shall apply, *mutatis mutandis*, to this Agreement.
2. Member States shall undertake joint assessment on performance requirements no later than 2 years from the date of entry into force of this Agreement. The aim of such assessment shall include reviewing existing performance requirements and considering the need for additional commitments under this Article.
3. Non-WTO Members of ASEAN shall abide by the WTO provisions in accordance with their accession commitments to the WTO.

⁵ For greater certainty, sub-regional arrangements between and among Member States shall include but not be limited to Greater Mekong Sub-region (“GMS”), ASEAN Mekong Basin Development Cooperation (“AMBDC”), Indonesia-Malaysia-Thailand Growth Triangle (“IMT-GT”), Indonesia-Malaysia-Singapore Growth Triangle (“IMS-GT”), Brunei-Indonesia-Malaysia-Philippines East ASEAN Growth Area (“BIMP-EAGA”).

⁶ This sub-paragraph refers to the Treaty of Amity and Economic Relations between the Kingdom of Thailand and the United States of America signed in Bangkok, Thailand on 29 May 1966.

Article 8

Senior Management and Board of Directors

1. A Member State shall not require that a juridical person of that Member State appoint to senior management positions, natural persons of any particular nationality.
2. A Member State may require that a majority of the board of directors of a juridical person of that Member State, be of a particular nationality, or resident in the territory of the Member State, provided that this requirement does not materially impair the ability of the investor to exercise control over its investment.

Article 9

Reservations

1. Articles 5 (National Treatment) and 8 (Senior Management and Board of Directors) shall not apply to:
 - (a) any existing measure that is maintained by a Member State at:
 - (i) the central level of government, as set out by that Member State in its reservation list in the Schedule referred to in paragraph 2;
 - (ii) the regional level of government, as set out by that Member State in its reservation list in the Schedule referred to in paragraph 2; and
 - (iii) a local level of government;
 - (b) the continuation or prompt renewal of any reservations referred to sub-paragraph (a).

2. Each Member State shall submit its reservation list to the ASEAN Secretariat for the endorsement of the AIA Council within 6 months after the date of signing of this Agreement. This list shall form a Schedule to this Agreement.
3. Any amendment or modification to any reservations contained in the Schedule referred to in paragraph 2 shall be in accordance with Article 10 (Modification of Commitments).
4. Each Member State shall reduce or eliminate the reservations specified in the Schedule in accordance with the three phases of the Strategic Schedule of the AEC Blueprint and Article 46 (Amendments).
5. Articles 5 (National Treatment) and 6 (Most-Favoured-Nation Treatment) shall not apply to any measure covered by an exception to, or derogation from, the obligations under Articles 3 and 4 of the Agreement on Trade-Related Aspects of Intellectual Property Rights in Annex 1C to the WTO Agreement, as may be amended (“TRIPS Agreement”), as specifically provided in those Articles and in Article 5 of the TRIPS Agreement.

Article 10 **Modification of Commitments**

1. For a period of 12 months after the date of submission of each Member State’s reservation list, a Member State may adopt any measures or modify any of its reservations made in the Schedule under Article 9 (Reservations) for prospective applications to investors of any other Member States and their investments, provided that such measures or modification shall not adversely affect any existing investors and investments.
2. After the expiration of the period referred to in paragraph 1, a Member State may, by negotiation and

agreement with any other Member States to which it made commitments under this Agreement, adopt any measure, or modify or withdraw such commitments and reservations, provided that such measure, modification or withdrawal shall not adversely affect any existing investors or investments.⁷

3. In any such negotiations and agreement referred to in paragraph 2, which may include provisions for compensatory adjustments with respect to other sectors, the Member States concerned shall maintain a general level of reciprocal and mutually advantageous commitments and reservations that is not less favourable to investors and investments than that provided for in this Agreement prior to such negotiations and agreements.

4. Notwithstanding paragraphs 1 and 2, a Member State shall not, under any measure adopted pursuant to this Article after the entry into force of this Agreement, require an investor of any other Member State, by reason of that investor's nationality, to sell or otherwise dispose of an investment existing at the time the measure becomes effective, unless otherwise specified in the initial approval by the relevant authorities.

Article 11 **Treatment of Investment**

1. Each Member State shall accord to covered investments of investors of any other Member State, fair and equitable treatment and full protection and security.

2. For greater certainty:

⁷ For the avoidance of doubt, Member States shall not adopt any measures or modify any of its reservation under the Schedule for a period of 6 months after the expiration of the period specified in paragraph 1.

- (a) fair and equitable treatment requires each Member State not to deny justice in any legal or administrative proceedings in accordance with the principle of due process; and
 - (b) full protection and security requires each Member State to take such measures as may be reasonably necessary to ensure the protection and security of the covered investments.
3. A determination that there has been a breach of another provision of this Agreement, or of a separate international agreement, does not establish that there has been a breach of this Article.

Article 12 Compensation in Cases of Strife

Each Member State shall accord to investors of any other Member State, in relation to their covered investments which suffered losses in its territory due to armed conflict or civil strife or state of emergency, non-discriminatory treatment with respect to restitution, compensation or other valuable consideration.

Article 13 Transfers

1. Each Member State shall allow all transfers relating to a covered investment to be made freely and without delay into and out of its territory. Such transfers include:

- (a) contributions to capital, including the initial contribution;
- (b) profits, capital gains, dividends, royalties, license fees, technical assistance and technical and

management fees, interest and other current income accruing from any covered investment;

- (c) proceeds from the total or partial sale or liquidation of any covered investment;
- (d) payments made under a contract, including a loan agreement;
- (e) payments made pursuant to Articles 12 (Compensation in Cases of Strife) and 14 (Expropriation and Compensation);
- (f) payments arising out of the settlement of a dispute by any means including adjudication, arbitration or the agreement of the Member States to the dispute; and
- (g) earnings and other remuneration of personnel employed and allowed to work in connection with that covered investment in its territory.

2. Each Member State shall allow transfers relating to a covered investment to be made in a freely usable currency at the market rate of exchange prevailing at the time of transfer.

3. Notwithstanding paragraphs 1 and 2, a Member State may prevent or delay a transfer through the equitable, non-discriminatory, and good faith application of its laws and regulations relating to:

- (a) bankruptcy, insolvency, or the protection of the rights of creditors;
- (b) issuing, trading, or dealing in securities, futures, options, or derivatives;
- (c) criminal or penal offences and the recovery of the proceeds of crime;

- (d) financial reporting or record keeping of transfers when necessary to assist law enforcement or financial regulatory authorities;
- (e) ensuring compliance with orders or judgments in judicial or administrative proceedings;
- (f) taxation;
- (g) social security, public retirement, or compulsory savings schemes;
- (h) severance entitlements of employees; and
- (i) the requirement to register and satisfy other formalities imposed by the Central Bank and other relevant authorities of a Member State.

4. Nothing in this Agreement shall affect the rights and obligations of the Member States as members of the IMF, under the Articles of Agreement of the IMF, including the use of exchange actions which are in conformity with the Articles of Agreement of the IMF, provided that a Member State shall not impose restrictions on any capital transactions inconsistently with its specific commitments under this Agreement regarding such transactions, except:

- (a) at the request of the IMF;
- (b) under Article 16 (Measures to Safeguard the Balance-of-Payments); or
- (c) where, in exceptional circumstances, movements of capital cause, or threaten to cause, serious economic or financial disturbance in the Member State concerned.

5. The measures taken in accordance with sub-paragraph 4(c)⁸:

- (a) shall be consistent with the Articles of Agreement of the IMF;
- (b) shall not exceed those necessary to deal with the circumstances described in sub-paragraph 4(c);
- (c) shall be temporary and shall be eliminated as soon as conditions no longer justify their institution or maintenance;
- (d) shall promptly be notified to the other Member States;
- (e) shall be applied such that any one of the other Member States is treated no less favourably than any other Member State or non-Member State;
- (f) shall be applied on a national treatment basis; and
- (g) shall avoid unnecessary damage to investors and covered investments, and the commercial, economic and financial interests of the other Member State(s).

⁸ For greater certainty, any measures taken to ensure the stability of the exchange rate including to prevent speculative capital flows shall not be adopted or maintained for the purpose of protecting a particular sector.

Article 14

Expropriation and Compensation⁹

1. A Member State shall not expropriate or nationalise a covered investment either directly or through measures equivalent to expropriation or nationalisation (“expropriation”),¹⁰ except:

- (a) for a public purpose;
- (b) in a non-discriminatory manner;
- (c) on payment of prompt, adequate, and effective compensation; and
- (d) in accordance with due process of law.

2. The compensation referred to in sub-paragraph 1(c) shall:

- (a) be paid without delay;¹¹
- (b) be equivalent to the fair market value of the expropriated investment immediately before or at the time when the expropriation was publicly announced, or when the expropriation occurred, whichever is applicable;

⁹ This Article shall be read with Annex 2 (Expropriation and Compensation).

¹⁰ For the avoidance of doubt, any measure of expropriation relating to land shall be as defined in the Member States’ respective existing domestic laws and regulations and any amendments thereto, and shall be for the purposes of and upon payment of compensation in accordance with the aforesaid laws and regulations.

¹¹ Member States understand that there may be legal and administrative processes that need to be observed before payment can be made.

- (c) not reflect any change in value because the intended expropriation had become known earlier; and
 - (d) be fully realisable and freely transferable in accordance with Article 13 (Transfers) between the territories of the Member States.
3. In the event of delay, the compensation shall include an appropriate interest in accordance with the laws and regulations of the Member State making the expropriation. The compensation, including any accrued interest, shall be payable either in the currency in which the investment was originally made or, if requested by the investor, in a freely usable currency.
4. If an investor requests payment in a freely useable currency, the compensation referred to in sub-paragraph 1(c), including any accrued interest, shall be converted into the currency of payment at the market rate of exchange prevailing on the date of payment.
5. This Article does not apply to the issuance of compulsory licenses granted in relation to intellectual property rights in accordance with the TRIPS Agreement.

Article 15 Subrogation

1. If a Member State or an agency of a Member State makes a payment to an investor of that Member State under a guarantee, a contract of insurance or other form of indemnity it has granted on non-commercial risk in respect of an investment, the other Member State shall recognise the subrogation or transfer of any right or title in respect of such investment. The subrogated or transferred right or claim shall not be greater than the original right or claim of the

investor. This, however, does not necessarily imply recognition of the latter Member State of the merits of any case or the amount of any claims arising therefrom.

2. Where a Member State or an agency of a Member State has made a payment to an investor of that Member State and has taken over rights and claims of the investor, that investor shall not, unless authorised to act on behalf of the Member State or the agency of the Member State making the payment, pursue those rights and claims against the other Member State.

3. In the exercise of subrogated rights or claims, a Member State or the agency of the Member State exercising such rights or claims shall disclose the coverage of the claims arrangement with its investors to the relevant Member State.

Article 16 **Measures to Safeguard the** **Balance-of-Payments**

1. In the event of serious balance-of-payments and external financial difficulties or threat thereof, a Member State may adopt or maintain restrictions on payments or transfers related to investments. It is recognised that particular pressures on the balance-of-payments of a Member State in the process of economic development may necessitate the use of restrictions to ensure, *inter alia*, the maintenance of a level of financial reserves adequate for the implementation of its programme of economic development.

2. The restrictions referred to in paragraph 1 shall:

- (a) be consistent with the Articles of Agreement of the IMF;

- (b) avoid unnecessary damage to the commercial, economic and financial interests of another Member State;
 - (c) not exceed those necessary to deal with the circumstances described in paragraph 1;
 - (d) be temporary and be phased out progressively as the situation specified in paragraph 1 improves;
 - (e) be applied such that any one of the other Member States is treated no less favourably than any other Member State or non-Member State.
3. Any restrictions adopted or maintained under paragraph 1, or any changes therein, shall be promptly notified to the other Member States.
4. To the extent that it does not duplicate the process under WTO, IMF, or any other similar processes, the Member State adopting any restrictions under paragraph 1 shall commence consultations with any other Member State that requests such consultations in order to review the restrictions adopted by it.

Article 17 **General Exceptions**

1. Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between Member States or their investors where like conditions prevail, or a disguised restriction on investors of any other Member State and their investments, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any Member State of measures:

- (a) necessary to protect public morals or to maintain public order;¹²
- (b) necessary to protect human, animal or plant life or health;
- (c) necessary to secure compliance with laws or regulations which are not inconsistent with this Agreement, including those relating to:
 - (i) the prevention of deceptive and fraudulent practices to deal with the effects of a default on a contract;
 - (ii) the protection of the privacy of individuals in relation to the processing and dissemination of personal data and the protection of confidentiality of individual records and accounts;
 - (iii) safety;
- (d) aimed at ensuring the equitable or effective¹³ imposition or collection of direct taxes in respect of investments or investors of any Member State;
- (e) imposed for the protection of national treasures of artistic, historic or archaeological value;

¹² The public order exception may be invoked by a Member State only where a genuine and sufficiently serious threat is posed to one of the fundamental interests of society.

¹³ For the purpose of this sub-paragraph, footnote 6 of Article XIV of the General Agreement on Trade in Services in Annex 1B to the WTO Agreement (GATS) is incorporated into and forms an integral part of this Agreement, *mutatis mutandis*.

- (f) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.
2. Insofar as measures affecting the supply of financial services are concerned, paragraph 2 (Domestic Regulation) of the Annex on Financial Services of the General Agreement on Trade in Services in Annex 1B to the WTO Agreement ("GATS") shall be incorporated into and form an integral part of this Agreement, *mutatis mutandis*.

Article 18 Security Exceptions

Nothing in this Agreement shall be construed:

- (a) to require any Member State to furnish any information, the disclosure of which it considers contrary to its essential security interests; or
- (b) to prevent any Member State from taking any action which it considers necessary for the protection of its essential security interests, including but not limited to:
 - (i) action relating to fissionable and fusionable materials or the materials from which they derived;
 - (ii) action relating to the traffic in arms, ammunition and implements of war and to such traffic in other goods and materials as is carried on directly or indirectly for the purpose of supplying a military establishment;

- (iii) action taken in time of war or other emergency in domestic or international relations;
 - (iv) action taken so as to protect critical public infrastructure, including communication, power and water infrastructures, from deliberate attempts intended to disable or degrade such infrastructure; or
- (c) to prevent any Member State from taking any action pursuant to its obligations under the United Nations Charter for the maintenance of international peace and security.

Article 19 **Denial of Benefits**

1. A Member State may deny the benefits of this Agreement to:

- (a) an investor of another Member State that is a juridical person of such other Member State and to investments of such investor if an investor of a non-Member State owns or controls the juridical person and the juridical person has no substantive business operations in the territory of such other Member State;
- (b) an investor of another Member State that is a juridical person of such other Member State and to investments of such investor if an investor of the denying Member State owns or controls the juridical person and the juridical person has no substantive business operations in the territory of such other Member State; and

- (c) an investor of another Member State that is a juridical person of such other Member State and to an investment of such investor if investors of a non-Member State own or control the juridical person, and the denying Member State does not maintain diplomatic relations with the non-Member State.
2. Following notification to the Member State of the investor, and without prejudice to paragraph 1, a Member State may deny the benefits of this Agreement to investors of another Member State and to investments of that investor, where it establishes that such investor has made an investment in breach of the domestic laws of the denying Member State by misrepresenting its ownership in those areas of investment which are reserved for natural or juridical persons of the denying Member State.

3. A juridical person is:

- (a) “owned” by an investor in accordance with the laws, regulations and national policies of each Member States;
- (b) “controlled” by an investor if the investor has the power to name a majority of its directors or otherwise to legally direct its actions.

Article 20 **Special Formalities and Disclosure of Information**

1. Nothing in Articles 5 (National Treatment) or 6 (Most-Favoured-Nation Treatment) shall be construed to prevent a Member State from adopting or maintaining a measure that prescribes special formalities in connection with investments, including a requirement that investments be legally constituted or assume a certain legal form under the laws or regulations of the Member State and compliance with

registration requirements, provided that such formalities do not materially impair the rights afforded by a Member State to investors of another Member State and investments pursuant to this Agreement.

2. Notwithstanding Articles 5 (National Treatment) or 6 (Most-Favoured-Nation Treatment), a Member State may require an investor of another Member State, or a covered investment, to provide information concerning that investment solely for informational or statistical purposes. The Member State shall protect any confidential information from any disclosure that would prejudice legitimate commercial interests or particular juridical persons, public or private or the competitive position of the investor or the covered investment. Nothing in this paragraph shall be construed to prevent a Member State from otherwise obtaining or disclosing information in connection with the equitable and good faith application of its law.

Article 21 **Transparency**

1. In order to achieve the objectives of this Agreement, each Member State shall:

- (a) promptly and at least annually inform the AIA Council of any investment-related agreements or arrangements which it has entered into and where preferential treatment was granted;
- (b) promptly and at least annually inform the AIA Council of the introduction of any new law or of any changes to existing laws, regulations or administrative guidelines, which significantly affect investments or commitments of a Member State under this Agreement;

- (c) make publicly available, all relevant laws, regulations and administrative guidelines of general application that pertain to, or affect investments in the territory of the Member State; and
 - (d) establish or designate an enquiry point where, upon request of any natural person, juridical person or any other Member State, all information relating to the measures required to be published or made available under subparagraphs (b) and (c) may be promptly obtained.
2. Nothing in this Agreement shall require a Member State to furnish or allow access to any confidential information, including information concerning particular investors or investments, the disclosure of which would impede law enforcement, or otherwise be contrary to the public interest, or which would prejudice legitimate commercial interests of particular juridical persons, public or private.

Article 22 **Entry, Temporary Stay and Work of** **Investors and Key Personnel**

Subject to its immigration and labour laws, regulations and national policies relating to the entry, temporary stay and authorisation to work, and consistent with its commitments under AFAS, each Member State shall grant entry, temporary stay and authorisation to work to investors, executives, managers and members of the board of directors of a juridical person of any other Member State, for the purpose of establishing, developing, administering or advising on the operation in the territory of the former Member State of an investment to which they, or a juridical person of the other Member States that employs such

executives, managers and members of the board of directors, have committed or are in the process of committing a substantial amount of capital or other resources.

Article 23 **Special and Differential Treatment** **for the Newer ASEAN Member States**

In order to increase the benefits of this Agreement for the newer ASEAN Member States, and in accordance with the objectives and principles set out in the Preamble and Articles 1 (Objective) and 2 (Guiding Principles), Member States recognise the importance of according special and differential treatment to the newer ASEAN Member States, through:

- (a) technical assistance to strengthen their capacity in relation to investment policies and promotion, including in areas such as human resource development;
- (b) commitments in areas of interest to the newer ASEAN Member States; and
- (c) recognising that commitments by each newer ASEAN Member State may be made in accordance with its individual stage of development.

Article 24 **Promotion of Investment**

Member States shall cooperate in increasing awareness of ASEAN as an integrated investment area in order to increase foreign investment into ASEAN and intra-ASEAN investments through, among others:

- (a) encouraging the growth and development of ASEAN small and medium enterprises and multi-national enterprises;
- (b) enhancing industrial complementation and production networks among multi-national enterprises in ASEAN;
- (c) organising investment missions that focus on developing regional clusters and production networks;
- (d) organising and supporting the organisation of various briefings and seminars on investment opportunities and on investment laws, regulations and policies; and
- (e) conducting exchanges on other issues of mutual concern relating to investment promotion.

Article 25 **Facilitation of Investment**

Member States shall endeavour to cooperate in the facilitation of investments into and within ASEAN through, among others:

- (a) creating the necessary environment for all forms of investments;
- (b) streamlining and simplifying procedures for investment applications and approvals;
- (c) promoting dissemination of investment information, including investment rules, regulations, policies and procedures;
- (d) establishing one-stop investment centres;

- (e) strengthening databases on all forms of investments for policy formulation to improve ASEAN's investment environment;
- (f) undertaking consultation with the business community on investment matters; and
- (g) providing advisory services to the business community of the other Member States.

Article 26 Enhancing ASEAN Integration

Member States recognise the importance of fostering ASEAN economic integration through various initiatives, including the Initiative for ASEAN Integration, Priority Integration Sectors, and AEC, all of which include cooperation on investment. In order to enhance ASEAN economic integration, Member States shall endeavour to, among others:

- (a) harmonise, where possible, investment policies and measures to achieve industrial complementation;
- (b) build and strengthen capacity of Member States, including human resource development, in the formulation and improvement of investment policies to attract investment;
- (c) share information on investment policies and best practices, including promoted activities and industries; and
- (d) support investment promotion efforts amongst Member States for mutual benefits.

Article 27

Disputes Between or Among Member States

The ASEAN Protocol on Enhanced Dispute Settlement Mechanism signed in Vientiane, Lao PDR on 29 November 2004, as amended, shall apply to the settlement of disputes concerning the interpretation or application of this Agreement.

SECTION B

Investment Dispute Between an Investor and a Member State

Article 28

Definitions

For the purpose of this Section:

- (a) “**Appointing Authority**” means:
 - (i) in the case of arbitration under Article 33(1)(b) or (c), the Secretary-General of ICSID;
 - (ii) in the case of arbitration under Article 33(1)(d), the Secretary-General of the Permanent Court of Arbitration; or
 - (iii) in the case of arbitration under Article 33(1)(e) and (f), the Secretary-General, or a person holding equivalent position, of that arbitration centre or institution;

- (b) “**disputing investor**” means an investor of a Member State that makes a claim on its own behalf under this Section, and where relevant, includes an investor of a Member State that makes a claim on behalf of a juridical person of the other Member State that the investor owns or controls;
- (c) “**disputing Member State**” means a Member State against which a claim is made under this Section;
- (d) “**disputing parties**” means a disputing investor and a disputing Member State;
- (e) “**ICSID**” means the International Centre for Settlement of Investment Disputes;
- (f) “**ICSID Additional Facility Rules**” means the Rules Governing the Additional Facility for the Administration of Proceedings by the Secretariat of the International Centre for Settlement of Investment Disputes;
- (g) “**ICSID Convention**” means the Convention on the Settlement of Investment Disputes between States and National of other States, done at Washington, D.C., United States of America on 18 March 1965;
- (h) “**New York Convention**” means the United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards, done at New York, United States of America on 10 June 1958;
- (i) “**non-disputing Member State**” means the Member State of the disputing investor; and

(j) “**UNCITRAL Arbitration Rules**” means the arbitration rules of the United Nations Commission on International Trade Law, approved by the United Nations General Assembly on 15 December 1976.

Article 29 **Scope of Coverage**

1. This Section shall apply to an investment dispute between a Member State and an investor of another Member State that has incurred loss or damage by reason of an alleged breach of any rights conferred by this Agreement with respect to the investment of that investor.
2. A natural person possessing the nationality or citizenship of a Member State shall not pursue a claim against that Member State under this Section.
3. This Section shall not apply to claims arising out of events which occurred, or claims which have been raised prior to the entry into force of this Agreement.
4. Nothing in this Section shall be construed so as to prevent a disputing investor from seeking administrative or judicial settlement available within the country of a disputing Member State.

Article 30 **Conciliation**

1. The disputing parties may at any time agree to conciliation, which may begin at any time and be terminated at the request of the disputing investor at any time.

2. If the disputing parties agree, procedures for conciliation may continue while procedures provided for in Article 33 (Submission of a Claim) are in progress.
3. Proceedings involving conciliation and positions taken by the disputing parties during these proceedings shall be without prejudice to the rights of either disputing parties in any further proceedings under this Section.

Article 31 **Consultations**

1. In the event of an investment dispute, the disputing parties shall initially seek to resolve the dispute through consultation and negotiation, which may include the use of non-binding, third party procedures. Such consultations shall be initiated by a written request for consultations delivered by the disputing investor to the disputing Member State.
2. Consultations shall commence within 30 days of receipt by the disputing Member State of the request for consultations, unless the disputing parties otherwise agree.
3. With the objective of resolving an investment dispute through consultations, a disputing investor shall make all reasonable efforts to provide the disputing Member State, prior to the commencement of consultations, with information regarding the legal and factual basis for the investment dispute.

Article 32 **Claim by an Investor of a Member State**

If an investment dispute has not been resolved within 180 days of the receipt by a disputing Member State of a request for consultations, the disputing investor may, subject to this Section, submit to arbitration a claim:

- (a) that the disputing Member State has breached an obligation arising under Articles 5 (National Treatment), 6 (Most-Favoured-Nation Treatment), 8 (Senior Management and Board of Directors), 11 (Treatment of Investment), 12 (Compensation in Cases of Strife), 13 (Transfers) and 14 (Expropriation and Compensation) relating to the management, conduct, operation or sale or other disposition of a covered investment; and
- (b) that the disputing investor in relation to its covered investment has incurred loss or damage by reason of or arising out of that breach.

Article 33 **Submission of a Claim**

1. A disputing investor may submit a claim referred to in Article 32 (Claim by an Investor of a Member State) at the choice of the disputing investor:

- (a) to the courts or administrative tribunals of the disputing Member State, provided that such courts or tribunals have jurisdiction over such claims; or
- (b) under the ICSID Convention and the ICSID Rules of Procedure for Arbitration Proceedings,¹⁴ provided that both the disputing Member State and the non-disputing Member State are parties to the ICSID Convention; or

¹⁴ In the case of the Philippines, submission of a claim to ICSID and the ICSID Rules of Procedure for Arbitration Proceedings shall be subject to a written agreement between the disputing parties in the event that an investment dispute arises.

- (c) under the ICSID Additional Facility Rules, provided that either of the disputing Member State or the non-disputing Member State is a party to the ICSID Convention; or
- (d) under the UNCITRAL Arbitration Rules; or
- (e) to the Regional Centre for Arbitration at Kuala Lumpur or any other regional centre for arbitration in ASEAN; or
- (f) if the disputing parties agree, to any other arbitration institution,

provided that resort to any arbitration rules or fora under sub-paragraphs (a) to (f) shall exclude resort to the other.

2. A claim shall be deemed submitted to arbitration under this Section when the disputing investor's notice of or request for arbitration ("notice of arbitration") is received under the applicable arbitration rules.

3. The arbitration rules applicable under paragraph 1, as in effect on the date the claim or claims were submitted to arbitration under this Section, shall govern the arbitration except to the extent modified by this Agreement.

4. In relation to a specific investment dispute or class of disputes, the applicable arbitration rules may be waived, varied or modified by written agreement between the disputing parties. Such rules shall be binding on the relevant tribunal or tribunals established under this Section, and on individual arbitrators serving on such tribunals.

5. The disputing investor shall provide with the notice of arbitration:

- (a) the name of the arbitrator that the disputing investor appoints; or
- (b) the disputing investor's written consent for the Appointing Authority to appoint that arbitrator.

Article 34

Conditions and Limitations on Submission of a Claim

1. The dispute shall be submitted to arbitration under Article 33(1)(b) to (f) in accordance with this Section, and shall be conditional upon:

- (a) the submission of the investment dispute to such arbitration taking place within 3 years of the time at which the disputing investor became aware, or should reasonably have become aware, of a breach of an obligation under this Agreement causing loss or damage to the disputing investor or a covered investment; and
- (b) the disputing investor providing written notice, which shall be submitted at least 90 days before the claim is submitted, to the disputing Member State of its intent to submit the investment dispute to such arbitration and which briefly summarises the alleged breach of the disputing Member State under this Agreement (including the provisions alleged to have been breached) and the loss or damage allegedly caused to the disputing investor or a covered investment; and
- (c) the notice of arbitration under Article 33(2) being accompanied by the disputing investor's written waiver of the disputing investor's right to initiate or continue any proceedings before the courts or administrative tribunals of the disputing Member State, or other dispute settlement procedures, of

any proceeding with respect to any measure alleged to constitute a breach referred to in Article 32 (Claim by an Investor of a Member State).

2. Notwithstanding sub-paragraph 1(c), the disputing investor shall not be prevented from initiating or continuing an action that seeks interim measures of protection for the sole purpose of preserving the disputing investor's rights and interests and does not involve the payment of damages or resolution of the substance of the matter in dispute, before the courts or administrative tribunals of the disputing Member State.
3. A Member State shall not give diplomatic protection, or bring an international claim, in respect of a dispute which one of its investors and the other Member State have consented to submit or have submitted to arbitration under this Section, unless such other Member State has failed to abide by and comply with the award rendered in such dispute. Diplomatic protection, for the purposes of this paragraph, shall not include informal diplomatic exchanges for the sole purpose of facilitating a settlement of the dispute.
4. A disputing Member State shall not assert, as a defence, counter-claim, right of set-off or otherwise, that the disputing investor in relation to the covered investment has received or will receive, pursuant to an insurance or guarantee contract, indemnification or other compensation for all or part of any alleged loss.

Article 35 **Selection of Arbitrators**

1. Unless the disputing parties otherwise agree, the tribunal shall comprise three arbitrators:

- (a) one arbitrator appointed by each of the disputing parties; and
 - (b) the third arbitrator, who shall be the presiding arbitrator, appointed by agreement of the disputing parties. The third arbitrator shall be a national of a non-Member State which has diplomatic relations with the disputing Member State and non-disputing Member State, and shall not have permanent residence in either the disputing Member State or non-disputing Member State.
2. Any person appointed as an arbitrator shall have expertise or experience in public international law, international trade or international investment rules. An arbitrator shall be chosen strictly on the basis of objectivity, reliability, sound judgment and independence and shall conduct himself or herself on the same basis throughout the course of the arbitral proceedings.
3. Subject to Article 36 (Conduct of the Arbitration), if a tribunal has not been constituted within 75 days from the date that a claim is submitted to arbitration under this Section, the Appointing Authority, on the request of a disputing party, shall appoint, in his or her discretion, the arbitrator or arbitrators who have not been appointed.
4. The tribunal shall reach its decisions by a majority of votes and its decisions shall be binding.
5. The parties to the dispute shall bear the cost of their respective arbitrators to the tribunal and share equally the cost of the presiding arbitrator and other relevant costs. In all other respects, the tribunal shall determine its own procedures.

6. The disputing parties may establish rules relating to expenses incurred by the tribunal, including remuneration of the arbitrators.

7. Where any arbitrator appointed as provided for in this Article resigns or becomes unable to act, a successor shall be appointed in the same manner as prescribed for the appointment of the original arbitrator and the successor shall have all the powers and duties of the original arbitrator.

Article 36 **Conduct of the Arbitration**

1. Where issues relating to jurisdiction or admissibility are raised as preliminary objections, the tribunal shall decide the matter before proceeding to the merits.

2. A disputing Member State may, no later than 30 days after the constitution of the tribunal, file an objection that a claim is manifestly without merit. A disputing Member State may also file an objection that a claim is otherwise outside the jurisdiction or competence of the tribunal. The disputing Member State shall specify as precisely as possible the basis for the objection.

3. The tribunal shall address any such objection as a preliminary question apart from the merits of the claim. The disputing parties shall be given a reasonable opportunity to present their views and observations to the tribunal. If the tribunal decides that the claim is manifestly without merit, or is otherwise not within the jurisdiction or competence of the tribunal, it shall render an award to that effect.

4. The tribunal may, if warranted, award the prevailing party reasonable costs and fees incurred in submitting or opposing the objection. In determining whether such an award is warranted, the tribunal shall consider whether either the claim or the objection was frivolous or manifestly without

merit, and shall provide the disputing parties a reasonable opportunity to comment.

5. Unless the disputing parties otherwise agree, the tribunal shall determine the place of arbitration in accordance with the applicable arbitration rules, provided that the place shall be in the territory of a State that is a party to the New York Convention.

6. Where an investment dispute relate to a measure which may be a taxation measure, the disputing Member State and the non-disputing Member State, including representatives of their tax administrations, shall hold consultations to determine whether the measure in question is a taxation measure.

7. Where a disputing investor claims that the disputing Member State has breached Article 14 (Expropriation and Compensation) by the adoption or enforcement of a taxation measure, the disputing Member State and the non-disputing Member State shall, upon request from the disputing Member State, hold consultations with a view to determining whether the taxation measure in question has an effect equivalent to expropriation or nationalisation.

8. Any tribunal that may be established under this Section shall accord serious consideration to the decision of both Member States under paragraphs 6 and 7.

9. If both Member States fail either to initiate such consultations referred to paragraphs 6 and 7, or to make such joint decisions, within the period of 180 days from the date of the receipt of request for consultation referred to in Article 31 (Consultations), the disputing investor shall not be prevented from submitting its claim to arbitration in accordance with this Section.

Article 37 Consolidation

Where two or more claims have been submitted separately to arbitration under Article 32 (Claim by an Investor of a Member State) and the claims have a question of law or fact in common and arise out of the same or similar events or circumstances, all concerned disputing parties may agree to consolidate those claims in any manner they deem appropriate.

Article 38 Expert Reports

Without prejudice to the appointment of other kinds of experts where authorised by the applicable arbitration rules, the tribunal, at the request of the disputing parties, may appoint one or more experts to report to it in writing on any factual issue concerning environmental, public health, safety or other scientific matters raised by a disputing party in a proceeding, subject to such terms and conditions as the disputing parties may agree.

Article 39 Transparency of Arbitral Proceedings

1. Subject to paragraphs 2 and 3, the disputing Member State may make publicly available all awards, and decisions produced by the tribunal.
2. Any of the disputing parties that intend to use information designated as confidential information in a hearing shall so advise the tribunal. The tribunal shall make appropriate arrangements to protect the information from disclosure.

3. Any information specifically designated as confidential that is submitted to the tribunal or the disputing parties shall be protected from disclosure to the public.
4. A disputing party may disclose to persons directly connected with the arbitral proceedings such confidential information as it considers necessary for the preparation of its case, but it shall require that such confidential information is protected.
5. The tribunal shall not require a Member State to furnish or allow access to information the disclosure of which would impede law enforcement or would be contrary to the Member State's law protecting Cabinet confidences, personal privacy or the financial affairs and accounts of individual customers of financial institutions, or which it determines to be contrary to its essential security.
6. The non-disputing Member State shall be entitled, at its cost, to receive from the disputing Member State a copy of the notice of arbitration, no later than 30 days after the date that such document has been delivered to the disputing Member State. The disputing Member State shall notify all other Member States of the receipt of the notice of arbitration within 30 days thereof.

Article 40 **Governing Law**

1. Subject to paragraphs 2 and 3, when a claim is submitted under Article 33 (Submission of a Claim), the tribunal shall decide the issues in dispute in accordance with this Agreement, any other applicable agreements between the Member States, and the applicable rules of international law and where applicable, any relevant domestic law of the disputing Member State.

2. The tribunal shall, on its own account or at the request of a disputing party, request a joint interpretation of any provision of this Agreement that is in issue in a dispute. The Member States shall submit in writing any joint decision declaring their interpretation to the tribunal within 60 days of the delivery of the request. Without prejudice to paragraph 3, if the Member States fail to issue such a decision within 60 days, any interpretation submitted by a Member State shall be forwarded to the disputing parties and the tribunal, which shall decide the issue on its own account.

3. A joint decision of the Member States, declaring their interpretation of a provision of this Agreement shall be binding on a tribunal, and any decision or award issued by a tribunal must be consistent with that joint decision.

Article 41 **Awards**

1. The disputing parties may agree on a resolution of the dispute at any time before the tribunal issues its final award.

2. Where a tribunal makes a final award against either of the disputing parties, the tribunal may award, separately or in combination, only:

- (a) monetary damages and any applicable interest; and
- (b) restitution of property, in which case the award shall provide that the disputing Member State may pay monetary damages and any applicable interest in lieu of restitution.

3. A tribunal may also award costs and attorney's fees in accordance with this Agreement and the applicable arbitration rules.

4. A tribunal may not award punitive damages.
5. An award made by a tribunal shall have no binding force except between the disputing parties and in respect of the particular case.
6. Subject to paragraph 7 and the applicable review procedure for an interim award, the disputing party shall abide by and comply with an award without delay.¹⁵
7. The disputing party may not seek enforcement of a final award until:
 - (a) in the case of a final award under the ICSID Convention:
 - (i) 120 days has elapsed from the date the award was rendered and no disputing party has requested revision or annulment of the award; or
 - (ii) revision or annulment proceedings have been completed;
 - (b) in the case of a final award under the ICSID Additional Facility Rules, the UNCITRAL Arbitration Rules, or the rules selected pursuant to Article 33(1)(e):
 - (i) 90 days have elapsed from the date the award was rendered and no disputing party has commenced a proceeding to revise, set aside, or annul the award; or

¹⁵ The Parties understand that there may be domestic legal and administrative processes that need to be observed before an award can be complied with.

- (ii) a court has dismissed or allowed an application to revise, set aside, or annul the award and there is no further appeal.
8. A claim that is submitted for arbitration under this Section shall be considered to arise out of a commercial relationship or transaction for purposes of Article 1 of the New York Convention.
9. Each Member State shall provide for the enforcement of an award in its territory.

SECTION C

Article 42 Institutional Arrangements

1. The AIA Council, as established by the AEM under the AIA Agreement, shall be responsible for the implementation of this Agreement.
2. The ASEAN Coordinating Committee on Investment (“CCI”) as established by the AIA Council and comprising senior officials responsible for investment and other senior officials from relevant government agencies, shall assist the AIA Council in the performance of its functions. The CCI shall report to the AIA Council through the Senior Economic Officials Meeting (“SEOM”). The ASEAN Secretariat shall be the secretariat for the AIA Council and the CCI.
3. The functions of the AIA Council shall be to:
 - (a) provide policy guidance on global and regional investment matters concerning promotion, facilitation, protection, and liberalisation;
 - (b) oversee, coordinate and review the implementation of this Agreement;

- (c) update the AEM on the implementation and operation of this Agreement;
- (d) consider and recommend to the AEM any amendments to this Agreement;
- (e) facilitate the avoidance and settlement of disputes arising from this Agreement;
- (f) supervise and coordinate the work of the CCI;
- (g) adopt any necessary decisions; and
- (h) carry out any other functions as the AEM may agree.

Article 43 Consultations by Member States

The Member States agree to consult each other at the request of any Member State on any matter relating to investments covered by this Agreement, or otherwise affecting the implementation of this Agreement.

Article 44 Relation to Other Agreements

Nothing in this Agreement shall derogate from the existing rights and obligations of a Member State under any other international agreements to which it is a party.

Article 45

Annexes, Schedule and Future Instruments

This Agreement shall include the Annexes, the Schedule and the contents therein, which shall form an integral part of this Agreement, and all future legal instruments agreed pursuant to this Agreement.

Article 46

Amendments

The provisions of this Agreement may be modified through amendments mutually agreed upon in writing by the Member States.

Article 47

Transitional Arrangements Relating to the ASEAN IGA and the AIA Agreement

1. Upon the entry into force of this Agreement, the ASEAN IGA and the AIA Agreement shall be terminated.
2. Notwithstanding the termination of the AIA Agreement, the Temporary Exclusion List and the Sensitive List to the AIA Agreement shall apply to the liberalisation provisions of the ACIA, *mutatis mutandis*, until such time that the Reservation List of ACIA comes into force.
3. With respect to investments falling within the ambit of this Agreement as well as under the ASEAN IGA, or within the ambit of this Agreement and the AIA Agreement, investors of these investments may choose to apply the provisions, but only in its entirety, of either this Agreement or the ASEAN IGA or the AIA Agreement, as the case may be, for a period of 3 years after the date of termination of the ASEAN IGA and the AIA Agreement.

Article 48 **Entry into Force**

1. This Agreement shall enter into force after all Member States have notified or, where necessary, deposited instruments of ratification with the Secretary-General of ASEAN, which shall not take more than 180 days after the signing of this Agreement.
2. The Secretary-General of ASEAN shall promptly notify all Member States of the notifications or deposit of each instrument of ratification referred to in paragraph 1.

Article 49 **Depository**

This Agreement shall be deposited with the Secretary-General of ASEAN, who shall promptly furnish a certified copy thereof to each Member State.

IN WITNESS WHEREOF, the undersigned, being duly authorised by their respective Governments, have signed this ASEAN Comprehensive Investment Agreement.

DONE at Cha-am, Thailand, this 26th Day of February in the Year Two Thousand and Nine, in a single original copy in the English language.

For Brunei Darussalam:

LIM JOCK SENG
Second Minister of Foreign Affairs and Trade

For the Kingdom of Cambodia:

CHAM PRASIDH
Senior Minister and Minister of Commerce

For the Republic of Indonesia:

MARI ELKA PANGESTU
Minister of Trade

For the Lao People's Democratic Republic:

NAM VIYAKETH
Minister of Industry and Commerce

For Malaysia:

TAN SRI MUHYIDDIN YASSIN
Minister of International Trade and Industry

For the Union of Myanmar:

U SOE THA

Minister for National Planning and Economic Development

For the Republic of the Philippines:

PETER B. FAVILA

Secretary of Trade and Industry

For the Republic of Singapore:

LIM HNG KIANG

Minister for Trade and Industry

For the Kingdom of Thailand:

PORNTIVA NAKASAI

Minister of Commerce

For the Socialist Republic of Viet Nam:

VU HUY HOANG
Minister of Industry and Trade

ANNEX 1

Approval in Writing

Where specific approval in writing is required for covered investments by a Member State's domestic laws, regulations and national policies, that Member State shall:

- (a) inform all the other Member States through the ASEAN Secretariat of the contact details of its competent authority responsible for granting such approval;
- (b) in the case of an incomplete application, identify and notify the applicant in writing within 1 month from the date of receipt of such application of all the additional information that is required;
- (c) inform the applicant in writing that the investment has been specifically approved or denied within 4 months from the date of receipt of complete application by the competent authority; and
- (d) in the case an application is denied, inform the applicant in writing of the reasons for such denial. The applicant shall have the opportunity of submitting, at that applicant's discretion, a new application.

ANNEX 2

Expropriation and Compensation

1. An action or a series of related actions by a Member State cannot constitute an expropriation unless it interferes with a tangible or intangible property right or property interest in a covered investment.
2. Article 14(1) addresses two situations:
 - (a) the first situation is where an investment is nationalised or otherwise directly expropriated through formal transfer of title or outright seizure; and
 - (b) the second situation is where an action or series of related actions by a Member State has an effect equivalent to direct expropriation without formal transfer of title or outright seizure.
3. The determination of whether an action or series of actions by a Member State, in a specific fact situation, constitutes an expropriation of the type referred to in subparagraph 2(b), requires a case-by-case, fact-based inquiry that considers, among other factors:
 - (a) the economic impact of the government action, although the fact that an action or series of actions by a Member State has an adverse effect on the economic value of an investment, standing alone, does not establish that such an expropriation has occurred;
 - (b) whether the government action breaches the government's prior binding written commitment to the investor whether by contract, licence or other legal document; and

- (c) the character of the government action, including, its objective and whether the action is disproportionate to the public purpose referred to in Article 14(1).
4. Non-discriminatory measures of a Member State that are designed and applied to protect legitimate public welfare objectives, such as public health, safety and the environment, do not constitute an expropriation of the type referred to in sub-paragraph 2(b).

INFORMATION REGARDING OOREDOO MYANMAR LIMITED 2014

1. Shareholders (Lic. 14.14 (d)(ii))

Ooredoo Asia Pte. Ltd.	99.9%
Ooredoo Asia Investments Pte Ltd.	0.1%

2014 Financial results (Lic. 14.14 (d)(ii))

Financials MMK (billion)		FY 2014
Revenue	49.9	
EBITDA	(96.5)	
% EBITDA	-194%	
NET PROFIT	(136.3)	
Capex	301.7	

2014 Operational results (Lic. 14.14 (d)(ii))

Operational	Note	FY 2014
Active Customers ('000)	Prepaid	2,236
ARPU (MMK)	Recurring	8,094
Total Minutes of Use	Total outgoing voice	868,453,255
Average revenue per minute of use (MMK)	Outgoing voice revenues	22

Board of Directors (Lic. 14.14 (d)(iii))

Name	Corporate affiliation
Aziz Aluthman Fakhroo	Ooredoo Q.S.C.
Ross Anthony Cormack	Ooredoo Q.S.C
Nasser M.Marafih	Ooredoo Q.S.C
U Tin Htwe	Independent
Ahmed Yousef Al Derbasti	Ooredoo Q.S.C
Ajay Bahri	Ooredoo Q.S.C
Dr. Shaika Sultan Al Jaber	Ooredoo Q.S.C
Bassem Ghaleb Abdel Hamid Hannoun	Ooredoo Q.S.C

Senior Management Team (Lic. 14.14 (d)(iv))

Chief Executive Officer	Ross Cormack
Chief Operating Officer	Haroon Shahul Hameed
Chief Financial Officer	Steve Collins
Chief People Officer	Mohamed Allam
Chief Marketing Officer	Rachel Goh
Chief Technical Officer	John Farhat
General Counsel	Bertrand Alexis
Chief B2B & Wholesale Officer	Peter Yap
Chief Sales & Distribution Officer	Neil Suares

INFORMATION REGARDING OOREDOO MYANMAR LIMITED 2019

Shareholders (Licence 14.14(d) (i))

Ooredoo Asia Pte. Ltd. 99.99%

Ooredoo Asian Investments Pte. Ltd. 0.1%

Financial and Operational results (License 14.14(d) (ii))

REVENUE (MMK billion)	442.6
EBITDA (MMK billion)	116.6
% EBITDA	26.3%
NET PROFIT/(LOSS) (MMK billion)	(312.9)
CAPEX (MMK billion)	98.6
ACTIVE CUSTOMERS (000)'s	11,527
ARPU (MMK)	3,223
TOTAL MINUTES OF USE	9,761,481,941
AVERAGE REVENUE PER MINUTE OF USE (MMK)	9.47

Board of Directors (Licence 14.14(d) (iii))

Ahmad Abdulaziz Al Neama Director

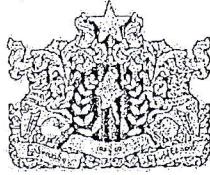
Ajay Bahri Director

Denzil Abel Director

Hans Anthony Kuropatwa Director

Vikram Sinha Director

Waleed Mohamed Ebrahim Al Sayed Director



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်

နိုင်ငံတော်သမ္မတရုံး

စာအမှတ် ၁၁ (၁) / ၇ / သမ္မတရုံး

ရက်စွဲ၊ ၂၀၁၃ ခုနှစ်၊ ဧပြီလ ၁၁ ရက်

အကြောင်းအရာ။ “Telecommunication Operator တင်ဒါနစစ် ရွှေးချယ်ရေးကော်မတီ” ဖွဲ့စည်းခြင်း

မြန်မာနိုင်ငံ၏ဆက်သွယ်ရေး ကဏ္ဍတွင် ပြည်တွင်း / ပြည်ပ ပုဂ္ဂလိကမှ ပါဝင်ယူဉ်ဖြိုင်ပြီး အများပြည်သူမှ စိတ်ကြိုက် ရွှေးချယ်နိုင်မည့် ဆက်သွယ်ရေးဝန်ဆောင်မှုစနစ်ကို ပွင့်လင်းမြင်သာစွာ အကောင်အထည်ဖော်သွားရန်အတွက် Telecommunication Operator တင်ဒါနစစ်ရွှေးချယ်ရေးကော်မတီကို အောက်ပါပုဂ္ဂလိများဖြင့် ဖွဲ့စည်းလိုက်ပါသည်-

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| (၁) | ဒေါက်တာဆက်အောင် | ပုံမှန် |
| | ခုတိယဝန်ကြီး | |
| | အမျိုးသားစီမံကိန်းနှင့်စီးပွားရေးဖွံ့ဖြိုးတိုးတက်မှုဝန်ကြီးဌာန | |
| (၂) | ခုတိယဝန်ကြီး | အဖွဲ့ဝင် |
| | စက်မှုဝန်ကြီးဌာန | |
| (၃) | ခုတိယဝန်ကြီး | အဖွဲ့ဝင် |
| | ဘဏ္ဍာရေးနှင့်အခွန်ဝန်ကြီးဌာန | |
| (၄) | ဦးသောင်းတင် | အဖွဲ့ဝင် |
| | ခုတိယဝန်ကြီး | |
| | ဆက်သွယ်ရေးနှင့် သတ်းအချက်အလက်နည်းပညာဝန်ကြီးဌာန | |
| (၅) | ခုတိယရှေ့နေ့ချုပ် | အဖွဲ့ဝင် |
| | ပြည်ထောင်စုရှေ့နေ့ချုပ်ရုံး | |
| (၆) | ညွှန်ကြားရေးမှူးချုပ် | အဖွဲ့ဝင် |
| | ဆက်သွယ်ရေးညွှန်ကြားမှုဥုးစီးဌာန | |
| | ဆက်သွယ်ရေးနှင့်သတ်းအချက်အလက်နည်းပညာဝန်ကြီးဌာန | |
| (၇) | ညွှန်ကြားရေးမှူးချုပ် | အဖွဲ့ဝင် |
| | အဆင့်မြှင့်သိပ္ပန်နည်းပညာဦးစီးဌာန | |
| | သိပ္ပန်နည်းပညာဝန်ကြီးဌာန | |

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| (၈) | အဖွဲ့ဝင်(၁)ဦး | အဖွဲ့ဝင် |
| | မြန်မာနိုင်ငံရှင်းနှီးမြှုပ်နှံမှုကော်မရှင် | |
| (၉) | ညွန်ကြားရေးမှူးချုပ် | အတွင်းရေးမှူး |
| | နိုင်ငံခြားစီးပွားဆက်သွယ်ရေးဦးစီးဌာန | |
| | အမျိုးသားစီမံကိန်းနှင့် စီးပွားရေးဖွံ့ဖြိုးတိုးတက်မှုဝန်ကြီးဌာန | |

၄၀။
ညွန်ကြားရေးမှူးချုပ်
နှင့်

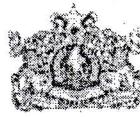
ဖြန့်ဝေခြင်း

လွှတ်တော်ရုံး

- ပြည်ထောင်စုတရားလွှတ်တော်ချုပ်
- နိုင်ငံတော်ဖွဲ့စည်းပုံအခြေခံဥပဒေဆိုင်ရာခုံး
- ပြည်ထောင်စုရွှေးကောက်ပွဲကော်မရှင်ရုံး
- ပြည်ထောင်စုဝန်ကြီးဌာနအားလုံး
- ပြည်ထောင်စုရှုံးနေ့ချုပ်ရုံး
- ပြည်ထောင်စုစာရင်းစစ်ဆေးရုံး
- ပြည်ထောင်စုရှာတူးဝန်အဖွဲ့
- ၎ တိုင်းဒေသကြီး/ပြည်နယ်အစိုးရအဖွဲ့အားလုံး
- နေပြည်တော်ကောင်စီ

စီစဉ်ရှိ

- သမ္မတဗြိုဟ်ရုံး
- ခုံးတို့ယသမ္မတဗြိုဟ်ရုံးစီးရုံးများ
- ပြည်ထောင်စုအစိုးရအဖွဲ့ရုံး



SPECTRUM LICENCE

REPUBLIC OF THE UNION OF MYANMAR

Posts and Telecommunications Department
Ministry of Communications and Information Technology

Nay Pyi Taw

Spectrum Licence

Granted to:
Ooredoo Myanmar Limited

Whose Principal Place of Business is:

MICT Park Building No. 10 Block 2
Myanmar Info Tech
Hlaing Township
Yangon
Republic of the Union of Myanmar

30.1.2014

DIRECTOR GENERAL
POSTS AND TELECOMMUNICATIONS
DEPARTMENT



SPECTRUM LICENCE

- m) "End User" means a Person, other than an Other Licensee, to whom a Licensee provides a Telecommunications Service.
- n) "Effective Date" means the date on which this Licence became legally effective, which is February 5, 2014 which is the same date on which the Associated Operating Licence became effective.
- o) "Expiry Date" means the date on which the then-current term of this Licence ends, unless previously surrendered or terminated.
- p) "Force Majeure Event" means an event beyond the Licensee's control, such as by war, terrorism, insurrection, civil commotion, public health emergencies, major labour unrest (other than disputes solely between the Licensee and its employees) or any man-made or any natural disasters, such as fire, flood, cyclone, earthquake or extreme weather.
- q) "Harmful Interference" means an emission, radiation, induction, conduction or other electromagnetic effect that endangers the functioning of a radionavigation service or other safety services or that seriously degrades, obstructs or repeatedly interrupts any radiocommunication service operating in accordance with applicable regulations or administrative determinations and the Convention.
- r) "ITU" means the International Telecommunication Union.
- s) "Licence" means this Radio Spectrum licence granted to Ooredoo Myanmar Ltd.
- t) "Licensee" means Ooredoo Myanmar Limited and does not include any Affiliates of the Licensee.
- u) "Myanmar Telecommunications Regulator" or "Regulator" means the entity, further described in Condition 2.2, with the legal authority to grant licenses and regulate the telecommunications sector in the Republic of the Union of Myanmar.
- v) "National Frequency Allocation Plan" means the plan, adopted by the Ministry pursuant to Section 19 of the Telecommunications Law, pursuant to which the Regulator may assign spectrum.
- w) "National Frequency Assignment Register" means a register containing a list of radio frequency spectrum assignments, including the name of the Licensee, the frequencies assigned, the uses for which they are authorised and any other relevant information contained in the Appendix.
- x) "Other Licensee" means a Person, other than the Licensee, that holds a licence granted by the Regulator for the provision of Telecommunications Services or the use of Radio Spectrum, or is otherwise authorised to provide such services, or use such Radio Spectrum, in the Republic of the Union of Myanmar.



SPECTRUM LICENCE

PART 4 – LICENSEE-SPECIFIC CONDITIONS

10. SPECIAL CONDITIONS

10.1 Spectrum Licence Fee

- a) The Licensee shall pay a one-time Spectrum Licence Fee of US \$ one billion ten million U.S. dollars (US\$ 1,010,000,000) to the Union Government, pursuant to the following schedule:
 - (i) The Licensee made the First Spectrum Licence Fee Payment, in an amount equal to fifty (50) percent of the Spectrum Licence Fee (i.e., US \$ 505,000,000), on the Effective Date of this Licence.
 - (ii) The Licensee shall make the Second Spectrum Licence Fee Payment, in an amount equal to an additional twenty-five (25) percent of the Spectrum Licence Fee (i.e., US \$ 252,500,000), within one (1) year after the Effective Date of its Spectrum Licence.
 - (iii) The Licensee shall make the Third Spectrum Licence Fee Payment, in an amount equal to the remaining twenty-five (25) percent of the Spectrum Licence Fee (i.e., US \$ 252,500,000), within two (2) years after the Effective Date of its Spectrum Licence.
- b) At the time the Regulator granted this Licence, the Licensee had obtained a Performance Bond, in the amount of two hundred million U.S. dollars (US \$ 200,000,000). In addition to any other remedies the Ministry or the Regulator may have, the Ministry will have the right to exercise the Performance Bond in the event that the Licensee fails to make a Spectrum Licence Fee Payment, or any portion thereof, by the time specified in this Condition. Prior to exercising the Performance Bond pursuant to this Condition, the Ministry will provide the Licensee with written notification that the Union Government has not received a required Spectrum Licence Fee Payment, or any portion thereof, and will provide the Licensee with five (5) working days to make the required payment.
- c) If the Union Government has not received the Spectrum Licence Fee Payment, or any portion thereof, by the end of the five-working-day period specified in Condition 10.1(b), the Ministry will provide the Licensee with a written notification that it intends to exercise the Performance Bond to the extent of the under-payment.



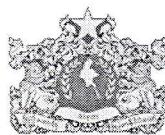
SPECTRUM LICENCE

APPENDIX – ASSIGNMENT OF RADIO FREQUENCY SPECTRUM

The frequency bands listed in the schedule below have been assigned for use by the Licensee, on a Primary Basis, for the provision of Nationwide Telecommunications Services, and are available for use as of the Effective Date.

		Frequency (MHz)			Frequency (MHz)		
Geographic Coverage Area	Band	Mobile to Base Station		Block Size (MHz)	Base Station to Mobile		Block Size (MHz)
Nationwide	900 MHz	890	895	5 MHz	935	940	5 MHz
Nationwide	2100 MHz	1950	1960	10 MHz	2140	2150	10 MHz

Invitation to Tender Questions and Answers



REPUBLIC OF THE UNION OF MYANMAR

Telecommunications Operator Tender Evaluation and Selection Committee

Nay Pyi Taw

Rules for Licensee Selection Process

**Regarding Two Nationwide Telecommunications Licences
in the Republic of the Union of Myanmar**

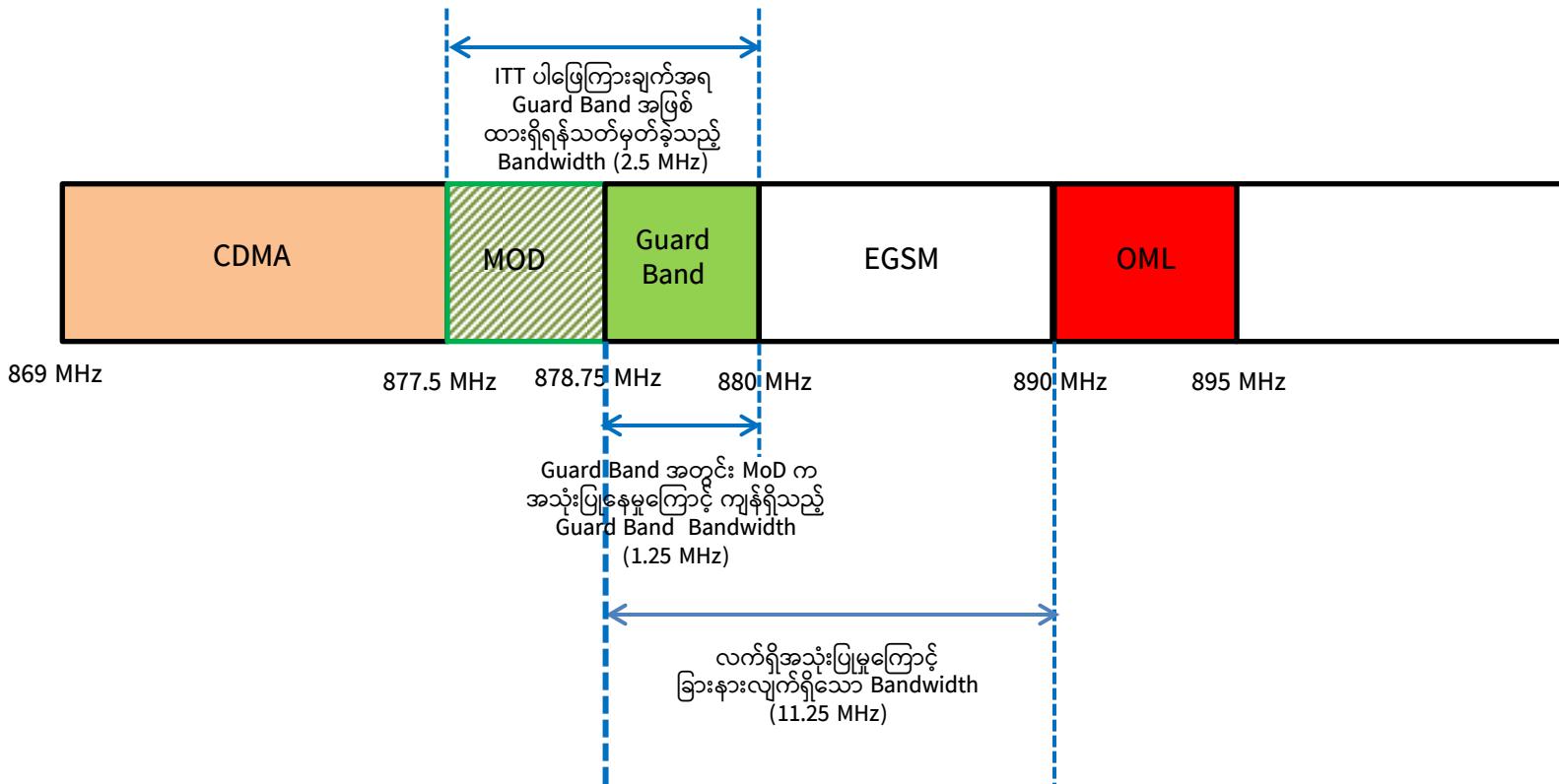
Invitation to Tender Questions and Answers

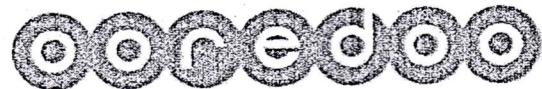
May 13, 2013

Invitation to Tender Questions and Answers

516	Annex J	Annex J, Section 4.3	Information Memorandum – Existing UHF Frequency Assignment and Use	<p>Spectrum allocation is limited. Use of WiFi in the 2.4 GHz and 5 GHz bands would allow a variety of data services to be provided.</p> <p>(a) Is licensing required in order to use the 2.4 GHz and 5 GHz bands?</p> <p>(b) If licensing is required in order to use the 2.4 GHz and 5 GHz bands: (i) May granting of such licences be assumed? (ii) May revenues derived from WiFi offload, or other WiFi service provision be included in the business plan?</p> <p>(c) If licensing is not required in order to use the 2.4 GHz and 5 GHz bands, may revenues derived from WiFi offload or other WiFi service provision be included in the business plan?</p>	<p>(a) WiFi in the 2.4 GHz is already widely used in the Republic of the Union of Myanmar and does not require a licence for usage for short-distance service.</p> <p>2.4 GHz spectrum band is licence exempt. However, the provision of long distance services over the WiFi bands may not be exempt from licensing. The Committee cannot provide information regarding the 3.5 and 5.8 GHz bands at this stage.</p> <p>(b) Applicants will be allowed to offer WiFi short-distance services to their customers.</p> <p>(c) Yes. This should be included in the category "Other revenues including fixed services".</p>
517	Annex J	Annex J, Section 4.3	Information Memorandum – Existing UHF Frequency Assignment and Use	The text under the heading "Summary" in section 4.3 provides that a total of 2x65 MHz spectrum is currently assigned to MPT, but the table headed "Frequency bands in use by MPT" indicates that the total spectrum assigned to MPT is 73.75. Please clarify the total spectrum assigned to MPT.	The text under the heading "Summary" in section 4.3 should read "A total of 2 x 50 MHz is currently assigned to MPT" (excluding the 2 x 3.75 MHz in the 450 MHz band which is not included in the chart). MPT is indeed using 2 x 73.75 MHz as stated in Annex J, Section 4.3, Table "Frequency bands in use by MPT". 2 x 53.75 MHz is assigned to MPT. In addition, 2 x 20 MHz is temporarily assigned to MPT in the 1800 MHz band.
518	Annex J	Annex J, Section 4.3	Information Memorandum – Existing UHF Frequency Assignment and Use	The tables at Part 4.3 indicate that MPT occupies both CDMA and GSM spectrum in 870-880 MHz and 890-915 MHz bands, respectively. We understand that it is expected that from the end of October, MPT will release 10 MHz GSM from the 890-900 MHz band, which will be awarded to the Successful Applicants. In our experience, in the case of GSM 900 and CDMA 850 co-operation, given that the GSM uplink (receiving) band is very close to the CDMA downlink (transmitting) band, out of band spurious emission of CDMA TX creates significant interference in the GSM band near 890 MHz. This causes a significant number of call drops in the GSM network. An additional TX filter is required in the CDMA BTS to mitigate this interference. Antenna separation, particularly vertical antenna separation, is the best solution to this issue. Please provide details of how MCIT plans to mitigate the risk of CDMA interference. There is precedent in the Bangladesh market which serves to illustrate that failure to mitigate such risk can severely impact the quality of service.	The incumbent Operator MPT, which currently occupies 870-880 MHz (for the CDMA downlink), will mitigate the risk by purposely reserving 2 channels of 1.25 MHz at 877.5- 880 MHz (not to put into actual use) to reduce the risk of interference. PTD, the Regulator, will also monitor the electromagnetic interference and coordinate with relevant parties to solve the issue when it happens.
519	Annex J	Annex J, Section 4.3	Information Memorandum – Existing UHF Frequency Assignment and Use	It is mentioned that 915 to 935 MHz are presently reserved as a guard band. Is this correct - should it not be 915 to 925 MHz?	915 to 935 MHz band is presently not in use. Looking forward, 915 to 925 MHz will be kept as a guard band while 925 to 935 MHz will be reserved for mobile services.
520	Annex	Annex J,	Information	MPT is being allowed to hold 10 MHz in 900 MHz band	MPT is being allowed to hold 2 x 15 MHz in the 900 MHz band and

CDMA စနစ်နှင့် OML အိုစနစ်တို့အကြား လိုင်းနှစ်းခွင်(Bandwidth) ခြားနားမှု အခြေအနေ





Ooredoo Myanmar Limited
MICT Park Building No. 10 Block 2
Myanmar Info Tech
Hlaing Township
Yangon
Republic of the Union of Myanmar

20 April 2015

Our ref: Reg/MCIT/15(28)

H.E. Union Minister U Myat Hein
Ministry of Communications and Information Technology
Republic of the Union of Myanmar
Office No (2)
Nay Pyi Taw
Myanmar

Your Excellency,

Meeting on 2 April 2015 – Spectrum Interference

With reference to my letter dated 3 April 2015, I am writing to inform Your Excellency of the good progress achieved on the issue of spectrum interference.

Since our meeting my team has had a constructive meeting with officers from both the PTD and the MEC. They have begun to take concrete steps to resolve the problem.

I have full confidence that with the teams working together, everything will be settled in the soonest time possible. I look forward to reporting satisfactory progress to you on this matter in the near future.

Please accept my thanks for your kind assistance.

Sincerely,

Ross Cormack
Chief Executive Officer

Copy: H. E. Lieutenant General Nyo Saw
Chairman, Myanmar Economic Corporation

အူရီ၉၁၂:မြန်မာလီမိတက်မှ 900 MHz Band အတွင်း Interference ဖြစ်ပေါ်နေမှုနှင့် ပတ်သက်၍ PTD မှ ဖြေရှင်းဆောင်ရွက်မှုအခြေအနေအားတင်ပြခြင်း

စဉ်	ရက်စွဲ	အကြောင်းအရာ	PTD မှ ဆောင်ရွက်မှုအခြေအနေ	မှတ်ချက်
I	၃.၁.၂၀၁၄	တရားမဝင် Repeater များသုံးစွဲခြင်းမပြုရန် နိုင်ငံပိုင်သတင်းစာတွင်ကြညာခြင်း	မိုဘိုင်းဆက်သွယ်ရေး လုပ်ငန်းကို အော်ပရေတာများဖြင့် ဆောင်ရွက်ရာတွင် မလိုလားအပ်သော လိုင်းနှုန်းနောင့်ယှက်မှု များ မဖြစ်ပေါ်စေရေးအတွက် လိုင်းနှုန်းနောင့်ယှက်မှုများဖြစ် ပေါ်နိုင်သည့်တရားမဝင် Repeater များ သုံးစွဲခြင်းမပြုရန် ဦးစီးဌာနမှ (၃.၁.၂၀၁၄) ရက်နေ့တွင် ပထမအကြိမ် အဖြစ် နိုင်ငံပိုင်သတင်းစာတွင် ထည့်သွင်းထုတ်ပြန်ကြညာခြင်းအား ဆောင်ရွက်ခဲ့ပြီးဖြစ်ပါသည်။	ပထမအကြိမ်
II	၅.၂.၂၀၁၄	Nationwide Telecommunications License နှင့် Spectrum License ကို OML သို့ ပေးအပ်ခဲ့ပါသည်။	တင်ဒါအောင်မြင်သောအော်ပရေတာများကိုပထေမအရစ် ၅၀ % ပေးသွင်းပြီးသည့် (၅.၂.၂၀၁၄) ရက်နေ့တွင် လုပ်ငန်းစတင် အသုံးပြနိုင်ပြီဖြစ်ပါသည်။ ဆက်သွယ်ရေးဥပဒေနှင့် အညီ လုပ်ငန်း ဆောင်ရွက်နိုင်ရန် အော်ပရေတာလိုင်စင်ထုတ်ပေးခဲ့ပါသည်။	
III	၂၁.၂.၂၀၁၄	တရားမဝင် Repeater များသုံးစွဲခြင်းမပြုရန် နိုင်ငံပိုင်သတင်းစာတွင်ကြညာခြင်း	မိုဘိုင်းဆက်သွယ်ရေး လုပ်ငန်းကို အော်ပရေတာများဖြင့် ဆောင်ရွက်ရာတွင် မလိုလားအပ်သော လိုင်းနှုန်းနောင့်ယှက်မှု များ မဖြစ်ပေါ်စေရေးအတွက် လိုင်းနှုန်းနောင့်ယှက်မှုများ ဖြစ်ပေါ်နိုင်သည့် တရားမဝင် Repeater များသုံးစွဲခြင်းမပြုရန်	ဒုတိယအကြိမ်

			ဦးစီးဌာနမှ (၂၁.၂.၂၀၁၄)ရက်နေ့တွင် ဒုတိယအကြိမ်အဖြစ် နိုင်ငံပိုင်သတင်းစာတွင် ထည့်သွင်းထုတ်ပြန် ကြေညာခြင်းအား ဆောင်ရွက်ခဲ့ပြီးဖြစ်ပါသည်။	
၄။	၂၂.၄.၂၀၁၄	OML မှ Invitation To Tender (ITT) ပါအချက်များအားရည်ညွှန်း၍ Clear Band ဖြစ်သည်ဟု အာမခံထားသည့် လိုင်းနှုန်းစဉ် အတွင်း MPT/ MEC မှ CDMA စနစ်အတွက် လိုင်းနှုန်း အသုံးပြုနေမှုများကို တွေ့ရှုရသဖြင့် လိုအပ်သလို ကူညီဆောင်ရွက် ပေးပါရန် တင်ပြလာပါသည်။	၃၁.၇.၂၀၁၄ ရက်နေ့တွင် (၂၆) ကြိမ်မြောက် Technical Meeting ကျင်းပပြုလုပ်ခဲ့ပြီး ၉၀၀MHz Band အတွင်း ရှိ Guard Band အသုံးပြုမှုနှင့်စပ်လျဉ်း၍ OML နှင့် MPT တို့ ပူးပေါင်းဆောင်ရွက်ရန် ဆုံးဖြတ်ခဲ့ကြပါသည်။ ထိုပြင် အဆိုပါ Band အတွင်း အသုံးပြုမှုရှိမရှိ အော်ပရေတာ များအား မေးမြန်ခဲ့ပြီး မည်သည့်အော်ပရေတာမှ အဆိုပါ Guard Band အတွင်း အသုံးပြုခြင်းမရှိကြောင်း တင်ပြလာပါသည်။	
၅။	၂၇.၅.၂၀၁၄	OML မှ PTD အနေဖြင့် လိုင်းနှုန်းနှောင့် ယုက်မှု Complaint များကို (၂) ရက်အတွင်း အကြောင်းပြန်ကြားပေးရန်နှင့် (၁၀) ရက် အတွင်း ဖြေရှင်းဆောင်ရွက်ပေးရန် ထပ်မံ အဆိုပြုလာပါသည်။		
၆။	၁၅.၈.၂၀၁၄	Ooredoo Myanmar Limited မှ ၂၀၁၄ ခုနှစ် သုဂ္ဂတ်လတွင် Commercial Launch စောင် ခဲ့ပါသည်။		
၇။	၁၅.၁၂.၂၀၁၄	OML မှ CDMA Band နှင့်စပ်လျဉ်း၍ လိုင်းနှုန်းနှောင့်ယုက်မှု ဖြစ်ပေါ်ခြင်းကြောင့် ငြင်းတို့ Network ၏ quality of service ကို	လိုင်းနှုန်းစဉ်များအား စနစ်တကျ စီမံခန့်ခွဲနိုင်ရေးအတွက် ဆက်သွယ်ရေးညွှန်ကြားမှု့ဌီးစီးဌာနအနေဖြင့် လိုင်းနှုန်းစဉ်	

		ပြင်းထန်စွာ သက်ရောက်မှု ရှိပါကြောင်း ထပ်မံ တင်ပြခဲ့ပါသည်။		
၈။	၂၉.၁.၂၀၁၅	900 MHz အတွင်းရှိ Guardband အား တရားမဝင် အသုံးပြုနေမှုများကြောင့် လိုင်းနှုန်းနှောင့်ယှက်မှုများဖြစ်ပေါ်နေခြင်းနှင့် စပ်လျဉ်း၍ ဖြေရှင်းဆောင်ရွက်ပေးနိုင်ရေး OML မှ တင်ပြလာပါသည်။	<p>တိုင်းတာရေးနှင့် စပ်လျဉ်းသည့် စက်ပစ္စည်းများအား ဝယ်ယူ တပ်ဆင်ခဲ့ပြီး (၂၀၁၅) ခုနှစ် မတ်လ နောက်ပိုင်းမှစတင်၍ လုပ်ငန်းစဉ်များအား အောက်ပါ အတိုင်း ဆောင်ရွက်ခဲ့ပါသည်-</p> <p>(က) (၅.၃.၂၀၁၅)ရက်နေ့တွင် မန္တလေးမြို့မြိုင်းနှုန်းတိုင်းတာရေးလုပ်ငန်းဆောင်ရွက်ပေးခဲ့ပါသည်။</p> <p>(ခ) (၃.၄.၂၀၁၅) ရက်နေ့ မှ (၅.၄.၂၀၁၅) ရက်နေ့ အတွင်း ရန်ကုန်မြို့တွင် OMLမှတာဝန်ရှိသူများ၊ PTD မှတာဝန်ရှိသူများနှင့် MEC တာဝန်ရှိသူများ ပူးပေါင်း၍တိုင်းတာခဲ့ပြီး တရားမဝင် Repeater များဖြတ်သိမ်းစေခြင်းနှင့် လိုင်းနှုန်းနှောင့်ယှက်မှုမဖြစ်စေရန်အတွက် ဆောင်ရွက်နိုင်သည့် အချက်များကို လေ့လာတင်ပြခဲ့ပါ သည်။</p> <p>(ဂ) (၅.၄.၂၀၁၅)ရက်နေ့မှ (၂၉.၄.၂၀၁၅)နေ့အထိ ရန်ကုန်မြို့အနဲ့ လိုင်းနှုန်းတိုင်းတာရေးလုပ်ငန်းဆောင်ရွက်ခဲ့ပါသည်။</p>	
၉။	၂၅.၂.၂၀၁၅	တရားမဝင် Repeater များသုံးစွဲခြင်းမပြုရန် နိုင်ငံပိုင်သတင်းစာတွင်ကြညာခြင်း	မိုဘိုင်းဆက်သွယ်ရေးလုပ်ငန်းကို အော်ပရေတာများဖြင့် ဆောင်ရွက်ရာတွင် မလိုလားအပ်သော လိုင်းနှုန်းနှောင့်ယှက်မှုများ မဖြစ်ပေါ်စေရေးအတွက် လိုင်းနှုန်းနှောင့်ယှက်မှုများ ဖြစ်ပေါ်နိုင်သည့် တရားမဝင် Repeater များသုံးစွဲခြင်းမပြုရန် ဦးစီးဌာနမှ (၂၅.၂.၂၀၁၅)ရက်နေ့တွင် တတိယအကြိမ်အဖြစ် နိုင်ငံပိုင်သတင်းစာတွင် ထည့်သွင်းထုတ်ပြန် ကြညာခြင်းအား	တတိယ အကြိမ်

			ဆောင်ရွက်ခဲ့ပြီးဖြစ်ပါသည်။	
၁၀။	၂၀.၄.၂၀၁၅	OMLမှ ပြည်ထောင်စုဝန်ကြီးသို့ လိုင်းနှုန်း နှောင့်ယူက်မှုဆိုင်ရာကိစ္စရပ်များနှင့် စပ်လျဉ်း၍ PTDမှ တာဝန်ရှိသူများနှင့် MEC တာဝန်ရှိသူများ အပြုသဘောဆောင်သော ဆွေးနွေးမှုများဖြင့် ဆောင်ရွက်နေသည့် အတွက် တိုးတက်မှုရှိကြောင်းပြည်ထောင်စုဝန်ကြီးသို့ တင်ပြခဲ့ပါသည်။	PTD မှ MEC တာဝန်ရှိသူများနှင့် ညီနှင့်ဆွေးနွေးမှုများ ပြုလုပ်ပေးခဲ့မှုကြောင့် တိုးတက်မှုရှိကြောင်း တင်ပြလာခဲ့ခြင်း ဖြစ်ပါသည်။	
၁၁။	၁၅.၇.၂၀၁၅	(က)MPT သို့ MEC မှ ခွင့်ပြုထားသော လိုင်းနှုန်းကိုသာတိကျစွာသုံးစွဲရန်နှင့် BTS များတွင် Filter များတပ်ဆင်သွားရန် အကြောင်းကြားခဲ့ပါသည်။ (ခ) OML သို့ ခွင့်ပြုထားသည့် Band အတွင်း Receiving Input Range ကိုသာ ဖမ်းယူရန် အကြောင်းကြားခဲ့ပါသည်။	(က) (၂၄.၇.၂၀၁၅)ရက်နေ့တွင် OML မှ PTD၏ Filter ပြင်ဆင်ရန် ညွှန်ကြားချက်ကိုဆောင်ရွက်ထားရှိမှ တင်ပြလာခြင်းမရှိပါ။ ထိုအပြင် Illegal Repeater များအရေးယူပေးရန် ထပ်မံတင်ပြခဲ့ပါသည်။ (ခ) MEC မှ Filter တပ်ဆင်ပြီးသော်လည်း လိုင်းနှုန်း နှောင့်ယူက်မှု များရှိနေဆဲဖြစ်သည့်အတွက် နိုင်ငံတကာအဆင့် ပြင်ပအဖွဲ့အစည်း (Third Party)ဖြင့်တိုင်းတာဆောင်ရွက်လိုကြောင်းတင်ပြလာခဲ့ပါသည်။ (ဂ) MEC မှ PTD၏ ညွှန်ကြားချက်အတိုင်း ဆောင်ရွက်ပြီးစီးကြောင်း ပြန်လည်တင်ပြခဲ့ပါသည်။	
၁၂။	၇.၈.၂၀၁၅	ရန်ကုန်မြို့တွင် MEC ၏ CDMA 800 MHz Sites များအား လိုင်းနှုန်းတိုင်းတာ	ဆက်သွယ်ရေးညွှန်ကြားမှုဦးစီးဌာနသည် ရန်ကုန်မြို့ရှိ MEC CDMA 800 MHz Site များအား လိုင်းနှုန်းတိုင်းတာ	

		ခဲ့မှုနှင့်စပ်လျဉ်း၍ အကြောင်းကြားခြင်းကိစ္စ	ဆောင်ရွက်မှုများ ပြုလုပ်ခဲ့ပါသည်။ အဆိုပါ တိုင်းတာတွေရှိချက်အရ MEC CDMA 800 MHz Site များမှာ လွှေ့အားလျော့ချထားကြောင်း တွေရှိရပြီး Ooredoo Myanmar Limited ၏ Band (890-895 MHz) သို့ ထုတ်လွှေ့မှု မရှိကြောင်းတွေရှိခဲ့ပြီး Ooredoo Myanmar Limitedအနေဖြင့် Receiving Band အား (880 MHz မှ 915 MHz) အထိ ဖမ်းယူနေကြောင်းတွေရှိသူဖြင့် ခွင့်ပြုထား သော Band အတွင်း၌သာ အသုံးပြုရန် Ooredoo Myanmar Limited သို့ အကြောင်းကြားခဲ့ပါသည်။ မြန်မာစီးပွားရေးကော်ပိုရေးရုံးသို့ ရန်ကုန်ဖြူရှိ CDMA 800 MHz Sites များအနက် Noise Floor မြင့်တက်နေသော Site များတွင် လိုအပ်သော ချိန်ညီမှုများ ပြုလုပ်ရန် အကြောင်းကြားခဲ့ပါသည်။	
၁၃။	၁၉.၉.၂၀၁၅	တရားမဝင် Repeater များသုံးစွဲခြင်းမပြုရန် နိုင်ငံပိုင်သတင်းစာတွင် ကြညာခြင်း	မိုဘိုင်းဆက်သွယ်ရေး လုပ်ငန်းကို အော်ပရေတာများဖြင့် ဆောင်ရွက်ရာတွင် မလိုလားအပ်သော လှိုင်းနှုန်း နှောင့်ယှက်မှု များ မဖြစ်ပေါ်စေရေးအတွက် လှိုင်းနှုန်းနှောင့်ယှက်မှုများ ဖြစ်ပေါ်နိုင်သည့် တရားမဝင် Repeater များသုံးစွဲခြင်းမပြုရန် ဦးစီးဌာနမှ (၁၉.၉.၂၀၁၅)ရက်နေ့တွင် စတုတွေအကြိမ်အဖြစ် နိုင်ငံပိုင်သတင်းစာတွင် ထည့်သွင်းထုတ်ပြန် ကြညာခြင်းအား ဆောင်ရွက်ခဲ့ပြီးဖြစ်ပါသည်။	စတုတွေအကြိမ်
၁၄။	၁၅.၁၂.၂၀၁၅	(Third Party) အဖွဲ့အစည်းအဖြစ် Cyprus နိုင်ငံအခြေစိုက် Norconsult Telematics	Norconsult Telematics Report တင်ပြခဲ့ပါသည်။ (က) အစီရင်ခံစာအပိုဒ်(၅.၁)တွင် MEC/ MPT CDMA	

		<p>အဖွဲ့အား (၁၅.၁၂.၂၀၁၅)ရက် နေ့ စတင် တာဝန်ပေးအပ်၍ PTD မှ စက်မှုဝန်ထမ်းများ OMLမှ စက်မှုဝန်ထမ်းများ ပူးပေါင်း၍ စစ်ဆေးစိစစ်မှုများ ဆောင်ရွက်ခဲ့ပါသည်။</p>	<p>စနစ်များမှ တိုက်ရိုက်နောင့်ယှဉ်မှုဖြစ်ပေါ်ကြောင်း အထောက် အထား မတွေ့ရှိရကြောင်းဖော်ပြ ရေးသားထားသည်ကိုတွေ့ရှိရ ပါသည်။</p> <p>(ခ) အစီရင်ခံစာအပိုဒ်(၉.၃)တွင် OML၏ filter settings ကြောင့် EGSM band မှ လိုင်းနှုန်းနောင့်ယှဉ်မှုများ ဖြစ်ပေါ် နိုင်ကြောင်းဖော်ပြရေးသားထားသည်ကိုတွေ့ရှိရပါသည်။</p> <p>(ဂ) Repeater (၁၈၂)လုံးဖြတ်သိမ်းခဲ့ပါသည်။</p>	
၁၅။	၁၆.၉.၂၀၁၆	Ooredoo Myanmar Limited မှ နယ်စပ် ဒေသများတွင် လိုင်းနှုန်း နောင့်ယှဉ်မှုများ ဖြစ်ပေါ်နေသဖို့ ဆက်သွယ်ရေး ညွှန်ကြားမှု ဦးစီးဌာနမှ ဖြေရှင်းဆောင်ရွက်ပေးနိုင်ရေး တင်ပြလာပါသည်။	ထိုင်းနိုင်ငံနှင့် 1 st Joint Technical Committee Meeting အား ၂၀၁၈ခုနှစ်၊ နိုဝင်ဘာလ (၈-၉) ရက်နေ့တွင် ရန်ကုန်မြို့၌ ကျင်းပပြုလုပ်ခဲ့ပြီး လိုင်းနှုန်းနောင့်ယှဉ်မှုများ လျော့ချုနိုင်ရေး ဆောင်ရွက်လျက်ရှိပါသည်။	
၁၆။	၂၈.၉.၂၀၁၆	တရားမဝင် Repeater များသုံးစွဲခြင်းမပြုရန် နိုင်ငံပိုင်သတင်းစာတွင် ကြေညာခြင်း	မို့ဘိုင်းဆက်သွယ်ရေးလုပ်ငန်းကို အော်ပရေတာများဖြင့် ဆောင်ရွက်ရာတွင် မလိုလားအပ်သော လိုင်းနှုန်း နောင့်ယှဉ်မှုများ မဖြစ်ပေါ်စေရေးအတွက် လိုင်းနှုန်းနောင့်ယှဉ်မှုများ ဖြစ်ပေါ်နိုင်သည် တရားမဝင် Repeater များသုံးစွဲခြင်းမပြုရန် ဦးစီးဌာနမှ (၂၈.၉.၂၀၁၆)ရက်နေ့တွင် ပဋိမာကြိမ်အဖြစ် နိုင်ငံပိုင်သတင်းစာတွင် ထည့်သွင်းထုတ်ပြန် ကြညာခြင်းအား ဆောင်ရွက်ခဲ့ပြီးဖြစ်ပါသည်။	ပဋိမာကြိမ်
၁၇။	၁၇.၁၁.၂၀၁၆	Ooredoo Myanmar Limited မှ ပဲခူး တိုင်းဒေသကြီး အတွင်းရှိ ဖြူးမြို့တွင်	အဆိုပါကိစ္စနှင့်စပ်လျဉ်း၍ J.၁၂.၂၀၁၆ ရက်နေ့မှ ၃.၁၂.၂၀၁၆ ရက်နေ့အထိ ဖြူးမြို့တွင်လိုင်းနှုန်းတိုင်းတာစစ်ဆေးမှုများ	

		လှိုင်းနှုန်း နောင့်ယှက်မှုရှိကြောင်း တင်ပြလာခဲ့ပါသည်။	ပြုလုပ်ခဲ့ပါသည်။	
၁၈။	၁၅.၈.၂၀၁၇	Ooredoo Myanmar Limited မှ EGSM Band အတွင်း အချို့မြှို့နယ်များတွင် လှိုင်းနှုန်း နောင့်ယှက်မှုများ ရှိနေကြောင်း EGSM Test Results အား ပေးပို့တင်ပြလာပါသည်။	Ooredoo Myanmar Limited မှ ဧရာဝတီ တိုင်းဒေသကြီး အတွင်းရှိ မြှို့များတွင် EGSM Band အတွင်း လှိုင်းနှုန်း ရှင်းလင်းမှု မရှိကြောင်း တင်ပြလာခြင်းနှင့် စပ်လျဉ်း၍ ဆက်သွယ်ရေးညွှန်ကြားမှု့ဗြီးစီးဌာနမှ ဖျော့ပုံ၊ ဘိုကလေး၊ ဒေးဒရဲနှင့် ဝါးခယ်မမြှို့များတွင် လှိုင်းနှုန်းတိုင်းတာ စစ်ဆေးမှု များပြုလုပ်ခဲ့ပြီး တရားမဝင် အသုံးပြုနေသည့် Repeater များအား ဖြုတ်သိမ်းစေခဲ့ပြီး Telenor မှ လှိုင်းနှုန်း ကျော်လွန် အသုံးပြုနေမှုအပေါ် အကြောင်းကြားစာ ပေးပို့သွားမည် ဖြစ်ကြောင်း အကြောင်းပြန်ကြားခဲ့ပါသည်။	
၁၉။	၁.၁၂.၂၀၁၇	Ooredoo Myanmar Limited မှ ရန်ကုန်မြို့၊ ထိုင်း၊ မြန်မာနှင့် တရာ်တိန်င်း နယ်စပ်ဒေသများတွင် 900 MHz Band အတွင်းသာမက 2100 MHz Band အတွင်းတွင်ပါ လှိုင်းနှုန်းနောင့်ယှက်မှုများ ရှိကြောင်း တင်ပြလာခဲ့ပါသည်။	ထိုင်းနိုင်းနှင့် 1 st Joint Technical Committee Meeting အား ၂၀၁၈ခုနှစ်၊ နိုဝင်ဘာလ (၈-၉) ရက်နေ့တွင် ရန်ကုန်မြို့နှင့် ကျင်းပပြုလုပ်ခဲ့ပြီး လှိုင်းနှုန်းနောင့်ယှက်မှုများ လျော့ချိန်ရေး ဆောင်ရွက်လျက်ရှိပါသည်။	
၂၀။	၂.၁.၂၀၁၈	Ooredoo Myanmar Limited မှ မန္တလေး မြို့တွင်လည်း လှိုင်းနှုန်းနောင့်ယှက်မှုများ ရှိကြောင်း တင်ပြလာခဲ့ပါသည်။	၂၀၁၇ ခုနှစ် ဒီဇင်ဘာလနှင့် ၂၀၁၈ ခုနှစ် ဇန်နဝါရီလတို့တွင် မန္တလေးမြို့အတွင်း လှိုင်းနှုန်းတိုင်းတာစစ်ဆေးခြင်း လုပ်ငန်းများ ဆောင်ရွက်၍ Repeater များ ဖြုတ်သိမ်းစေခြင်း၊ Internal Interference ဖြစ်ပေါ်နေပါက ဖြစ်ပေါ်နေမှုနှင့် စပ်လျဉ်း၍ အကြောင်းကြားခဲ့ပါသည်။	
၂၁။	၂၁.၂.၂၀၁၈	Ooredoo Myanmar Limited မှ မန္တလေး၊	အဆိုပါကိစ္စနှင့်စပ်လျဉ်း၍ ဆက်သွယ်ရေးညွှန်ကြားမှု့ဗြီးစီးဌာန	

		စစ်ကိုင်းချင်းနှင့် နေပြည်တော်စသည့် နေရာများတွင်လည်း လိုင်းနှုန်းနောင့်ယုက်မှုများ ထပ်မံတင်ပြလာခဲ့ပါသည်။	နေပြည်တော်စသည့် လိုင်းနှုန်းနောင့်ယုက်မှုများ ရှိကြောင်း	မှုပုဘရ ခုနှစ်၊ မေလတွင် (၇) ကြိမ်၊ ဇွန်လတွင် (၃) ကြိမ် စုစုပေါင်း (၁၀) ကြိမ် လိုင်းနှုန်းတိုင်းတာစစ်ဆေးမှုများ ပြုလုပ် ခဲ့ပြီး Repeater များ ဖြုတ်သိမ်းစေခြင်း၊ Internal Interference ဖြစ်ပေါ်နေပါက ဖြစ်ပေါ်နေမှုနှင့် စပ်လျဉ်း၍ အကြောင်းကြားခဲ့ပါသည်။	
JJ။	J၃.၄.၂၀၁၈	Ooredoo Myanmar Limited မှ ရန်ကုန်မြို့တွင် လိုင်းနှုန်းနောင့်ယုက်မှုများ ရှိနေပြီး ဝန်ဆောင်မှုများအပေါ် တိခိုက်မှုများ ရှိပါသဖြင့် ဦးစားပေး ဆောင်ရွက်ပေးစေ လိုကြောင်း တင်ပြလာခဲ့ပါသည်။		အဆိုပါကိစ္စနှင့်စပ်လျဉ်း၍ ဆက်သွယ်ရေးညွှန်ကြားမှုဌီးစီးဌာန မှုပုဘရ ခုနှစ်၊ ဧပြီလတွင် (၂)ကြိမ်၊ မေလတွင် (၂) ကြိမ် စုစုပေါင်း (၄) ကြိမ် လိုင်းနှုန်းတိုင်းတာ စစ်ဆေးမှုများ ပြုလုပ်ခဲ့ပြီး Repeater များ ဖြုတ်သိမ်းစေခြင်း၊ Internal Interference ဖြစ်ပေါ်နေပါက ဖြစ်ပေါ်နေမှုနှင့် စပ်လျဉ်း၍ အကြောင်းကြားခဲ့ပါသည်။	
J၃။	J၆.၄.၂၀၁၈	Ooredoo Myanmar Limited မှ ရန်ကုန်မြို့တွင် ဖြစ်ပေါ်နေခဲ့သည့် လိုင်းနှုန်း နောင့်ယုက်မှုများနှင့်စပ်လျဉ်း၍ ဆက်သွယ် ရေးညွှန်ကြားမှုဌီးစီးဌာနမှ ပူးပေါင်း ဆောင် ရွက်ပေးမှုအပေါ် ကျေးဇူးတင်ရှိကြောင်းနှင့် လိုင်းနှုန်းနောင့်ယုက်မှု ဖြစ်ပေါ်ရသည့် အကြောင်း အရင်းအား သိရှိလိုကြောင်း၊ လက်ရှိ မြန်မာနိုင်ငံတစ်ရှစ်မီးလုံးတွင် ဖြစ်ပေါ် နေသည့် လိုင်းနှုန်းနောင့်ယုက်မှုများ အား ဖြော်ပြုရေးဆောင်ရွက်ပေးရန်တင်ပြလာခဲ့ပါသည်။			
J၄။	J၆.၆.၂၀၁၈	Ooredoo Myanmar Limited မှ ဗားဆောင်း၊ နမ့်ဆန်း မြစ်ကြီးနားတို့တွင် လိုင်းနှုန်းနောင့်ယုက်မှုများဖြစ်ပေါ်နေကြောင်း		ဆက်သွယ်ရေးညွှန်ကြားမှုဌီးစီးဌာနသည် J၆.၆.၂၀၁၈ ရက်နေ့မှ ၄.၇.၂၀၁၈ ရက်နေ့အထိ စဉ်ကိုင်၊ ကျောက်ဆည်၊ မြင်းခြားတောင်သာမဏ္ဍလေးမိတ္ထိလာ၊ သာစည်နှင့် ကူမဲ့မြို့	

		နှင့် အမိကထား ဖြေရှင်းပေးရမည့် လိုင်းနှစ်း နှောင့်ယှက်မှုဖြစ်ပေါ်နေသည့် မြို့နယ် စာရင်း အား ပေးပို့လာပါသည်။	များတွင် လိုင်းနှစ်းတိုင်းတာစစ်ဆေးခြင်း လုပ်ငန်းများ ဆောင်ရွက်၍ Repeater များ ဖြတ်သိမ်းစေခြင်း၊ Internal Interference ဖြစ်ပေါ်နေပါက ဖြစ်ပေါ်နေမှုနှင့်စပ်လျဉ်း၍ အကြောင်းကြားခဲ့ပါသည်။	
၂၅။	၁၀.၈.၂၀၁၈	Ooredoo Myanmar Limited မှ ရန်ကုန် တိုင်းဒေသကြီးတွင် လိုင်းနှစ်း နှောင့် ယှက်မှု ဖြစ်ပေါ်နေကြောင်း တင်ပြလာပါသည်။	ဆက်သွယ်ရေးညွှန်ကြားမှုံးစီးဌာနသည် ၁၃.၈.၂၀၁၈ ရက်နေ့တွင် ရန်ကုန်မြို့၌ လိုင်းနှစ်းတိုင်းတာစစ်ဆေးခြင်း လုပ်ငန်းများ ဆောင်ရွက်၍ Repeater များ ဖြတ်သိမ်းစေခြင်း၊ Internal Interference ဖြစ်ပေါ်နေပါက ဖြစ်ပေါ်နေမှုနှင့် စပ်လျဉ်း၍ အကြောင်းကြား ခဲ့ပါသည်။	
၂၆။	၂၀.၈.၂၀၁၈	Ooredoo Myanmar Limited မှ 900 MHz Band အတွင်း လိုင်းနှစ်း နှောင့်ယှက်မှုများ ဖြစ်ပေါ့သည့်အတွက် ဆုံးရုံးနှစ်နာခဲ့ရခြင်း နှင့်စပ်လျဉ်း၍ ဆွေးနွေးလိုကြောင်း Request for Consultation အား ပို့ဆောင်ရေးနှင့် ဆက်သွယ်ရေးဝန်ကြီးဌာန၊ စီမံကိန်းနှင့် ဘဏ္ဍာရေးဝန်ကြီးဌာနနှင့် မြန်မာနိုင်ငံရေးနှီးမြိုပ်နှံမှုကော်မရှင်တို့သို့ လိပ်မှု၍ တင်ပြလာ ခဲ့ပါသည်။	အဆိုပါ ကိစ္စနှင့်စပ်လျဉ်း၍ ဆက်သွယ်ရေးညွှန်ကြားမှုံးစီးဌာနမှ ဖြေရှင်း ဆောင်ရွက်မှုအခြေအနေများအား အတွင်းရေးများ၊ မြန်မာနိုင်ငံရေးနှီးမြိုပ်နှံမှုကော်မရှင်သို့ တင်ပြခဲ့ပါသည်။	
၂၇။	၂၀.၁၁.၂၀၁၈	Ooredoo Myanmar Limited မှ Request for Consultation တင်ပြလာမှုအပေါ် သက်ဆိုင်ရာ ဌာနများမှ အကြောင်းပြန်ကြားခြင်းမရှုပါသဖြင့် Arbitration ပြည်လုပ်လို	ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာန၊ ပြည်ထောင်စု ဝန်ကြီးနှင့် Ooredoo Group CEO တို့ (၁၈.၈.၂၀၁၉) ရက်နေ့တွင် တွေ့ဆုံးဆွေးမည်ဖြစ်ကြောင်း အကြောင်းပြန်ကြားခဲ့ပါသည်။	

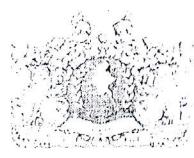
		<p>ကြောင်း “Intent to Commence Arbitration”</p> <p>အား ပို့ဆောင်ရေးနှင့် ဆက်သွယ်ရေးဝန်ကြီးဌာန၊ စီမံကိန်းနှင့် ဘဏ္ဍာရေးဝန်ကြီးဌာနနှင့် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှုကော်မရှင် တို့သို့ လိပ်မူ၍ ပေးပို့လာပါသည်။</p>	
၂၈။	၁၃.၂၂၀၁၉	<p>ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာနသည် ဥပဒေကြောင်းဆိုင်ရာ ကိစ္စရပ်များနှင့် စပ်လျဉ်း၍လည်းကောင်း၊ ရင်းနှီးမြှုပ်နှံမှု ဆိုင်ရာ အချက်အလက်များနှင့် စပ်လျဉ်း၍ လည်းကောင်း ညီးနှုန်းဆွေးနွေးနိုင်ရေး အတွက် စီမံကိန်း၊ ဘဏ္ဍာရေးနှင့်စက်မှု ဝန်ကြီးဌာနမှ တာဝန်ရှိသူများ၊ ဥပဒေ အကြံဥာဏ်ပေးရေးဦးစီးဌာနနှင့် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်တို့မှ တာဝန်ရှိသူများ ကို ဖိတ်ကြား၍ ညီးနှုန်းအစည်းအဝေး တစ်ရပ်ကို (၁၃.၂၂၀၁၉) ရက်နေ့တွင် ကျင်းပပြုလုပ်ခဲ့ပါသည်။</p>	<p>အဆိုပါ အစည်းအဝေးတွင် Arbitration ပြုလုပ်မည်ဆိုပါက နိုင်ငံ၏ ပုဂ္ဂိုလ်ကို ထိခိုက်စေနိုင်မည်ဖြစ်ပြီး ကုန်ကျစရိတ်များမည်ဖြစ်ကြောင်း၊ ပို့ဆောင်ရေးနှင့် ဆက်သွယ်ရေး ဝန်ကြီးဌာန အနေဖြင့် နှစ်ဦးနှစ်ဖက် ရာသင့်ရထိက်သော အခွင့်အရေးများ မဆုံးရှုံးစေရန် OML နှင့် ညီးနှုန်းဖြေရှင်းနိုင်ရေးဆောင်ရွက်သင့်ကြောင်းနှင့် နှစ်ဖက်သဘောတူညီမှ မရရှိမှုသာ Arbitration ဆောင်ရွက်ရမည်ဖြစ်ကြောင်း ဆွေးနွေးခဲ့ကြပါသည်။</p>

၂၉။	၂၈.၂၀၁၉	နှစ်ဖက်ကိုယ်စားလှယ်များပါဝင်သည့် Joint TaskForce ဖွဲ့စည်းခြင်း	<p>ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာန၊ ပြည်ထောင်စု ဝန်ကြီးနှင့် Ooredoo Group CEO တို့ (၁၈.၂.၂၀၁၉)</p> <p>ရက်နေ့တွင် တွေ့ဆုံးနေ့ခြားပြီး ဆွေးနွေးချက်များအရ နှစ်ဦးနှစ်ဖက်ရသင့်ရထိက်သော အခွင့်အရေးများ မဆုံးရှုံး စေရန် ညီးစွမ်းဖြေရှင်းနိုင်ရေးအတွက် နှစ်ဖက်ကိုယ်စားလှယ် များပါဝင်သည့် Joint Taskforce ကို ဖွဲ့စည်းခဲ့ပါသည်။</p> <p>အဆိုပါ Joint Taskforce သည် ဖွဲ့စည်းတည်ထောင်သည့်နေ့မှ (၆) လ အတွင်းတွင် နှစ်ဦးနှစ်ဖက် သဘောတူသည့် အဖြေ တစ်ခုကိုရရှိနိုင်ရေး ညီးစွမ်းဆောင်ရွက်သွားရမည်ဖြစ်ပြီး Joint Taskforce မှ တင်ပြချက်များ အပေါ်မူတည်၍ ဝန်ကြီးဌာနက ဆုံးဖြတ်ချက် တစ်ခုခုကို (၃၁.၈.၂၀၁၉) ရက်နေ့၊ မတိုင်မီ ချမှတ်ပေးရမည်ဖြစ်ပါသည်။</p>	
၂၀။	၂၈.၂၀၁၉ ရက်နေ့မှ (၄.၂.၂၀၂၀) ရက်နေ့အထိ	အဆိုပါ Joint Taskforce ၏ (၂.၄.၂၀၁၉) ရက်နေ့မှ (၄.၂.၂၀၂၀) ရက်နေ့အထိ ညီးစွမ်း အစည်းအဝေးများကို ကျင်းပပြုလုပ်ခဲ့ပါသည်။	<p>အဆိုပါအစည်းအဝေးတွင် 900 MHz Band တွင် ဖြစ်ပေါ်ခြေသော ညိုင်းနှင့် နောင့်ယှက်မှုများကြောင့် Ooredoo Myanmar Limited က နစ်နာဆုံးရှုံးရမှုများနှင့်စပ်လျဉ်း၍ ဖြေရှင်းဆောင်ရွက်ပေးနိုင်မည့် နည်းလမ်းများကို ညီးစွမ်းဆွေးနွေးမှုများ ပြုလုပ်ခဲ့ကြပါသည်။</p>	
၂၁။	၂၆.၁၁.၂၀၁၉	800 MHz Band ကို Refarming ပြုလုပ်နိုင်ရေးနှင့်စပ်လျဉ်း၍ လုပ်ငန်းကော်မတီ ဖွဲ့စည်းနိုင်ရေးကိစ္စ	<p>ဆက်သွယ်ရေးညွှန်ကြားမှုံးစီးဌာနအနေဖြင့် 800 MHz Band ကို Refarming ပြုလုပ်နိုင်ရေးအတွက် ဆက်သွယ်ရေး ညွှန်ကြားရေးမှုံးရုံး၊ ကာကွယ်ရေးဦးစီးချုပ်ရုံး (ကြည်း)၊ မြန်မာ့စီးပွားရေးကော်ပို့ရေးရှင်းတို့မှ ဆက်သွယ်ရေးလုပ်ငန်း၊ မြန်မာ့စီးပွားရေးကော်ပို့ရေးရှင်းတို့မှ</p>	

		<p>တာဝန်ရှိသူများ၊ ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာန၊ ပြည်ထောင်စုဝန်ကြီးရုံးနှင့် ဆက်သွယ်ရေးညွှန်ကြားမှုံးစီး ဌာနတို့မှ တာဝန်ရှိသူများပါဝင်သည့် လုပ်ငန်းကော်မတီတစ်ရပ် ဖွဲ့စည်းနိုင်ရေး ပြည်ထောင်စုဝန်ကြီးရုံးသို့ တင်ပြခွင့်ပြုချက် ရရှိ ခဲ့ပြီးဖြစ်ပါသည်။</p> <p>အဆိုပါလုပ်ငန်းကော်မတီအား အမြဲတမ်းအတွင်းဝန်၊ ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာနမှ ဥက္ကဋ္ဌအဖြစ် ဦးဆောင်သွားမည်ဖြစ်ရာ သက်ဆိုင်ရာအဖွဲ့အစည်းများမှ အဖွဲ့ဝင်အဖြစ် ပါဝင်ဆောင်ရွက်နိုင်ရေး အမည်စာရင်းတောင်းခံချက် (၂၀၁၂.၂၀၁၉) ရက်နေ့တွင် “800/850 MHz Band Refarming ပြုလုပ်နိုင်ရေး လုပ်ငန်းကော်မတီ”ကို ဖွဲ့စည်းခဲ့ပါသည်။</p>	
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၂၀၁၅ ခုနှစ်မှ ၂၀၂၀ ခုနှစ်အထိ နှစ်အလိုက် Repeater ဖြတ်သိမ်းစေခဲ့မှုများ

Sr	Year	City	Repeater Total	Remark
၁	၂၀၁၅	Yangon	၆၃	
		Taunggyi	၂	
၂	၂၀၁၆	Yangon	၈၅	
၃	၂၀၁၇	Yangon	၂၁	
		Mandalay	၁၀	
		Naypyitaw	၁၀	
		Bogalay	၁၀	
၄	၂၀၁၈	Yangon	၂၁	
		Mandalay	၁၀	
		Mahlaing	၁၀	
၅	၂၀၁၉	Mandalay	၄	
		Tachilake	၂၀	
		Meik	၂	
		Yangon	၁၂၈	
၆	၂၀၂၀	Yangon	၁၃	
Total			၃၉၅	



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်
 ပို့ဆောင်ရေးနှင့် ဆက်သွယ်ရေးဝန်ကြီးဌာန
 ပြည်ထောင်စုပန်ကြီးရုံး
 အမိန့်ကြော်ပြာစာအမှတ် (၂၆ /၂၀၁၉)
 ၁၃၈၁ ခုနှစ်၊ နတ်တော်လပြည့်ကျော် ၉ ရက်
 (၂၀၁၉ ခုနှစ်၊ ဒီဇင်ဘာလ ၂၀ ရက်)

800/ 850 MHz Band Refarming ပြည်ပနိုင်ရေး လုပ်ငန်းကော်မတီဖွဲ့စည်းခြင်း

၁။ 800/ 850 MHz Band အတွင်း လိုင်းနှုန်းအသုံးပြနေမှုနှင့်စပ်လျဉ်း၍ Refarming ပြည်ပနိုင်ရုံးအတွက် “800/ 850 MHz Band Refarming ပြည်ပနိုင်ရေး လုပ်ငန်းကော်မတီ” ကို အောက်ဖော်ပြပါ ပုဂ္ဂိုလ်များဖြင့် ဖွဲ့စည်းတာဝန်ပေးအပ်လိုက်သည်-

(က) ဦးစိုးသိန်း	ပေါ်
အမြဲတမ်းအတွင်းဝန်	
ပို့ဆောင်ရေးနှင့် ဆက်သွယ်ရေးဝန်ကြီးဌာန	
(ခ) ဦးမျိုးဆွဲ	အဖွဲ့ဝင်
ဗျာန်ကြားရေးမှူးချုပ်	
ဆက်သွယ်ရေးဗျာန်ကြားမှူးဦးစီးဌာန	
(ဂ) ဗိုလ်မှူးချုပ် ကိုကိုသန်	အဖွဲ့ဝင်
ဒုတိယဆက်သွယ်ရေးဗျာန်ကြားရေးမှူး	
ကာကွယ်ရေးဦးစီးချုပ်ရုံး (ကြည်း)	
ဆက်သွယ်ရေးဗျာန်ကြားရေးမှူးရုံး	
ကာကွယ်ရေးဝန်ကြီးဌာန	
(ဃ) ဗိုလ်မှူးကြီး မင်းနိုင်ဝင်း	အဖွဲ့ဝင်
ဌာနမှူး	
တပ်မတော်အဆင့်မြင့် နည်းပညာသုံး ဆက်သွယ်ရေးနှင့်	
အီလက်ထရောနစ်ပစ္စည်းများထုတ်လုပ်ရေးနှင့် သုတေသန	
ဌာနချုပ်ကာကွယ်ရေးဦးစီးချုပ်ရုံး (ကြည်း)	
ဆက်သွယ်ရေးဗျာန်ကြားရေးမှူးရုံး	
ကာကွယ်ရေးဝန်ကြီးဌာန	

(c)	၃၆၀၅၁၂၄၈၇၉	အနေဖြင့်ယာဉ်	အနေဖြင့်
		နှုန်းပညာနှင့်ကြိုး၊ ဆက်သွယ်ရေးနည်းပညာနှင့်	
		မြန်မာ့ဆက်သွယ်ရေးလုပ်ငန်း	
(d)	၅၇၁၁၅၄၄၅၆၅၆	အထွေထွေမန်နေဂျာ	အဖွဲ့ဝင်
		သတင်းအချက်အလက်နှင့်မိဘိုင်းဆက်သွယ်ရေးလုပ်ငန်း	
		မြန်မာ့စီးပွားရေးကော်ပိုရေးရှင်း	
(e)	၅၇၁၁၁၅၄၄၅၆၅၆	အတွင်းရေးများ	
		ဒုတိယညွှန်ကြားရေးများချုပ်	
		ဆက်သွယ်ရေးညွှန်ကြားမှုပိုးစီးဌာန	

- ၂။ အဆိုပါ လုပ်ငန်းကော်မတီ၏ လုပ်ငန်းတာဝန်များမှာ အောက်ဖော်ပြပါအတိုင်းဖြစ်သည်-
- (က) 800/ 850 MHz Band အတွင်း လိုင်းနှုန်းအသုံးပြုမှုနှင့်စပ်လျဉ်း၍ အကျိုးရှိစွာ အသုံးပြုနိုင်ရေးနှင့် သတ်မှတ်ထားသည့် Guard Band (877.5 – 880 MHz) အတွင်း လိုင်းနှုန်းများ ကျော်လွန်အသုံး မပြုစေရေးတို့အတွက် ညိုနှင့်ဆွေးနွေးခြင်း၊
 - (ခ) 800/ 850 MHz Band Refarming ပြုလုပ်နိုင်ရေးနှင့်စပ်လျဉ်း၍ နည်းပညာပိုင်းဆိုင်ရာကိစ္စရပ်များနှင့်စပ်လျဉ်း၍လည်းကောင်း၊ ဘဏ္ဍာရေးဆိုင်ရာကိစ္စရပ်များနှင့် စပ်လျဉ်း၍လည်းကောင်း ညိုနှင့်ဆွေးနွေးခြင်း၊
 - (ဂ) လိုင်းနှုန်းများကို အကျိုးရှိရှိ စီမံခန့်ခွဲနိုင်ရေးနှင့် လိုင်းနှုန်းအသုံးပြုသူများအနေဖြင့် တစ်ဆက်တစ်စပ်တည်းရှိသည့် လိုင်းနှုန်းအသုံးပြုနိုင်ရေးအတွက် ဆက်လက် ဆောင်ရွက်သွားမည့် နည်းလမ်းများကို ဝန်ကြီးဌာနသို့တင်ပြ၍ အတည်ပြုချက် ရယူခြင်း၊

သန့်စင်မောင်
ပြည်ထောင်စုဝန်ကြီး

ဖြန်ပေါ်ခိုင်း

800/ 850 MHz Band Refarming [မြတ်စွာပို့ပေါ်] လုပ်ငန်းကော်မတီဝင်မြားအေားလုံး

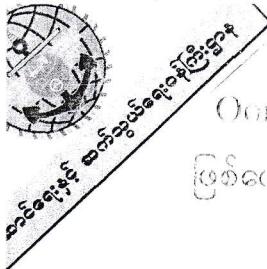
မိတ္တာကို

ရုံးလက်ခံ

မျှော်စာတဲ့

အမိန့်အရ

၂၀၁၂/၁၀/၁၉
(စိုးသိန်း)
အမြဲတမ်းအတွင်းဝန်
/ မ.



Ooredoo Myanmar Limited မှ ၹ၀၀ MHz Band အတွင်း လိုင်းနှစ်းနှောင့်ယူက်မှုများ
ဖြစ်ပေါ်ခဲ့ခြင်းကြောင့် နစ်နာရီရှူးရှုံးနှင့်စပ်လျဉ်း၍ ‘အနုညာတနည်းဖြင့် စီရင်ဆုံးဖြတ်ခြင်း
ဖြုလုပ်လိုကြောင်း’ တင်ပြလာခြင်းအပေါ် သက်ဆိုင်ရာအဖွဲ့အစည်းများနှင့်
ပြုလုပ်ခဲ့သည့် ညီနှင့်အစည်းအဝေးမှတ်တမ်း

အစည်းအဝေးနောက်	-	၂၀၁၉ ခုနှစ်၊ ဖေဖော်ဝါရီလ (၁၃) ရက်
အစည်းအဝေးအချိန်	-	(၁၀:၀၀) နာရီ မှ (၁၁:၃၀) နာရီအထိ
အစည်းအဝေးနောက်	-	ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာန၊ ရုံးအမှတ် (၂)
အစည်းအဝေးခန်းမ		

အစည်းအဝေးတက်ရောက်ကြသူများ

၁။ အောက်ပါပုဂ္ဂိုလ်များ တက်ရောက်ကြပါသည် -

ဦးစိုးသိန်း	အမြဲတမ်းအတွင်းဝန်	ပို့ဆောင်ရေးနှင့် ဆက်သွယ်ရေး ဝန်ကြီးဌာန
ဦးမျိုးဆွဲ	ဒုတိယညွှန်ကြားရေးမှူးချုပ်	ပို့ဆောင်ရေးညွှန်ကြားမှုပိုးစီးဌာန
ဦးကျော်ကျော်နိုင်	ဒုတိယညွှန်ကြားရေးမှူးချုပ်	ဥပဒေအကြံ့ဥက္ကားပေးရေးဦးစီးဌာန
ဒေါ်သီတာထွန်း	ဒုတိယညွှန်ကြားရေးမှူးချုပ်	ရသုံးမှန်းခြေထွေစာရင်းဦးစီးဌာန
ဦးမင်းဇော်ဦး	ညွှန်ကြားရေးမှူး	မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်
ဦးသန်းဝင်း	ညွှန်ကြားရေးမှူး	ပြည်တွင်းအခွန်များဦးစီးဌာန
ဦးစိုးနိုင်	ညွှန်ကြားရေးမှူး	ဆက်သွယ်ရေးညွှန်ကြားမှုပိုးစီးဌာန
ဦးသန်းထွန်းအောင်	ညွှန်ကြားရေးမှူး	ဆက်သွယ်ရေးညွှန်ကြားမှုပိုးစီးဌာန
ဦးဇာနည်အောင်	ညွှန်ကြားရေးမှူး	ဆက်သွယ်ရေးညွှန်ကြားမှုပိုးစီးဌာန
ဒေါ်စံ	ညွှန်ကြားရေးမှူး	ဆက်သွယ်ရေးညွှန်ကြားမှုပိုးစီးဌာန
ဒေါ်စိမ့်စိမ့်အေး	ညွှန်ကြားရေးမှူး	ဆက်သွယ်ရေးညွှန်ကြားမှုပိုးစီးဌာန
ဒေါ်တင်သူလှိုင်	လက်ထောက်ညွှန်ကြားရေးမှူး	ဆက်သွယ်ရေးညွှန်ကြားမှုပိုးစီးဌာန
ဒေါ်အေးမျိုးဝင်း	လက်ထောက်ညွှန်ကြားရေးမှူး	ပို့ဆောင်ရေးနှင့် ဆက်သွယ်ရေး ဝန်ကြီးဌာန
ဦးသက်လွင်	လက်ထောက်ညွှန်ကြားရေးမှူး	ပြည်ထောင်စုရေးနှင့် ပြည်ထောင်စုရေးနှင့် ရုံးချုပ်ရုံး

ဒေါ်ထားအိစ	လက်ထောက်ညွန့်ကြားရေးမှူး	DICA
ဒေါ်မေပွင့်အောင်	ဦးစီးအရာရှိ	DICA
ဦးဝေဖြိုး	ဦးစီးအရာရှိ	ပြည်တွင်းအခွန်များဦးစီးဌာန
ဦးပေါ်သူရမောင်	ဦးစီးအရာရှိ	ဆက်သွယ်ရေးညွန့်ကြားမှုဦးစီးဌာန
		ဆက်သွယ်ရေးညွန့်ကြားမှုဦးစီးဌာန

အစည်းအဝေးမတက်ရောက်နိုင်သူများ

ဦးမိုးကျော်စိုး(တာဝန်) ဒုတိယအမြဲတမ်းအတွင်းဝန် ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေး ဝန်ကြီးဌာန

ရည်ရွယ်ချက်

J" Ooredoo Myanmar Limited က 900 MHz Band အတွင်း လိုင်းနှုန်းနှောင့်ယှက်မှု များ ဖြစ်ပေါ်ခဲ့ခြင်းကြောင့် နစ်နာခဲ့ရမှုများနှင့် စပ်လျဉ်း၍ ‘အနုညာတနည်းဖြင့် စီရင်ဆုံးဖြတ်ခြင်း ပြုလုပ်လိုကြောင်း’ တင်ပြလာခြင်းအပေါ် ရက်ပေါင်း (၉၀) အတွင်း Ooredoo Myanmar Limited နှင့် ညီနှိုင်းဆွေးနွေးမှုပြုလုပ်ရမည်ဖြစ်ရာ ထိုသို့ ဆွေးနွေးညီနှိုင်းခြင်းမပြုမီ ဥပဒေကြောင်းဆိုင်ရာ ကိစ္စရပ်များနှင့်စပ်လျဉ်း၍လည်းကောင်း၊ ရင်းနှီးမြှုပ်နှံမှုဆိုင်ရာ အချက်အလက်များနှင့် စပ်လျဉ်း၍လည်းကောင်း ညီနှိုင်းဆွေးနွေးကြရန် အစည်းအဝေးခေါ်ယူ ကျင်းပရခြင်း ဖြစ်ပါသည်။

ဆွေးနွေးချက်များ

၃" အမြဲတမ်းအတွင်းဝန်က ယနေ့အစည်းအဝေးသို့ တက်ရောက်လာသည့်အတွက် ကျေးဇူး အထူးတင်ရှိကြောင်း၊ Ooredoo Myanmar Limited မှ 900 MHz Band အတွင်း လိုင်းနှုန်းနှောင့်ယှက်မှုများ ဖြစ်ပေါ်ခဲ့ခြင်းကြောင့် နစ်နာခဲ့ရမှုများနှင့်စပ်လျဉ်း၍ ‘အနုညာတနည်းဖြင့် စီရင်ဆုံးဖြတ်ခြင်း ပြုလုပ်လိုကြောင်း’ တင်ပြလာခြင်းအပေါ် ရက်ပေါင်း (၉၀) အတွင်း ၂၀၁၉ ခုနှစ်၊ ဖေဖော်ဝါရီလ (၁၈) ရက်နေ့မတိုင်မီ Ooredoo Myanmar Limited နှင့် ညီနှိုင်းဆွေးနွေးမှုပြုလုပ်ရမည်ဖြစ်ရာ ထိုသို့ ဆွေးနွေးညီနှိုင်းခြင်းမပြုမီ ဥပဒေကြောင်းဆိုင်ရာ ကိစ္စရပ်များနှင့် စပ်လျဉ်း၍လည်းကောင်း၊ ရင်းနှီးမြှုပ်နှံမှုဆိုင်ရာ အချက်အလက်များနှင့် စပ်လျဉ်း၍လည်းကောင်း ညီနှိုင်းဆွေးနွေးနိုင်ရန်အတွက် ယခုအစည်းအဝေးကိုခေါ်ယူရခြင်းဖြစ်ကြောင်း ရေးဦးစွာ ဖြောကြားခဲ့ပါသည်။

၄။ ဆက်လက်၍ အမြဲတမ်းအတွင်းဝန်က ဖြစ်စဉ်အကျဉ်းအား ရှင်းလင်းပြောကြားရာတွင် မြန်မာနိုင်ငံ၏ ဆက်သွယ်ရေးကဏ္ဍဖွံ့ဖြိုးတိုးတက်စေရေးအတွက် (၂၀၁၃) ခုနှစ်မှ စတင်၍ Market Liberalization ကို ဆောင်ရွက်ခဲ့ပြီး Telenor Myanmar Limited နှင့် Ooredoo Myanmar Limited တို့က တင်ဒါအောင်မြင်ခဲ့ကာ Nationwide Telecommunications License ရရှိခဲ့ကြောင်း၊ အဆိုပါ တင်ဒါမပြုလုပ်မီ တင်ဒါလျော်စားသူများနှင့်ပြုလုပ်သည့် အစည်းအဝေး (Invitation to Tender-ITT) ၏ အမေးအဖြေကဏ္ဍတွင် အစိုးရအနေဖြင့် လိုင်းနှုန်းရှင်းလင်းပေးပြီးမှသာ မိဘိုင်းအော်ပရေတာများသို့ လိုင်းနှုန်းအသုံးပြုခွင့် (Spectrum License) ပေးအပ်ရမည်ဟု ဖြေကြားထားမှုအပေါ် အခြေခံ၍ Ooredoo Myanmar Limited က ယခုကဲ့သို့ တင်ပြလာခြင်းဖြစ်ကြောင်း၊ လိုင်းနှုန်းနောင့်ယှက်မှု ဖြစ်ပေါ်နေသည့်ကိစ္စနှင့်စပ်လျဉ်း၍ ယခု Ooredoo Myanmar Limited သို့ သတ်မှတ်ချထားပေးထားသည့် လိုင်းနှုန်း၏ တစ်စိတ် တစ်ပိုင်းမှာ ငှင်းတို့သို့ ချထားမပေးမိကာလတွင် မြန်မာဆက်သွယ်ရေးလုပ်ငန်းက အသုံးပြုခဲ့သည့် အတွက် ၂၀၁၃ ခုနှစ်၊ အောက်တိုဘာလအတွင်း လိုင်းနှုန်းရှင်းလင်းပေးရန် မြန်မာဆက်သွယ်ရေး လုပ်ငန်းသို့ ညွှန်ကြားခဲ့ပြီး လိုင်းနှုန်းရှင်းလင်းပြီးမှသာ Ooredoo Myanmar Limited သို့ လိုင်းနှုန်းစဉ်လိုင်စင် သတ်မှတ်ချထားပေးခဲ့ခြင်းဖြစ်ကြောင်း၊ သို့သော် တရားမဝင်အသုံးပြုနေသည့် Repeater များကြောင့် မိဘိုင်းအော်ပရေတာများသို့ လိုင်းနှုန်းနောင့်ယှက်မှုများရှိနေပြီး Ooredoo Myanmar Limited မှာ ငှင်းတို့ အသုံးပြုသည့် နည်းပညာကြောင့် လိုင်းနှုန်းနောင့်ယှက်ခံရမှုမှာ အများဆုံးဖြစ်ခဲ့ကြောင်း၊ ဆက်သွယ်ရေးညွှန်ကြားမှုဥုးစီးဌာနအနေဖြင့် တရားမဝင် Repeater အသုံးပြုခြင်းများ မပြုလုပ်ရန် နိုင်ငံပိုင်သတ်းစာများတွင် အကြိမ်ပေါင်းများစွာ ထုတ်ပြန်ကြညာ ခဲ့ပြီး အဆိုပါ တရားမဝင် အသုံးပြုနေသည့် Repeater များကို တိုင်းတာစစ်ဆေး၍ ဖြုတ်သိမ်းခြင်းများ အပါအဝင် လိုင်းနှုန်းတိုင်းတာစစ်ဆေးခြင်းများကို သက်ဆိုင်ရာအဖွဲ့အစည်းများနှင့် ပူးပေါင်း၍ စဉ်ဆက်မပြတ် ဆောင်ရွက်ပေးခဲ့ကြောင်း၊ ထိုပြင် CDMA စနစ်နှင့် လိုင်းနှုန်းနောင့်ယှက် မှုကို လျော့ချိန်ရန်အတွက် (third party) Consultant အားငှားရမ်း၍ လိုင်းနှုန်းတိုင်းတာမှုများ ပြုလုပ်ခဲ့ပြီး အဆိုပါ Consultant ၏ အကြံပြုချက်အရ လိုင်းနှုန်းနောင့်ယှက်မှု ဖြစ်ပေါ်နေသည့် နေရာများတွင် Filter တပ်ဆင်မှုများပြုလုပ်ရန် သက်ဆိုင်ရာ အဖွဲ့အစည်းများသို့ ညွှန်ကြားခဲ့ကြောင်း ရှင်းလင်းပြောကြားခဲ့ပါသည်။

၅။ ဆက်လက်၍ အမြဲတမ်းအတွင်းဝန်က Ooredoo Myanmar Limited သည် ယခုကိစ္စကို ASEAN Comprehensive Investment Agreement (ACIA) နှင့်အညီ အနညာတနည်းဖြင့် စီရင်ဆုံးဖြတ်ခြင်း ပြုလုပ်လိုကြောင်း တင်ပြထားသည့်ကိစ္စနှင့်စပ်လျဉ်း၍ ACIA တွင် ဆက်သွယ်ရေး ကဏ္ဍအတွက် ဖော်ပြထားခြင်းမရှိသဖြင့် ယခုကိစ္စအား အဆိုပါ ACIA ဖြင့် ဆောင်ရွက်၍ ရ/ မရ အကြံပြုဆွေးနွေးပေးစေလိုကြောင်း ပြောကြားခဲ့ပါသည်။

၆။ ဥပဒေအကြံ့ညာကိုပေးရေးဦးစီးဌာန၏ခုတိယဉ်နှင့်ကားရေးမှူးချုပ်၊ ဦးကျော်ကျော်နိုင်ကယခု ကိစ္စအား အဆိုပါ ACIA ဖြင့် ဆောင်ရွက်၍ ရ/ မရ နှင့်စပ်လျဉ်း၍ စင်ကာပူနိုင်ငံတွင် Ooredoo Group ၏ကုမ္ပဏီ(၂) ခုရှိကြောင်း၊ အဆိုပါ ကုမ္ပဏီ(၂) ခုအနေဖြင့် လက်ရှိ Ooredoo Myanmar Limited တွင် ရုယ်ယာပါဝင်ကြောင်း သိရှိရသဖြင့် ရုယ်ယာပါဝင်မှုအချိုးအစားကို သိရှိရန် လိုအပ်ကြောင်း၊ Majority Share အနေဖြင့်ပါဝင်ခြင်း ရှိ/ မရှိ၊ Board of Directors တွင် ပါဝင်မှုအခြေအနေ စသည့်အချက်များကို သိရှိရပါက ACIA ဖြင့်ဆောင်ရွက်၍ ရ/မရ မှတ်ချက်ပေးနိုင်မည်ဖြစ်ကြောင်း ရှင်းလင်းပြောကြားခဲ့ပါသည်။

၇။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်၏ ညွှန်ကားရေးမှူး၊ ဦးမင်းကော်ဦးက လက်ရှိ Ooredoo Myanmar Limited သည် စင်ကာပူ နိုင်ငံတွင် Ooredoo Group ၏ကုမ္ပဏီနှင့် Incorporate ပြလုပ်ထားသည့် ကုမ္ပဏီဖြစ်ကြောင်း၊ ACIA ဖြင့် ဆောင်ရွက်၍ ရ/ မရနှင့် စပ်လျဉ်း၍ ယခု Ooredoo Myanmar Limited မှာ Singapore Incorporate ပြလုပ်ထားသည့်ကုမ္ပဏီဖြစ်သည့်အတွက် Singapore Entity အနေဖြင့် Claim ပြလုပ်လာခြင်း ဖြစ်ကြောင်း၊ ACIA ၏ Article 3 တွင်ဖော်ပြထားသည့် Scope of Arbitration တွင်ပါဝင်သည့် ကဏ္ဍများမှာ Member States များအနေဖြင့် Reservation ပြလုပ်နိုင်သည့် ကဏ္ဍများကိုသာ ဖော်ပြထားခြင်းဖြစ်သည့်အတွက် ဆက်သွယ်ရေး ကဏ္ဍအား သီခြားဖော်ပြမထားခြင်းဖြစ်ကြောင်း ရှင်းလင်းပြောကြားခဲ့ပါသည်။

၈။ ဆက်လက်၍ မြန်မာအစိုးရအနေဖြင့် ချိုးဖောက်သည်ဟု Ooredoo Myanmar Limited က ဖော်ပြထားသော Articles (National Treatment | Treatment of Investment | Transfer) များအနက် Treatment of Investment အပေါ်တွင်သာ စိစစ်သုံးသပ်ကြည့်ရန် လိုအပ်မည်ဖြစ်ကြောင်း၊ ထိုအပြင် ယခုကိစ္စရပ်အား နှစ်ဦးနှစ်ဖက် ညီ့နှင့်ဖြေရှင်းခြင်းနည်းဖြင့်သာ ဦးစွာဖြေရှင်းစေလိုကြောင်း၊ Arbitration ပြလုပ်မည်ဆိုပါက နိုင်ငံ၏ပုံစံပိုကို ထိခိုက်စေနိုင် မည်ဖြစ်ပြီး ကုန်ကျစရိတ် များမည်ဖြစ်ကြောင်း၊ Consultation Approach ဖြင့်သာ ဦးစွာ ဆောင်ရွက်စေလိုကြောင်း၊ ထိုအပြင် ငှါးတို့သို့ပေးအပ်ထားသည့် လိုင်းနှင့်စဉ်လိုင်စင် (Spectrum License) အပိုဒ်(၁၀.၅) တွင် ဖော်ပြထားချက်အရ Arbitration ဆောင်ရွက်နိုင်ခြင်း မရှိသည့် အတွက် နှစ်ဖက်ညီ့နှင့်ဆွေးနွေးမှု ဦးစွာပြလုပ်စေလိုကြောင်းနှင့် ACIA ၏ Article (11) ပါ Treatment of Investment တွင် ဖော်ပြပါရှိသည့် Fair and Equitable Treatment ကိစ္စနှင့်စပ်လျဉ်း၍ သတိပြုဆောင်ရွက်ရန် လိုအပ်ကြောင်း၊ Arbitration မပြုမိ အဆင့်ဆင့် ညီ့နှင့် ဆောင်ရွက်ခြင်း၊ ဆွေးနွေးခြင်းများ ဆောင်ရွက်ရမည်ဖြစ်ပြီး နှစ်ဖက်သဘောတူညီမှု မရရှိမှုသာ Arbitration ဆောင်ရွက်ရမည် ဖြစ်ကြောင်း၊ ထိုသို့အဆင့်ဆင့် ညီ့နှင့်ဆောင်ရွက်ရာတွင် သက်ဆိုင် ရာကုမ္ပဏီ အဖွဲ့အစည်းမှ တင်ပြလာသည့် ကိစ္စရပ်များအပေါ် အရေးယူဆောင်ရွက်ရာ၏ Fair and Equitable ဖြစ်စေရန်လိုအပ်ကြောင်းနှင့် လက်ရှိတွင် မြန်မာအစိုးရအနေဖြင့် Fair and Equitable

Treatment ချိုးဖောက်ခြင်း မရှိသေးပါကြောင်း ညွှန်ကြားရေးမှူး၊ ဦးမင်းကော်မီးက ရှင်းလင်းပြောကြားခဲ့ပါသည်။

၉။ အမြဲတမ်းအတွင်းဝန်က Ooredoo Myanmar Limited သို့ ဦးစွာ ညီးနှင့်ဆွေးနွေးနိုင်ရေး အကြောင်းကြားစာကို ပေးပို့သွားမည်ဖြစ်ပြီး (၁၈.၂.၂၀၁၉) ရက်နေ့တွင် Ooredoo Myanmar Limited နှင့် ပြည်ထောင်စုဝန်ကြီးတို့ တွေ့ဆုံးသည့်အခါ နှစ်ဖက်ညီးနှင့်ဆွေးနွေးခြင်းဖြင့် ပြောလည်အောင် ဆောင်ရွက်သွားမည်ဖြစ်ပါကြောင်း ပြန်လည်ဆွေးနွေးခဲ့ပါသည်။

၁၀။ ပြည်ထောင်စုရွှေနေ့ချုပ်ရုံးက ဥပဒေကြောင်းအရ လိုအပ်သည့်အကူအညီများ အကြံပြုဆွေးနွေးဆောင်ရွက်ပေးသွားမည် ဖြစ်ပါကြောင်းနှင့် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်မှလည်း လိုအပ်သည့်အကူအညီများ ဆွေးနွေးဆောင်ရွက်ပေးသွားမည် ဖြစ်ပါကြောင်း ပြန်လည်ပြောကြားခဲ့ပါသည်။

၁၁။ အစည်းအဝေးတွင် အောက်ပါတို့ကို ဆုံးဖြတ်ခဲ့ပါသည် -

စဉ်	ဆုံးဖြတ်ချက်များ	ဆောင်ရွက်ရန်
၁။	Ooredoo Myanmar Limited နှင့် ဦးစွာ ညီးနှင့်ဆွေးနွေးနိုင်ရေး အကြောင်းကြားစာပေးပို့ရန်	ပို့ဆောင်ရေးနှင့်ဆက်သွယ်ရေးဝန်ကြီးဌာန ပြည်ထောင်စုဝန်ကြီးရုံး
၂။	Ooredoo Myanmar Limited ၏ကိစ္စနှင့် စပ်လျဉ်း၍ ဖြေရှင်းနိုင်ရေး လိုအပ်သည့်အကူအညီများ ဆောင်ရွက်ပေးရန်	ပြည်ထောင်စုရွှေနေ့ချုပ်ရုံး မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

၁၂။ တွေ့ဆုံးဆွေးနွေးမှုသည် (၁၁:၃၀) နာရီတွင် ပြီးဆုံးပါသည်။

မှတ်တမ်းတင်သူ

(အေးမြို့ဗိုးဝင်း)

လက်ထောက်ညွှန်ကြားရေးမှူး

ရက်စွဲ။ ၂၀၁၉ခုနှစ်၊ မတ်လ ၁၂ ရက်

စာအမှတ်၊ ဆသ-၂/မလ(မှတ်တမ်း)/၂၀၁၉/(၈၆၈)

ဖြန့်ဝေခြင်း

အစည်းအဝေးတက်ရောက်သူများအားလုံး

မိတ္တာကို

ရုံးလက်ခံ / မျှော်စာတဲ့

JOINT TASKFORCE OF MOTC AND OOREDOO

TERMS OF REFERENCE AND PROCESS PLAN FOR INTERFERENCE NEGOTIATIONS

With regard to **losses suffered by Ooredoo Myanmar Limited because of interference in 900 MHz band**, letters of commitment have been exchanged between Ooredoo Myanmar Limited and its shareholders (jointly "Ooredoo") on one side and the Ministry of Transport and Communications (MOTC) on the other. During the commitment period as underlined in the Commitment Letter, which is from February 21, 2019 to August 30, 2019, the parties will engage in good faith negotiations regarding the impact of spectrum interference on OML's business..This Terms or Reference sets out the formation of a Joint Taskforce, the scope for the Joint Taskforce, and the general processes and their timelines..

I. Formation of JOINT TASKFORCE

The parties set up a Joint Task Force with the following participants:

Ooredoo	MOTC
Vikram Sinha	Soe Thein
Mikael Gape	MyoSwe
Chris Peirce	ThanHtunAung
Liliana Ortega	ZarneAung
Shwe Yee Hpoo	SeintSeint Aye

A party may add additional participants from their respective organizations to the JT or bring such officials to the negotiations from time to time with the agreement of the other party. The parties may also jointly agree to invite or engage third party experts, if needed.

The joint task force shall prepare a detailed minute at the conclusion of each stage that will provide a foundation for the final negotiation step.

II. SCOPE OF THE JOINT TASKFORCE

The Joint Task Force shall review and discuss the impact of the spectrum interference on OML's business, appropriate compensation to recognize the impact of the interference on OML's business performance and value, and a path forward to eliminate to the greatest extent possible, ongoing interference in the 900 MHz band.

III. GENERAL PROCESSES OF THE NEGOTIATION

The Negotiation shall be carried out in the following stages:

- A. Diagnostic stage: The Joint Taskforce will discuss the causes of the interference and the impact it has on network performance, diagnostics, examples of similar problems from other markets, remedial actions taken by OML and the overall impact on OML's business.
- B. Discussion on remedial process Stage: JT will discuss mechanisms to eliminate, to the greatest extent possible, ongoing interference in the OML 900 MHz band and prevent future interference into the said band.
- C. Discussion on compensation process stage: The final stage of work for the Joint Taskforce is to agree on appropriate and fair compensation for the impact of interference on OML's business performance and value.
- D. Agreement stage: A high level meeting which include relevant stakeholders outside the Task Force will review the progress. The task force shall then suggest final recommendation for both parties to seek approval. A high level meeting will be organized to officially conclude the work of the Joint Task Force.

Below is breakdown of the four different stages with timelines and milestones.

1. DIAGNOSTICS

Two days' workshop examining technical problems and impact:

Part 1

- Sources and effects of similar interference cases between CDMA and GSM/UMTS bands
- International examples of similar interference problems
- Technical impact of interference
- General market impact of interference
- Specific impact on OML's network and performance

Conclusions

Part 2

Task Force review and discussions:

- Technical and administrative actions taken by PTD
- Technical remedial actions taken by OML
- Other remedial action taken by OML
- Overall market impact on OML

Conclusions

2. REMEDIATION – ROAD TO CLEAN SPECTRUM

One day workshop covering:

- Possible technical solutions to achieve clean spectrum and potential impact on third parties
- Remedial action taken in other countries
- Means of implementation of possible remedies

- Review of APT suggestions to mitigate interference problems
- Time frame for clearance

Conclusions

3. COMPENSATION

Task Force review and discussions:

- Options for compensation
- International examples

Conclusions

High level meeting

A high level meeting with relevant stakeholders outside the Task Force is planned to review the progress.

4. FINAL SUGGESTED APPROACH

- Once the parties have agreed on a suggested way forward on how to come to a conclusion
- Review of approvals required
- Path forward
- Conclusions

AGREEMENT AND CONCLUSION

IV. TIMELINE:

Each stage of the negotiation shall be carried out in line with the following timeline:

Diagnostic workshop	25 th and 26 th March, 2019
Remediation workshop	23 rd April, 2019
Compensation review	20 th May, 2019
High level meeting	Week of 29 th May, 2019
Final suggested approach	Week of 10 th June, 2019
Agreement and conclusion	17 th June to 15 th August ,2019
Final high level meeting	End of August, 2019

The parties may change the timeline with a mutual consent.

Confidentiality:

The JT shall keep any information prepared solely for this negotiation as confidential and not disclose them to any third party without prior consent of the other party.

Dissolution of the JT:

The Joint Task Force shall be dissolved, unless otherwise mutually agreed, upon meeting one of the following conditions:

1. Completion of the work outlined in section III of this ToR
2. Completion of the commitment period, or
3. Termination of the task force with mutual consent.



UNION MINISTER'S OFFICE
REPUBLIC OF THE UNION OF MYANMAR
MINISTRY OF TRANSPORT AND COMMUNICATIONS

Ref: Satha-5/PaPa(Ooredoo)/(2019/188)

Dated: February 22, 2019

To:

Chief Executive Officer
Ooredoo Myanmar Limited

- Your Ref: (1) Letter dated (30.8.2018) by Ooredoo Myanmar Limited
(2) Letter dated (30.11.2018) by Ooredoo Myanmar Limited
(3) Letter dated (11.2.2019) by Ooredoo Myanmar Limited

Our Ref: SaTha-2/MaLa(General)/2019(530)

Dear Sirs:

Letter of Commitment to negotiate on the losses suffered by Ooredoo Myanmar Limited because of interference in 900 MHz band

This Letter of Commitment ("Letter") is in follow up to our meeting of February 18th, 2019, in NayPyiTaw, the subject of which was the interference Ooredoo Myanmar Limited (OML) has experienced on the 900 MHz spectrum it was allocated, especially in Yangon and to a lesser extent Mandalay. During that meeting and previously in the notices referenced above, in which OML and its shareholders (jointly "Ooredoo") sought relief under the ASEAN Comprehensive Investment Agreement (ACIA), you have raised your desire to engage with the Government of the Union of Myanmar in order to discuss the impact of the interference on OML's business, appropriate compensation to recognize the impact of the interference on OML's business performance and value, and a path forward to eliminate to the greatest extent possible, ongoing interference in the 900 MHz band.

Ooredoo have expressed their preference to negotiate a mutually agreeable solution to these issues, and to suspend, for the time being, commencement of any arbitration under the ACIA.

The Ministry of Transport and Communications (MOTC) also welcomes a negotiated solution. MOTC commits therefore, to work with Ooredoo to negotiate in good faith such a solution over the course of the next six months. For a start, MOTC commits to draft a timetable together with Ooredoo, by Friday, 28 February 2019, concerning key milestones and processes to be followed for the negotiations, and, to abide by such a timetable, once agreed mutually.

We also confirm that we have agreed to establish by 28th February, 2019 a joint-task force between MOTC and Ooredoo to conduct the negotiations, and to have the said joint-task force led by the Permanent Secretary, U Soe Thein on MOTC's side.

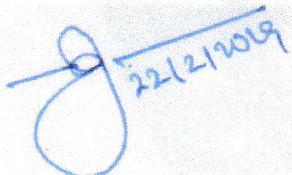
In reliance upon the foregoing, the MOTC acknowledges that Ooredoo will not take any formal action or trigger any arbitration while the negotiations are ongoing.

While negotiating as committed, MOTC does not intend that MOTC or Ooredoo be prejudiced in terms of rights and remedies they may have as of the date hereof and that the intention of the parties is that any rights and remedies existent as of the date hereof and/or arising out of this letter should remain reserved until the earlier of either (i) a mutually agreeable solution being negotiated and agreed or (ii) six months lapsing from the date hereof, whereupon MOTC and Ooredoo shall be free to resort to their respective rights and remedies existent as of the date hereof.

MOTC also commits to keep all the relevant information, including but not limited to the agreed timetable and substance of all negotiations, confidential and not disclose them to any third party without prior consent of the other party.

We look forward to constructively and amicably resolving these matters and to the continued investment of OML in Myanmar as we collectively work for the social and economic growth of Myanmar for the benefit of its citizens.

Yours truly,



22/2/2019

(For Union Minister)

U Soe Thein

Permanent Secretary

Ministry of Transport and Communications

Project Mandalay

Review of OML compensation claim

Ministry of Transport and Communications
Government of the Republic of the Union of Myanmar

Produced by PricewaterhouseCoopers (PwC)

November 2019

This Report (and all versions of it) is provided solely in connection with Project Spectrum Compensation Claims Analytical Support (Mandalay) in accordance with our engagement letter dated 7 October 2019. Any liability of PwC Consulting Myanmar Co. Ltd. to Ministry of Transportation and Communication is subject to the terms set out in the engagement contract. PwC Consulting Myanmar Co. Ltd. accepts no liability to any other person in respect of Project Spectrum Compensation Claims Analytical Support.

This is a final report in accordance with the requirements of this engagement but, given the nature of the dialogue between participants in the matter, the contents may not represent final opinions or conclusions which may be reached through further discussions. For the avoidance of doubt no part of this work constitutes legal advice in any capacity and all views expressed in this report are privileged and provided without prejudice. This report must not be made available or copied in whole or in part to any person without our express written permission.

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1 Introduction

1.1 Context

The Myanmar telecommunications market was liberalised in 2013 with two new operators, Ooredoo Myanmar Limited (OML) and Telenor Myanmar Limited (TML) granted mobile licenses and allocated spectrum. Their entry formed a three-player telecommunications market along with the incumbent, MPT. This became a four-player market with the entry of a new operator, MyTel, in 2018.

From April 2014 and onwards, OML expressed dissatisfaction concerning the high level of interference on the spectrum they had been allocated. According to OML, this lack of clean spectrum access has resulted, continuously over a period of time, in both foregone revenue opportunity as well as an additional cost burden, together resulting in a substantial economic cost to the business. The Posts and Telecommunications Department (PTD) has measured and confirmed interference in the uplink frequencies of the UMTS900 spectrum allocated to OML.

Formal proceedings for compensation of the substantial economic cost were initiated by OML in August 2018. By mutual agreement, these proceedings were paused in the expectation that claim be settled to the satisfaction of both parties by the end of October 2019. Whilst there are important differences to resolve, meetings held during September 2019 in Nai Pyi Taw between PTD and Ooredoo executives have brought both parties together to seek an amicable resolution to this matter. The agreement to pause formal proceedings was therefore subsequently extended to allow further time for both parties to resolve the matter.

This is the first time since market liberalisation in 2014 that PTD is involved in any form of dispute settlement, and the first to be conducted in any major infrastructure sector in Myanmar since the economy was opened to foreign investors from 2013.

In line with their deep relationship, both the Myanmar Government and OML have expressed their desire to settle the matter amicably. Much has been achieved by OML in Myanmar, based on strong commitments and efforts. Together with other investors in the industry, these parties have worked together to create unprecedented growth and access in one of Asia's last frontier markets. Successful resolution of this matter provides an opportunity for strengthening the role of sector regulation, which has faced many challenges since market liberalisation, and to establish repeatable processes for dispute resolution.

The timeline agreed by both parties for proceeding towards amicable resolution is as follows:

Date	Activity
August 2019	MOTC and PTD begin discussions with PwC to provide support to compensation claim analysis and resolution.
September 2019	PwC formally engaged by MOTC and commence providing support with analysis through speaking with key stakeholders and collecting information. Ooredoo, PTD and PwC attend a workshop meeting in Nai Pyi Taw and additional information is requested to support PwC analysis. <ul style="list-style-type: none">• 4 Sept 2019 – PwC briefed by PTD• 17 Sept 2019 – PwC, Ooredoo and PTD initial discussion• 23-24 Sept 2019 – PwC, Ooredoo and PTD attend workshop in Nai Pyi Taw
October 2019	PwC submit draft findings and recommendation for amicable solution to PTD and MOTC for discussion. The revised findings are subsequently shared with Ooredoo for comment. Proceedings for amicable resolution commence. <ul style="list-style-type: none">• 11 Oct 2019 – PwC to submit draft findings and recommendation to PTD and MOTC• 18 Oct 2019 – PTD to provide feedback on draft findings to PwC

Date	Activity
	• 21 Oct 2019 – PTD to share draft findings with Ooredoo and organise follow-up discussion
	• 25 Oct 2019 – Ooredoo to provide feedback
	• 30 Oct 2019 – Discuss and agree final remediation agreement during this week of 30/10
	• 9 Nov 2019 – PTD to discuss findings with OML
	• Up till late December – PTD to consult internally with GoM stakeholders to seek outcomes to resolve dispute

Source: PTD documentation, Ooredoo Presentation 23 September 2019.

1.2 Role of PwC and structure of this report

PTD has engaged PwC to undertake a qualitative review of the operator's compensation claim. The team deployed for this engagement has specific telecommunications operational and commercial experience in related matters from Myanmar, neighbouring SE Asian countries, India and South Asia, the Middle East and Africa, as well the UK and Australia.

PwC's role is currently limited to conducting a high-level review of OML's compensation claim, consisting of the following activities:

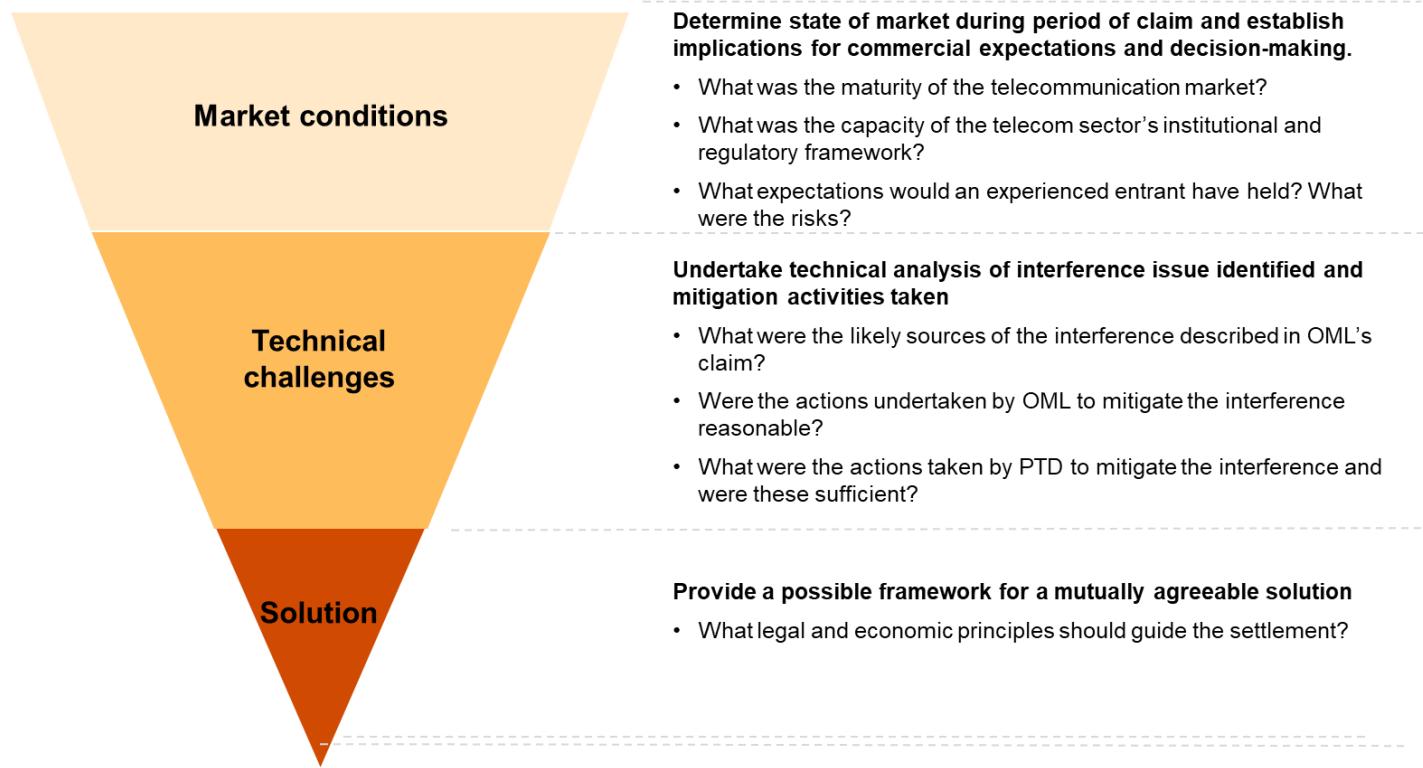
- high-level market review to provide context for the OML claim
- high-level technical review of OML claim
- recommended framework for compensation.

This exercise is not intended to be a review of the compensation claim itself. Both parties agreed to pursue a high-level approach to find an amicable resolution at this stage, and this report is intended to provide a framework for considering how this might best be achieved. It is recognised that a full review of the OML claim would require collecting more data in the field, potentially on a site to site basis, and overlaying this with more detailed population, uptake and usage analysis. Whilst PwC was appointed by PTD, the review has been conducted in a collaborative way with the involvement and consultation of Ooredoo Group to gather information, ascertain key facts, understand assumptions and gain insights.

1.3 Approach

To establish a transparent basis for providing a sound framework for PTD to consider compensation for OML, the report evaluates the points listed in section 1.2 through the lens of several key questions, presented in Figure 1. Whilst the OML claim relates principally to factors which are relevant to operations, a thorough assessment of the claim should also take account of materially relevant factors in OML's activities with respect to the prevailing market conditions and planning. This is further discussed in section 2.

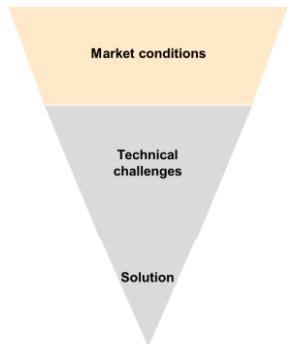
Figure 1: Thematic approach



Source: PwC

2 Market considerations

This purpose of this section is to consider the market conditions in Myanmar following the liberalisation of the telecommunication sector that would be expected to impact a new entrant, and therefore relevant in assessing the OML claim. Acknowledging the realities of this operating environment, including the immaturity of the market, the lack of experience of the Government, and the practical challenges faced by a newly established regulator dealing effectively with known legacy - including military - sources of interference, an operator would expect to carry some responsibility for managing issues that arise beyond the formal commitments made.



2.1 Overview of Myanmar market conditions

Closed from international trade and investment since 1948, Myanmar experienced an extended period of economic stagnation between 1900 and 1990. Research suggests that the 90-year average real GDP growth for Myanmar was as low as 1.6 percent per year, well below the global growth rate of 3 percent¹.

However, this period of stagnation lifted in the late 1990s and early 2000s as Myanmar became an active participant in the international forums and bodies for supporting and facilitating investment (ASEAN membership: 23 July 1997, WTO membership: 1 January 1995). Since 2010 Myanmar has sought to further accelerate its economic development, through a range of political and economic reform initiatives, formally initiated by the government in office at that time.

However, this has come with its challenges. Despite attracting a high volume of foreign interest and investment, the country is still in the early stages of developing the basic foundations for a robust institutional, policy and regulatory framework for handling trade and investment matters. The country is keenly aware of the need to establish credibility, predictability and enforcement to maintain the confidence of foreign investors. Several years into reforms, Myanmar still faces significant and well-known challenges due to:

- overall lack of experience and know-how in working with international investors and trade
- a wide set of diverse local and incumbent interests that require time to coordinate across ministries or geographic areas, causing jurisdictional challenges
- an emerging political climate in the country as it endeavours to establish its presence in the ASEAN region, and to handle multiple regional and other challenges at home
- a lack of capacity to resolve the large volume of investment and trade matters that are ongoing.

The challenging nature of the business environment is demonstrated by the below statistics:

- **Ease of doing business index:** This index ranks economies based on their ease of doing business, from 1–190 (1 = most business friendly regulations). Myanmar's current score is 171. This means Myanmar has one of the most challenging business environments in South-East Asia, with only Bangladesh possessing a poorer ranking (176). The next South-East Asian country listed is Cambodia at 138².

¹ McKinsey Global Institute, Myanmar's moment: Unique opportunities, major challenges, June 2013, [accessed here](#).

² The World Bank, Ease of doing business index, [accessed here](#).

- **Transparency of Government Policymaking:** This index assesses how easy it is for businesses to obtain information about changes in government policies and regulations affecting their activities (1 = extremely difficult; 7 = extremely easy). For the period from 2013-2015 for which there is data on Myanmar, the country's score averaged around 2.9. This is relatively poor to other countries in South East Asia including Indonesia, India and Malaysia who score above 4³.

Overall, telecommunication operators seeking to enter Myanmar would be aware of this unique and challenging operating context, as part of conducting a normal level of market due diligence. Furthermore, before making a significant financial commitment, a standard due diligence process would take into account the overall risk imposed by this environment, and the organisation would weigh this against the potential commercial reward.

2.1.1 Telecommunications liberalisation in Myanmar

Business challenges have been keenly felt in the liberalisation of the country's telecommunications market, since this was the first mover in all of Myanmar's infrastructure reforms. The telecommunication sector, along with the infrastructure sector, energy sector and transportation, also present the most challenging investor environment due to the need to:

- coordinate multiple central agencies to enact, agree to and enforce reforms
- establish initial cross-agency and department understanding of important coordination topics, and to identify areas of individual and collective responsibility, as well as accountability and authority for action
- co-ordinate in local areas, across states and nationally on ground for engineering works, construction of infrastructure, clearing rights of way, accessing commonly used spaces such as roads, airwaves or ducts
- bear in mind the long-term nature of infrastructure reform, where it can sometimes take several years to address on ground issues

In nearly all liberalising markets in the past twenty years, telecom reforms to address issues around site access and interference have usually been the most complex to resolve and the most intractable, requiring patience on all sides, a strong degree of perseverance, and tolerance of delays to attaining desired outcomes. In some markets, it is well known across the industry that operators have had to be careful to place reliance on new regulators in a newly reformed market to be able to credibly coordinate multiple agencies, including ones concerned with defence and security responsibilities.

In Myanmar, progress is still being made in terms of developing the basic institutional, policy and regulatory framework, and ensuring sufficient capability and capacity exists within the Myanmar Government, sufficient to promote the effective operation of the sector. Despite assistance made available to the Government from the World Bank, the regulatory authority remains lacking in having sufficient numbers of skilled staff, lacks protocols and established procedures in many domains of activity, and lacks commercial and negotiation skills to resolve disputes and enforce changes and regulatory measures.

For example, Myanmar still does not have an independent telecom sector regulatory authority, and the sector ministry still lacks the capacity to develop and expedite complex sector policy. Almost seven years into reforms, the sector ministry is still working on resolving challenges to corporatize the state-owned telecommunications service provider, MPT.

These levels of immaturity of the sector were clear at the onset of the liberalisation program. At the time the first international licences were awarded to TML and OML in 2013, and the entrants formally launched

³ The World Bank, Transparency of government policymaking, [accessed here](#).

operation in 2014, the establishment of a sector regulator, and the corporatisation of MPT, the incumbent, was substantially incomplete. In both these respects, Myanmar was an outlier compared to most other emerging markets which have undertaken telecom reforms in the past 20 years, indicated in Figure 2.

Figure 2: Comparison of selected emerging market telecommunication reforms at point of introduction of competition

At point of introduction of competition Government had:			
	Corporatised incumbent	Introduced investment into incumbent	Set up sector regulator
South Africa	✓	✓	✓
India	✓	✓	✓
Saudi Arabia	✓	✓	✓
Bangladesh	✗	✓	✗
Pakistan	✓	✓	✓
Malaysia	✓	✓	✓
Thailand	✓	✓	✓
Sri Lanka	✓	✓	✓
Kenya	✓	✓	✓
Myanmar	✗	✗	✗

Source: PwC analysis

2.2 Tender Commitments

As part of the procurement process the government selected Ooredoo (OML) and Telenor (TML) from among 91 companies that expressed interest. The licenses were issued in early January 2014, though the actual texts have not been made public. Table 1 presents the commitments made by the two successful licensees: OML and TML.

Table 1: Commitments made by the successful bidders for Myanmar mobile licenses

Commitment	OML	TML
Coverage	84% voice & data coverage by 2018	83% voice coverage & 78% data coverage by 2018
Sale points (SIMs)	240,000	70,000
Sale points (PrePaid Top ups)	720,000	95,000
Price (per minute)	Peak prepaid voice < 35 MMK/min (on-net) & 45 MMK/min (off-net)	Peak prepaid voice < 25 MMK/min
Price ceiling per SIM	1500 MMK	1500 MMK
Community	10,000 telecentres + schools & hospitals	200 community centres with Internet
Other	99.9% employees Myanmarese by 2018	Free central government SMS channel

Source: Policy Challenges in Embracing Mobile Technology to Promote Socioeconomic Development: The case of Myanmar; Rohan Samarajiva, p3, quoting http://www.mcit.gov.mm/sites/default/files/press_conference_with_successful_applicants_20130710.pdf

Each of OML and TML were allocated 5 MHz paired of 900 MHz band spectrum. OML received 890 – 895 MHz paired with 935 – 940 MHz and TML received 895 – 900 MHz paired with 940 – 945 MHz. That is, the OML spectrum was adjacent to the 850 MHz band.

With the context of the market factors presented in section 2.1, OML determined a commercial and technical strategy to enter Myanmar that contrasted significantly with the other successful bidder. This assessment does

not comment on the efficacy or rationale of this contrasting strategy, but it does refer to the extent of dependency of this strategy on the spectrum challenges later experienced in the 900 MHz band. It is important to note that the commitments presented in Table 1 were made to the Myanmar Government by OML as part of the tendering process; they were not requirements presented to bidders as a condition of being awarded the Tender. Relevant to this assessment is the fact that these commitments were made by OML in the context of the risk environment presented above, reflecting an ambitious network strategy, cell site deployment plan, branding and market segmentation.

In short, OML's strategy comprised:

- a 3G only service offering - the aim of this strategy was to be able to acquire customers who valued voice and wireless data services, rather than voice only services.
- the deployment of UMTS (3G) services in the 900 MHz band.

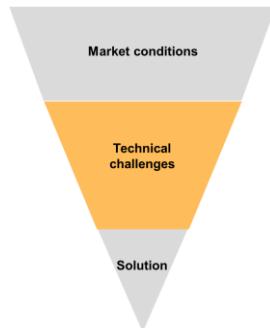
OML's strategy did not represent the only way to fulfil the mandate of the ITT. This is evidenced by the contrasting commitments of the two successful bidders. This review has identified a number of technical and operational risks that OML would have faced as a result of this strategy and broader general market conditions. These are outlined below:

- UMTS is less tolerant of interference than GSM.
- There was clear evidence of interference in the 900 MHz band prior to launch.
- UMTS is more expensive than GSM only user equipment.
- 3G only strategy was aimed at customers who could afford higher cost user equipment and who valued wireless data services, placing more commercial pressure on having access to interference-free spectrum in the 900 MHz band.
- Optimal cell site acquisition in a greenfield market has historically been problematic, given the use in many jurisdictions of inexperienced agents on the ground involved in their procurement. In the Myanmar case, there would have been the need to consider obvious sources of interference in the immediate surrounding area (eg roof antennae, masts etc) given the known challenges in the 900 MHz range. OML's position is that had filters been installed from the outset by band 5 operators, even co-location of sites would not have resulted in unmanageable noise floor levels. However, there is evidence that a large part of the responsibility for this interference comes from illegal repeaters rather than from direct CDMA interference. Based on wider international experience, it would not be reasonable to expect all these repeaters to be removed immediately, and the difficulty of policing illegal repeaters in a reforming market would be a risk identified as part of a due diligence process. Optimal site selection away from obvious sources of interference could have mitigated that risk, but in their suggesting that the filters used should have had a sufficient dampening effect on interference at a distance of 30 metres, OML explicitly eschewed this strategy.

3 Technical challenges

It is evident from tests conducted by the Joint OML / MOTC Taskforce⁴ that OML did experience significant UTMS900 interference on its network. This section considers these technical challenges as outlined by OML and the mitigation actions undertaken considering the interference experienced. The purpose of the assessment in this respect is to address four issues:

- the extent to which interference both from the 850MHz band operator, and from illegal repeaters, as articulated by OML is valid;
- other coexisting causes of interference;
- effectiveness of OML's mitigation activities; and
- actions undertaken by PTD



3.1 Interference from the CDMA 850MHz band and illegal repeaters

A report produced by Norconsult Telematics in 2016 confirmed the interference in the UMTS900 band reported by OML. However, the report did not find evidence of direct CDMA interference from the 850MHz band in the 8 sites sampled for testing. The conclusion following lab testing was explicit in this regard that “in a repeater-free environment even *very strong DL CDMA signals will not cause interference into the OML band*” [Emphasis added by Norconsult Telematics].

The Norconsult report places significant emphasis on the use of illegal repeaters, and attributes to their use the responsibility for the majority of the UTMS900 interference identified by OML. This finding appears to contradict tests conducted by the joint interface scanning team which identified 34 sites where CDMA 850MHz interference appeared to be present. A possible reconciliation of this contradictory evidence is that the Norconsult report does identify the presence of *indirect* interference from CDMA 850MHz sites, which it also attributes to the use of illegal repeaters. More detailed analysis and testing would be needed to confirm this hypothesis.

PTD's position (consistent with most regulators) is that the use of illegal repeaters is an issue in most reforming markets, and that it is typically very difficult to police in newly liberalised markets where the institutional coordination between telecom regulators and crime prevention agencies (such as the police) is still under development. Regulators in most emerging markets are faced with an industry-wide challenge to remove illegal repeaters, and in fact, action was taken by PTD in this regard. This action is detailed in Appendix C.

OML's position is that it was MOTC and PTD's responsibility under the terms of the ITT to provide clean spectrum for their operations. According to OML, PTD should have enforced the ban on illegal repeaters more forcefully, and the suggestion is that the CDMA 850MHz interference would have been mitigated had TX filters been fitted to Band 5 operator sites. The ITT also establishes that MOTC undertook to reserve a guard band of 2.5 MHz between other operators and OML licensed spectrum. OML contends that this guard band between the CDMA downlink, which is adjacent to the OML uplink, was not enforced by PTD, and would have materially mitigated the interference.

⁴ Following the exchange of commitment letters on 26 February 2019, a Joint Taskforce was formed between OML and MoTC to discuss: the impact of the interference on OML's business, appropriate compensation to recognize the impact of the interference on OML's business performance and value, and a path forward to eliminate to the greatest extent possible, ongoing interference in the 900 MHz band.

In summary:

- there is agreement between all parties that OML experienced significant UTMS900 interference on its network
- OML accepts that it was aware of the potential for interference on the 900 MHz spectrum during the licence bid process, as is clear *prima facie* from the fact that in an ITT question, OML sought specific clarification from the Myanmar Government surrounding this issue
- OML relied upon the impact of such interference to be mitigated through actions enforced by PTD, and this was a key factor in its decision to invest in spectrum and network deployment.

3.2 Other causes of interference

Based on international experience of launching new networks in emerging markets, there are at least three other factors; site selection, intermodulation and transitory interference, which may cause interference, each of which would apply in Myanmar. These are expanded upon in Table 2.

Table 2: Additional source of interference

Sources of interference	Description
Site selection	In a greenfield market entry, it is critical for operators to carefully consider site selection, given pre-existing market conditions. There is a question as to the efficacy of OML's original site selection, and the extent to which it was able to comprehensively consider the proximity of some other operator's base stations.
Intermodulation	Intermodulation is a common factor that is experienced in a network build of the nature undertaken by OML in Myanmar. There are several factors relevant to the claim assessment: <ul style="list-style-type: none">• the Norconsult Report found a problem (pg. 52) that could be explained by intermodulation. Further, some of the tests conducted by PTD indicated that interference (expressed as a heightened noise floor) remained when other carriers were switched off at some sites. This could also be explained by in-band intermodulation interference.• OML has explained that parts of the base stations were prefabricated by ZTE in China. Although rigorously tested, it is very difficult to test for potential intermodulation interference away from the final installation location. There may be a risk that the ZTE construction practices could lead to the intermodulation interference being a systematic problem.• OML strongly argues that the equipment that is manufactured overseas is built to the highest quality, the same process has been used for networks in other jurisdictions with no intermodulation detected, and indeed has been adopted as standard industry practice by other operators.
Transitory interference	In the case of a greenfield network build such as in Myanmar, transitory interference can be materially relevant, and pertinent to this claim assessment is that one of the issues raised by OML and the Norconsult Report is the transitory nature of some interference sources. U900 cell lockout would be in response to a continuing interference source. However, some peak busy hour quality degradation, including from "cell breathing" may not be able to be detected and dealt with by the PTD unless the interference could be observed. However, the noise rise on some of OML's sites was more than 30dB. Normal cell breathing in a CDMA network results in a noise rise of 3-4dB. OML has therefore excluded normal cell breathing in its identification of cells with interference.

Source: PwC.

3.3 Testing by the Joint Taskforce

Field work was conducted by the joint interface scanning team as part of the joint taskforce, to identify sources of U900 interference at a sample of sites in Yangon. Presented in OML's submissions, the identified sources of interference and the number of sites, are detailed in Table 3. It is clear that a number of interference sources were identified.

Table 3 Interference sources identified by Joint Interface Scanning Team

Interference source	Number of sites
Automatic gate door	1
CDMA 850MHz	34
Co-location	16
Jammer	3
NB Repeater / Suspected NB Repeater	33
Singapore Embassy	3
No interference detected	30

Source: Ooredoo presentation for PTD/MOTC meeting 23 September 2019 p59

3.4 Effectiveness of OML's mitigation activities

The main action taken by OML was to turn off many of its 900 MHz sectors that were severely subjected to interference, replacing the lost coverage from these sites with 382 infill sites using its clean 2100 MHz spectrum. The mitigating actions taken by OML were effective and did lead to a network that could compete with the other operators in Myanmar, but it still did not clear all of the interference.

As OML still has many 900 MHz sectors locked down there is a continued need for these infill sites for coverage mitigation. OML maintains that infill sites that are no longer needed do not provide any additional benefit as there is currently no need for the additional capacity provided by these sites. Evidence that this is currently the case is that when further capacity has been required, OML has purchased an additional 2x5 MHz of 2100 MHz spectrum as well as 2x20 MHz of 1800 MHz capacity spectrum. However, the "interference" infill sites still form part of the network and as such, they can only be removed with difficulty (and extra cost) and must also be upgraded to new technologies (such as 4G) for the network to function.

Nevertheless, it is likely the case that at least a proportion of these infill sites would have been constructed over the period regardless of interference to add additional quality of coverage as part of new generation technology rollouts.

It is also not clear that OML has generated no benefit from the operation of the additional sites and that the sites fulfilled no purpose (and never would in future) other than to manage the interference issue. The sites themselves mean the capacity/coverage that OML can offer in that area could be generating economic value, enabling users to access a higher quality mobile network. There may also be the potential for site sharing or sub-leasing the site for the remainder of the lease.

3.5 Impact of interference on OML's revenue

There are two main revenue impacts of the UTMS900 interference identified by OML. Firstly, that existing OML subscribers reduced their usage of the network by switching to a competitor. Secondly, that a disproportionate number of potential OML customers subscribed to rival networks during the initial competition for market share and continue to do so due to the reputational damage suffered. In both cases, an adjusted ARPU differential between OML and Telenor (TML) has been used to demonstrate the extent of the revenue impact of UTMS900 interference.

The approach applied by OML for existing subscribers explicitly assumes that the ARPUs of the market operators will converge, and that any divergence is due to network quality and the preference to co-locate with family and friends on the same network. Additionally, it is a complex task to disaggregate TML's 3G ARPU, even were it possible to understand whether individual users operate 2G or 3G services. Indeed, many users would simultaneously operate both. An alternative approach could assume that interference might be expected to directly impact network usage, so could compare appropriate network usage metrics to establish the actual reduction of use caused by interference, then convert this to a revenue differential.

To establish this impact on potential subscribers, OML uses as a metric the differential between their realised market share and 50% of the total TML and OML subscribers across the period 2014 – 2019. TML has not published an estimate of their subscriber numbers by network type, which makes this direct comparison difficult to validate. Similarly, the range factors that impact customer acquisition are potentially more significant than usage. A study conducted in India in 2013 confirmed that users take into account multiple factors when selecting an operator⁵. At a minimum, the expectation would be that brand, marketing, price, coverage, network quality and social factors would be relevant to operator choice. An alternative measure of the impact of interference on potential subscribers could be the differential in share of net additions (SoNA) for active subscribers between TML and OML. Importantly, this excludes existing MPT, TML, and later Mytel, subscribers, as the failure of OML to secure a transfer from another operator may not primarily be reflective of network interference, but of other factors such as brand attrition, as noted above.

3.6 Actions taken by PTD

During the course of the period in question, PTD undertook several actions to mitigate and manage the interference problems encountered by OML (as well as other issues encountered by other operators). Appendix B contains a detailed timeline of actions taken by PTD in respect to OML interference in the 900 MHz band. Highlights of actions taken by PTD include the following:

- PTD issued repeated public announcements regarding the interference issue across the time period in question
- PTD undertook monitoring activity in reference to specific interference issues identified by OML including:
 - Identifying and removing illegal repeaters at various times
 - Coordinating with other operators to support monitoring activity
 - PTD ordered other operators to use frequencies in accordance with the terms of their licence and the frequency allocation conditions therein
 - PTD ordered other operators to install filters where required.

A reasonable approach to claim assessment must take into account these actions.

⁵ PwC India, Findings value for the consumer – The Indian mobile industry, published October 2013, accessed [here](#).



4 Claim analysis

The purpose of this section is to provide a high level review of OML's initial claim for compensation. Table presents a side by side comparison of the OML initial claim and the results of the current analysis.

Table 4 Comparison of initial OML claim and current analysis (USD thousands (2019), NPV inclusive of cost of capital)

Compensation category	OML initial claim Total (NPV)	Current claim analysis Total (NPV)
Remediation cost	119,000	41,194.9
Existing subscriber revenue loss	56,000	4,030.6
Potential subscriber loss	Parked	Parked
Total (thousands, USD)	175,000	45,225.5

Source: Ordeoo Presentation for PwC meeting 23 September 2019, PwC analysis.

4.1 Compensation framework

As presented in Table , the same overarching framework as agreed with the joint taskforce was applied to the current analysis. This compensation framework comprised three component parts to estimate the full loss to OML:

- 1 Costs incurred due to interference
- 2 Losses from existing subscribers
- 3 Losses from potential subscribers

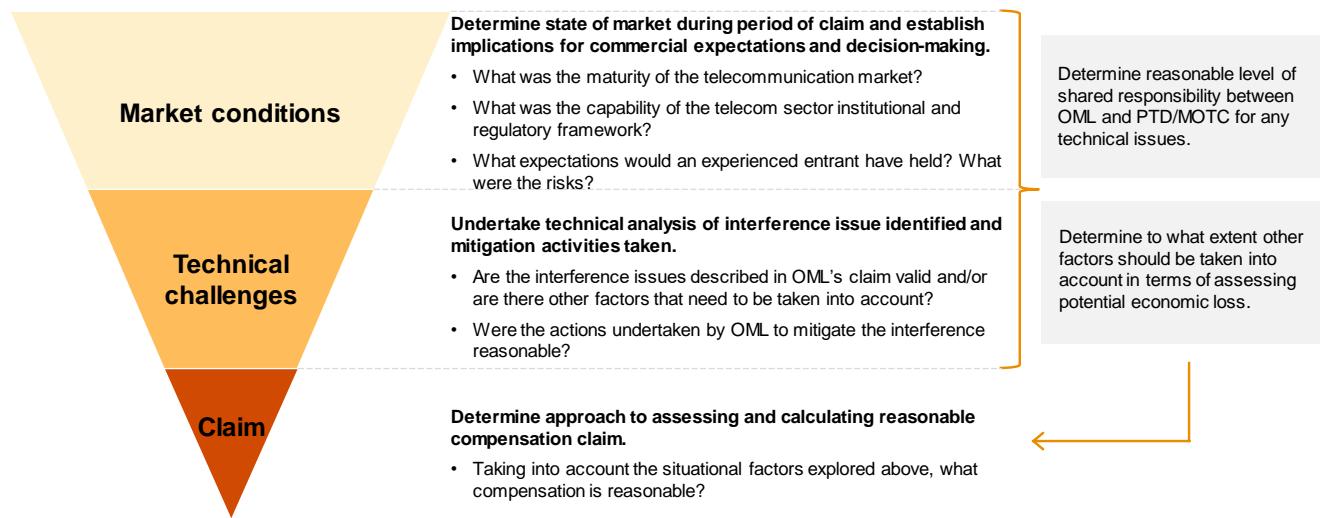
This framework reflects the discussions between MOTC/PTD and OML from March to July 2019. Although there may be alternative frameworks used to calculate economic value (such as using enterprise value), there is advantage in the simplicity and transparency of this approach, which is the reason it has been adopted here.

The economic loss arising from potential subscribers was parked in an OML submission earlier this year and therefore it is not considered in this analysis.

Information was received from both MOTC/PTD and OML detailing the compensation framework, and some underlying calculations used to estimate the impact of the lack of access to clean spectrum in terms of lost value to OML.

An overview of how the approach applies to the claim analysis is shown below.

Figure 3: Application of thematic approach to claim analysis



Source: PwC analysis.

4.2 Market and technical review of initial OML claim

In reviewing OML's claim we have identified three broad issues:

- Merit of OML's estimation methodology for each component:** A review of OML's methodology to estimate each component of the framework was conducted, and adjustments made where considered appropriate. This process is detailed in the sections below.
- Future compensation:** Across all three components OML's claim extends to a period beyond 2019. However, for compensation based on costs incurred in the future requires the claim to make strong assumptions about what the future of the market and PTD/OML operations look like. The risk of accepting a future claim is that there is a fundamental change to these assumptions in practice which may change the nature and value of compensation. For example, OML has estimated ongoing operation costs for the value of its infill sites until 2025. If between now and 2025 OML decides to de-commission some infill sites (if for example, the interference issue is remediated and they are no longer required) the operational costs would be reduced significantly. This suggests that there is a significant financial risk awarding future compensation. For this reason the analysis has not included any consideration of compensation for anticipated future losses.
- Allocation of responsibility:** Based on the market conditions established in section 2 and the multiple interference factors identified in section 3 this analysis allocates a percentage of responsibility to PTD that is less than 100% (which is OML's assertion). To arrive at a specific estimate for the percentage we have considered the results of the field work was conducted by the joint taskforce to identify sources of U900 interference at a sample of sites in Yangon. The identified sources of interference, the number of sites, and the share of PTD responsibility applied for the purpose of this analysis are presented in **Table 5**.

Table 5 Interference sources identified by Joint Taskforce

Interference source	Number of sites	PTD responsibility factor applied
Automatic gate door	1	0%
CDMA 850MHz	34	100%
Co-location	16	0%

Interference source	Number of sites	PTD responsibility factor applied
Jammer	3	50%
NB Repeater / Suspected NB Repeater	33	50%
Singapore Embassy	3	0%
No interference detected	30	NA

Source: Oordeo Presentation for PwC meeting 23 September 2019 p59

The analysis considers several of the interference sources listed in **Table** as those that OML should have been expected to anticipate acting as an experienced operator in the industry. For these, this analysis attributes a 0% PTD responsibility factor. Other sources of interference such as repeaters and suspected repeaters would be encountered in many similar operating environments, but may have been more pervasive in Myanmar, and this analysis therefore attributes an equal share of responsibility for mitigation to OML and PTD. PTD is assumed to be fully responsible for the CDMA interference identified.

Excluding sites at which no interference was detected, based on the evidence presented in **Table**, PTD were assumed to be responsible for interference at 52 out of the total 90 sites on average. Therefore, a factor of 58% is applied to moderate all components of the compensation framework following their calculation. This is a generous assumption given the market conditions established in section 2 have not been directly taken into account.

4.3 Costs incurred due to interference

This analysis estimates OML's total remediation cost attributable to interference to be \$41.2m, against an initial claim of \$119m.

Figure 4 summarises the key adjustments made to OML's initial claim for mitigation costs compared to the current analysis, and the remainder of this section describes this in more detail.

Figure 4 Key components of difference between OML claim and current analysis of mitigation costs (\$ discounted PV)



Source: PwC.

4.3.1 Review of initial OML claim

OML claim: due to the lack of access to clean spectrum at some sites OML incurred costs to remediate it. OML asserts that these costs would not have otherwise been incurred and that PTD should compensate OML for all of the economic value of these costs. These costs comprise:

- consultants hired to identify the sources of interference

- activities intended to reduce the impact of interference, including upfront capital expenditure and ongoing operational expenditure (until 2025).

In reviewing these calculations the following is noted:

- The majority of costs are associated with infill sites that may have been built (to some extent), regardless of the interference issue, at some time in the future. In this case the costs would have been incurred but at a later date implying that the key consideration is the time value of expenditure. These infill sites were required to provide capacity for LTE and GSM services as well as to UMTS. Given that OML changed its commercial strategy in 2016, it is not clear that there would be any significant claim in respect of infill after that year.
- OML's claim for 100% of the value of the infill costs suggests that the company has generated no benefit from the operation of the additional sites. However, the sites themselves mean the capacity/coverage that OML can offer in that area should be generating economic value, enabling users to access a higher quality mobile network. There may also be further value for site sharing revenue.

4.3.2 Current analysis

A total of 382 infill sites were established by OML in the period 2015 – 2017. The number of each site type and associated CapEx costs were provided by OML in a written response (30 September 2019). Aligned with the OML materials provided, the analysis has assumed that the construction expenditure per site type was constant thorough the period, as would be the case, for example, if a single procurement process was conducted to contract out the construction work. The initial CapEx cost assumptions are presented in Table , and are unchanged from the OML response submission of 30 September 2019.

Table 6 Number of infill sites and construction costs per site type (\$US thousands, current prices, not inclusive of cost of capital)

Site type	Cost per site type (\$US thousands)	Number of sites		
		2015	2016	2017
Billboard	42.0	-	15	-
Rooftop	52.0	80	124	26
Greenfield	67.0	90	32	15
Total	170	171	41	
Cumulative total	170	341	382	

Source: Ooredoo Response to PwC 30/9/19 p13

In addition to the infrastructure assumptions presented in Table , LTE technology upgrades at each of the 382 sites were conducted in 2017 at a cost of \$25,719 (US) per site for all site type. Table presents total capital expenditure on infill sites, totalling \$31.6m (US).

Table 7 Total infill site CapEx costs (\$US thousands, current prices, not inclusive of cost of capital)

Site type	Cost per site type	Total CapEx		
		2015	2016	2017
Billboard	42.0	-	630.0	-
Rooftop	52.0	4,160.0	6,448.0	1,352.0
Greenfield	67.0	6,030.0	2,144.0	1,005.0
LTE technology upgrades	25.7			9,824.7
Total		10,190.0	9,222.0	12,181.7

Cumulative total	10,190.0	19,412.0	31,593.7
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Source: Ooredoo Response to PwC 30/9/19 p13

OML also provided an estimate of the operations cost incurred at the 382 new infill sites. In addition to overall site operation costs (including manpower, leased transmission lines and software costs), 151 filters were swapped in 2015 at a cost of \$1,255 (USD) per filter. There were also a number of minor one-off items including consultancy and spectrum scanning reports.

Although OML has provided operation costs extending to 2025, for the reasons discussed the analysis does not include estimates of future losses.

Finally, the analysis has considered that a proportion of the infill sites will have economic value beyond dealing with the interference issues. Therefore, the analysis has discounted OML's remediation cost claim by 20% to account for this factor. It should be noted that the true discount factor is likely many times this amount, reflecting the continuing value of these sites to OML.

A year by year breakdown of the final estimates is shown in Table 6.

Table 8: Total value lost due to remediation costs 2014 – 2019 (USD thousands (2019), discounted, inclusive of cost of capital)

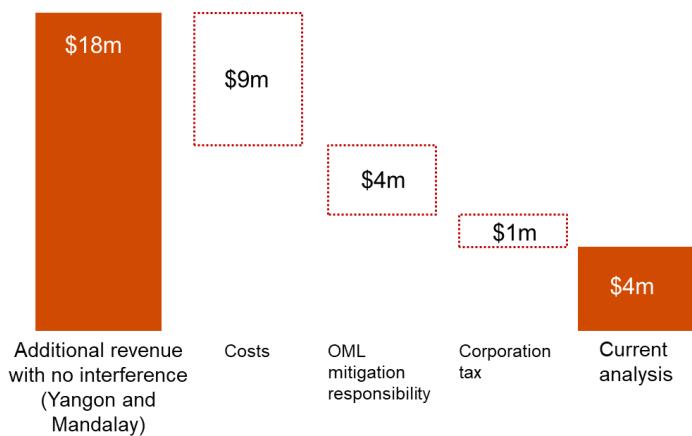
	2014	2015	2016	2017	2018	2019
Remediation cost	251.1	8,522.9	10,305.2	12,396.4	5,215.2	4,504.1

Source: PwC.

4.4 Loss from existing subscribers

This analysis estimates OML's total value loss from existing subscribers attributable to interference to be \$4.0m, against an initial claim of \$77m. Figure 5 presents the key steps in reaching this estimate. It should be noted that the \$18m revenue base used in this analysis is considerably lower than that applied by OML, reflecting the much lower percentage network usage differential than ARPU differential between TML and OML across the period, and the removal from the base of all revenue after 2019. The remainder of this section describes this in more detail.

Figure 5 Key calculation steps in estimating OML lost value from existing subscribers (\$ discounted, PV)



Source: PwC.

4.4.1 Review of initial OML claim

OML claim: OML asserts that as a result of interference existing OML subscribers reduced their usage of the network, by switching to a competitor. This is based on:

- OML's assertion that the OML 3G ARPU and TML 3G ARPU converge as the level of interference falls.
- OML's assertion that the estimated lost value should be increased by a factor of 2 (ie doubling the claim) to account for the movement of subscribers into and out of affected areas in Yangon and Mandalay.
- OML's assertion that the factors determining usage are price, coverage and network quality and that price and coverage were broadly equivalent across competing networks.

In reviewing these calculations the following is noted:

- At the time of launch and for the ensuing period, TML offered both a 2G and 3G network. There is no TML published material regarding the notional level of their 2G and 3G ARPU. It is questionable how this TML ARPU disaggregation could be estimated, even were it possible to understand whether individual users operate 2G or 3G services; indeed, many users would simultaneously operate both.
- There does not appear to be any basis for applying a factor of 2 to account for 'subscriber mobility' in Yangon and Mandalay. For example, in Q3 2015, OML asserts that interference was detected at 57% of sites in Yangon and Mandalay. Applying the factor of 2 results in the assumption that all its 2.3 million subscribers situated in Yangon and Mandalay are impacted by the interference, and all to the same extent.
- The normalisation approach applied by OML explicitly assumes that ARPU will converge but for the difference in network quality and the preference to co-locate with family and friends on the same network. OML assumes that 72.5% of the ARPU differential over the period is due to network quality issues, quoting reports from Deloitte and GSMA Intelligence. The quoted reports do not appear to support this assertion. Other material factors potentially causing ARPU to diverge are discounted: From the launch period onwards OML, TML and MPT were competing heavily to incentivise consumers to choose to stay with their brand. So although price may broadly have converged (although OML provides no evidence of this) the existence of discounts and promotions means price may still have impacted usage.

Taking into account the above observations the analysis uses a revised calculation method to estimate a reasonable compensation claim. In particular, the analysis has sought to establish a genuine usage comparison on each network to ascertain that OML's assertion is valid, and then calculate lost revenue on this basis.

4.4.2 Current analysis

Since there are many factors that could drive the difference between the two ARPUs, the analysis uses the difference between average minutes of use between TML and OML customers as an explicit Quality of Service proxy. In this way, the difference in network quality is being explicitly measured in terms of average relative network usage. Table provides the average percentage usage differential between TML and OML in terms of minutes of use for the period 2014 – 2019. The 2014 and 2019 percentage differentials were calculated as the average of the period 2015 – 2018.

Table 8 Network usage differential OML / TML 2014 – 2018

	2014	2015	2016	2017	2018
Total minutes of use per customer per month					
TML	Not provided	180	152	124	125
OML	Not provided	174	143	117	101
Network usage % differential	5.14%**	3.67%	6.09%	5.66%	19.08%

**The 2014 Quality of Service factor is calculated as an average of the period 2015 – 2018
Source: PTD Quarterly Report for Operators Q2 2019.

Aligned with OML's methodology, the analysis considers only existing OML subscribers in Yangon and Mandalay, provided by OML. Table presents the proportion of OML's subscribers situated in Yangon and Mandalay for the period 2014 – 2019.

Table 9 Proportion of OML subscribers in Yangon and Mandalay

	2014	2015	2016	2017	2018	2019
Proportion of OML subscribers	54%	49%	43%	45%	44%	44%

Source: Ooredoo presentation for PwC meeting 23/9/19 p70

OML also provided interference levels in Yangon between 2015 and 2019. Table presents the average annual U900 interference levels based on this evidence. Despite varying levels of interference, for the purpose of this analysis and without prejudice, this analysis has not discounted the compensation claim even for medium level interference.

Table 10 Interference rates in Yangon 2014 - 2019

	2014	2015	2016	2017	2018	2019
No U900 interference detected	51%	51%	57%	64%	72%	79%
Total interference incidence	49%	49%	43%	36%	28%	21%

Source: Ooredoo response to PwC 30 September 2019

OML provided its annual number of subscribers and ARPU (MMK) for the period 2014 – 2019. This was converted to total revenue (USD) as the base of the compensation estimate. The subscriber base in Q3 of each year was chosen as the snapshot point for the year. Table presents the calculation of total revenue.

Table 11 Total number of subscribers, ARPU (MMK) and Total revenue (USD) per annum - OML

	2014	2015	2016	2017	2018	2019
Subscribers (thousands, Q3)	1,013	4,767	8,238	6,272	4,921	3,842
ARPU (Q3, MMK)	22,240	20,361	13,436	14,262	11,161	8,734
Total revenue (thousands, USD)	41,371	161,734	153,202	118,050	66,727	38,476

Source: Ooredoo presentation for PwC meeting 23/9/19 p71

Aligned with OML's methodology, the approach calculates OML's lost earnings as the difference between lost revenue and cost. OML provided quarterly gross margins and OpEx expressed as percentages of revenue for the period 2014 – 2019. A mean average per annum was taken across these quarterly percentages to express the annualised cost as a percentage of revenue. These percentages are presented in Table .

Table 12 Costs as percentage of revenue (2014 - 2019)

	2014	2015	2016	2017	2018	2019
Costs as % revenue	55%	53%	53%	39%	38%	38%

Source: Ooredoo presentation for PwC meeting 23/9/19 p72

Finally, it appears more appropriate to calculate compensation due to lost earnings net of Myanmar corporation tax, which is 25%. The rationale for this is that some of the additional profit calculated using this methodology would have been paid by OML in tax to the Myanmar Government, and as such does not represent lost value to OML.

A year by year breakdown of the final estimates is shown in Table 12.

Table 13 Total value lost due to existing subscriber revenue loss 2014 – 2019 (USD thousands (2019), discounted, inclusive of cost of capital)

	2014	2015	2016	2017	2018	2019
Existing subscriber revenue loss	316.4	844.9	1,045.3	729.4	992.1	102.4

Source: PwC.

5 Recommendation

This section outlines a framework for applying the market and technical principles outlined in Section 3, and assessed further in Section 4, with a view to achieving a mutually agreeable settlement.



5.1 Suggested preconditions

Recognising the preference of both parties for an informal resolution, it is suggested that this settlement should be entered into with a number of preconditions to protect both parties, as below:

- The facts, analysis and reporting relating to this dispute should remain confidential and unique to this dispute.
- All parties should be subject to a non-disclosure agreement to this effect, to protect both parties from any question of precedent being set in the event of any future similar claims.
- Any settlement should be entered into with no acknowledgement or admission of liability on either side.
- Any settlement should be accepted by OML as full and final settlement of this dispute.
- OML should indemnify the Government of Myanmar from any further accountability in this matter. Any future claims for a new issue, or a continuation of this issue, should be established as a new claim.

The contents of this recommendation do not constitute an offer to settle, are provided without prejudice, have not been approved for release by the Government, and may be withdrawn at any time.

Any measures to be specified will be outlined “in-kind” and the principle of in-kind compensation has been agreed by the Joint Taskforce and documented in OML submissions where the form of compensation proposed is a credit note against future payments to PTD⁹.

The underlying analysis for these recommendations relies on a top-down assessment of the OML claim. Such assessment will be taken forward by MOTC to engage in further discussions in Government to determine settlement propositions to offer to OML. A more thorough, bottom up analysis has not been conducted.

5.2 Principles to determining the recommendation

Upon assessment of the OML claim as outlined in the previous sections, PTD has drawn the following initial perspectives:

- OML is correct in stating that during deployment and in subsequent time periods to date, it faced interference in several geographic areas attributable to signal interference from adjacent 850 MHz sites operated by another operator
- PTD accepts OML’s 3-step approach to assessing its loss, by way of 1) in-fill cost; 2) loss from usage of existing subscribers and 3) loss of potential subscribers
- PTD has considered both “medium” level and “high” levels of interference to constitute interference for OML’s network.

⁹ Joint Taskforce Meeting 9 May 2019 p9

- Market conditions in Myanmar and technical considerations go some way to explaining the level of UTMS900 interference, and these are not within PTD's control.

Whilst PTD does not accept that OML's loss is entirely due to the interference referred to above, and that several other factors apply, PTD accepts the principle of adjustment measures for the OML loss, given the above. In this context, PTD may wish to consider in-kind measures, whose value to OML might reflect OML's investment in and ongoing commitment to the telecommunications industry in Myanmar. These measures could include the provision of additional spectrum to OML in specific geographic locations across Myanmar aligned with OML's business development plans and PTD's overall service quality and coverage objectives. The points above reflect PTD's approach to a settlement discussion, and do not necessarily represent PTD's final position, and some of the concessions noted above may be withdrawn at any time.

5.3 Proposed adjustment measures

Adjustment measures will require action to be taken by all parties:

- PTD will undertake renewed efforts to enforce spectrum interference remediation by other operators, pertinent to the matter. PTD will seek to put in place a remediation plan such that remaining issues might be mitigated within 12 months of date of settlement of this dispute. Agreement by PTD of such an action plan (through discussions with other government parties and operators) will form part of the dispute settlement process between OML and PTD.
- Amongst the suite of measures under consideration, PTD will explore the possibility of in-kind adjustments such as the ex gratia allocation of additional spectrum to OML in specific geographic locations across Myanmar. If desired by both parties, the commercial value of this spectrum allocation to OML could also be independently assessed in the context of the economic loss to OML brought about by the interference issue.
- OML will agree a suite of appropriate adjustment measures, to be determined. OML will discuss and agree on an appropriate measure or "bundle" of measures from this list with PTD.

The overall bundle of measures will aim to provide value to OML broadly equivalent to their economic loss, adjusted for the market and technical factors discussed in sections 2 and 3. It is recognised however, that to the extent that in-kind measures may be considered as part of the bundle, some latitude in assessing the value to OML may be appropriate given that OML would bear inherent commercial risk.

5.4 Additional recommendations

It is recommended that PTD introduce an agreed formal conflict resolution process following this experience, which would be adopted as standard for any future similar disputes.

Appendices

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Appendix A Technical concepts

To analyse the technical component of OML's claim five concepts are required to understand the relevant interference and cell deployment issues.

Table 18: Summary of technical concepts relevant to interference issues

Concept	Description
Coverage vs capacity	The first concept is the distinction between coverage and capacity. In the early stages of network rollout, there is a need to maximise the geographic area in which services are available. This is done by deploying macro coverage cells that provide service over a wide area. In order to take advantage of the comparative propagation characteristics, coverage is usually provided at frequencies below 1 GHz. In Myanmar, this would use spectrum in the 850 MHz band or the 900 MHz band. Once coverage is established, the capacity of the network is increased by deploying infill small cells. These cells typically use frequencies above 1 GHz. In Myanmar, this would use spectrum in the 1.8 GHz band or the 2.1 GHz band. The network is formed by the concurrent use of spectrum in the different bands where services are supplied using a combination of small coverage cells and macro coverage cells. However, this network configuration only works when the network can "hand off" traffic between the macro coverage cells and the small coverage cells.
Frequency domain duplex technology	The second concept arises from the way in which technologies that use "frequency domain duplex" (FDD) operate. In FDD systems, the transmit frequency of the cell matches the receive frequency of the user equipment. At the same time, the receive frequency of the cell matches the transmit frequency of the user equipment. The cell receive system is referred to as the "uplink" and the cell transmit system is referred to as the "downlink". When all operators are using the same technologies, there is no prospect of interference between the uplink and the downlink. However, when adjacent bands are used, there is the potential for interference between the downlink of one service and the uplink of another. In order to minimise this potential, there is usually spectrum set aside and not allocated to provide protection from this type of interference. This unallocated spectrum is referred to as a "guard band".
Interference	The third concept is the way in which interference occurs. The first mechanism is that an unauthorised service is using spectrum that is allocated on an exclusive basis to a licensee. This is direct interference. The second is when an unauthorised service is using spectrum that is on an adjacent frequency to the spectrum allocated to a licensee. This is one form of adjacent channel interference. Another form of adjacent channel interference arises when the downlink of an authorised spectrum licensee interferes with the uplink of an authorised spectrum licensee. This can occur when there is a guard band in place but the licence requirements for adjacent channel interference have not been met. That is, when there are "spurious emissions" by an authorised spectrum licensee. There is another self-generated form of interference called "intermodulation interference" – this is discussed below.
Noise floor	The fourth concept is the one of "noise floor". This is the level of general noise in a specific spectrum band. The level of noise floor that is assumed in radio frequency planning is usually based on exclusive use of spectrum or a known level of sharing

Concept	Description
	<p>with services that are “noise like”. In order to provide services, the user equipment and the cell equipment must have a minimum “signal to noise ratio”. If the noise floor is higher than anticipated, the radio frequency planning assumptions may not be valid. This leads to degraded performance.</p>
Intermodulation	<p>The fifth concept is another potential source of interference. However, this interference is self-generated and is called “intermodulation interference”. Intermodulation interference occurs when the harmonics of transmit carriers combine in a way that leads to a product that interferes with the receiver. For example, if there were two downlinks in the UMTS900 band with centre frequencies of 927.5 MHz (f1) and 957.5 MHz (f2), then there is the potential for an intermodulation product at $(2 \times f1) - f2 = 897.5$ MHz. This is in the middle of the UMTS900 uplink. That is, there is a risk of self-generated interference in a UMTS900 system. In general, intermodulation products would be expected at $\pm m \times f1 \pm n \times f2$ where m and n are integers.</p> <p>This interference would be found if there were quality issues with the systems:</p> <ul style="list-style-type: none"> • RF surfaces with dirt or rust; • Connectors being too tight or too loose • Cold or broken soldering or welding; • Deficient metal ends in RF cables; and/or • Close metallic elements in the main radiation lobe. <p>In the main, the issue comes from connectors.</p>

Source: PwC analysis.

Appendix B Detailed timeline

No.	Date	Description	Action of PTD	Remark
1.	3.1.2014	Announcement in the Newsletter concerned with the restrictions for the illegal repeater usage	PTD issued the public announcement in the Newsletter on 3.1.2014 regarding usage the illegal repeaters which may interfere mobile communications services of the operators.	As the first time announcement
2.	5.2.2014	PTD awarded the nationwide Telecommunications License and Spectrum License to OML.	The mobile operators who won the tender started their service after paying 50% of the License fee. PTD issued the license to the operators in according with the Telecommunications Law.	
3.	21.2.2014	Announcement in the Newsletter concerned with the restrictions for the illegal repeater usage	PTD issued a public announcement in the Newsletter on 21.2.2014 regarding usage the illegal repeaters which may interfere mobile communications services of the operators.	As the second time announcement
4.	21.4.2014	with reference the Invitation To Tender Document(ITT), OML reported to PTD to do the necessary actions for the interference in the guard band. That kind of interference may cause the delay when OML deploy their network.	In 26 th Technical Meeting on 31.7.2014, PTD, OML and MPT agreed to cooperate for the spectrum clearance in the guard band.	
5.	27.5.2014	OML requested to PTD that PTD should acknowledge for the interference complain during 2 days after receiving complaint and resolve it during 10 days.		
6.	15.8.2014	OML launched the services commercially on August 2014.		
7.	15.12.2014	OML report again the CDMA Band.	PTD setup the spectrum monitoring equipment to be able to manage the spectrum properly and started the spectrum monitoring after March 2015 as the follows. (a) Monitored the spectrum in Mandalay in (5.3.2015). (b) PTD's representatives, MEC's representatives and OML's representatives monitored the spectrum in Yangon from (3.4.2015) to (5.4.2015)and removed the illegal repeaters. During that time, PTD studied and reported the observations that may not cause the frequency interference. (c) Monitored the spectrum in the whole Yangon region during (25.4.2015) to (29.4.2015).	
8.	29.1.2015	OML reported to PTD to intervene for the spectrum interference which is caused by illegal usage in the guardband of 900 MHz.		
9.	25.2.2015	Announcement in the Newsletter concerned with the restrictions for the illegal repeater usage	PTD issued the public announcement in the Newsletter on 25.2.2015 regarding usage the illegal repeaters which may interfere mobile communications services of the operators.	As the third time announcement
10.	20.4.2015	OML reported to Minister that there was a progress on the spectrum interference matter due to the cooperation of PTD and MEC.	There was a progress for spectrum interference issues because PTD coordinated with the MEC.	

No.	Date	Description	Action of PTD	Remark
11.	15.7.2015	(a) PTD ordered to MPT to use the frequencies for MEC exactly and to install the filters at BTS. (b) PTD ordered to OML to receive the Receiving input range in the authorized band.	(a) OML did not report back to PTD related with the filter installation on 24.7.2015. But OML reported to PTD for the illegal repeater to be actioned again. (b) OML reported to PTD that there was a desire for spectrum monitoring with the international third party because spectrum interference still exit after installing the filters by MEC. (c) MEC reported to PTD about the finishing of filters installation according to the PTD's instruction.	
12.	7.8.2015	Informing about the spectrum monitoring at MEC's CDMA 800 MHz sites in Yangon.	PTD monitored the spectrum at MEC's CDMA 800 MHz sites in Yangon. According to the monitoring result, PTD informed to OML about the result of PTD investigation that MEC's CDMA 800 MHz sites already reduced the output power. And then OML should use the spectrum in the authorized band. PTD also informed to MEC to do the necessary justification for the raise of noise floor at the sites in Yangon.	
13.	19.9.2015	Announcement in the Newsletter concerned with the restrictions for the illegal repeater usage	PTD issued the public announcement in the Newsletter on 19.9.2015 regarding usage the illegal repeaters which may interfere mobile communications services of the operators.	As the fourth time announcement
14.	15.12.2015	Norconsult Telematics which is the Third Party for spectrum monitoring investigated the spectrum usage in cooperation with the PTD and OML on 15.12.2015.	Norconsult Telematics Reported as the follows: (a) In the section (5.1) of the report, there is no evidence about the direct spectrum interference of MEC/MPT CDMA system. (b) In the section (9.3) of the report, there may be spectrum interference from EGSM Band to OML sites because of the filter settings of OML's Sites. (c) Removed the (182) Repeaters	
15.	16.9.2016	OML report to PTD to intervene for the cross border spectrum interferences.	1 st Joint Technical Committee Meeting with Thailand was held in (8-9) November, 2018 to decrease the spectrum interference.	
16.	28.9.2016	Announcement in the Newsletter concerned with the restrictions for the illegal repeater usage	PTD issued the public announcement in the Newsletter on 28.9.2016 regarding usage the illegal repeaters which may interfere mobile communications services of the operators.	As the fifth time announcement
17.	17.11.2016	OML reported to PTD related with the spectrum interference in Phyu Township in Bago Division.	As the response of OML's report, PTD monitored the spectrum from (2.12.2016) to (3.12.2016).	
18.	15.8.2017	OML reported and send the EGSM Band Test results to PTD in which there was the spectrum interferences in some township.	As per OML's report, PTD responded to OML that PTD monitored the spectrum in Phyar Pone, Bokalay, Daydaye, WarKhalMa Township, removed the illegal repeaters and informed to TML about out of band usage.	
19.	1.12.2017	OML reported to PTD that there were spectrum interferences not only in 900 MHz but also in 2100 MHz band in the Yangon region, Myanmar-Thailand Cross Border areas and Myanmar-China Cross Border areas.	1 st Joint Technical Committee Meeting with Thailand was held in (8-9) November, 2018 to decrease the spectrum interference.	

No.	Date	Description	Action of PTD	Remark
20.	2.1.2018	OML reported to PTD about the spectrum interference in Mandalay.	PTD did the spectrum monitoring at Mandalay in 2017, December and 2018, January and remove the illegal repeaters. Then, PTD informed to OML about the internal interference.	
21.	21.2.2018	OML reported to PTD again that there were the spectrum interference at Mandalay, Sagaing, Chin and NayPyiTaw.	Regarding with the OML's report, PTD informed to OML about PTD did (7) times and (4) times spectrum monitoring during May and June 2018, respectively and removing repeaters including about internal interferences.	
22.	23.4.2018	OML reported to PTD to resolve the spectrum interference in Yangon region as the priority due to the impact of their services.	Regarding with the OML's report, PTD informed to OML about PTD did (2) times and (2) times spectrum monitoring during April and May 2018, respectively and removing repeaters including about internal interferences.	
23.	26.4.2018	OML reported to PTD that OML wanted to know about the cause of spectrum interference around the Myanmar.	Regarding with the OML's report, PTD informed to OML about PTD did (2) times and (2) times spectrum monitoring during April and May 2018, respectively and removing repeaters including about internal interferences.	
24.	6.6.2018	OML reported to PTD about the spectrum interference in Hpaswang, Namhsan, Myitkyina Township including with the list of priority Townships to be interference resolved.	PTD monitored the spectrum at Sintgaing, Kyauksel, MyinGyan, Taungtha,Mandalay, Meiktila, Thar Si and Kume Townships and removed the repeaters during the (26.6.2018) to (4.7.2018).	
25.	10.8.2018	OML reported to PTD about the spectrum interference in Yangon.	PTD monitored the spectrum at Yangon Townships and removed the repeaters in 13.8.2018.	
26.	30.8.2018	OML sent the letter "request for consultation concerned with the OML's lost due to the spectrum interference in 900 MHz Band" to Ministry of Transport and Communications, Ministry of Planning and Finance and Ministry of Myanmar Investment Commission	PTD reported to Secretary of MIC about the condition on that matter.	
27.	30.11.2018	OML sent the letter to Ministry of Transport and Communications, Ministry of Planning and Finance and Ministry of Myanmar Investment Commission about the "Intent to Commence Arbitration because OML did not receive any response on the previous letter "request for consultation' from the concerned department".	PTD responded to OML that Minister of Transport and Communications will meet with the OML's Group CEO on (18.2.2019).	

အူရီအူးမြန်မာလီမိတက်မှ 900 MHz Band အတွင်း Interference ဖြစ်ပေါ်နေမှုနှင့်ပတ်သက်၍ PTD နှင့်ပြုလုပ်ခဲ့သည့်ညီးနှင့်အစည်းအဝေးများ

စဉ်	ရက်စွဲ	အကြောင်းအရာ	မှတ်ချက်
၁။	၂၄.၂၀၁၉၊ ၃၄.၂၀၁၉၊ ၂၀၂၀.၄.၂၀၁၉ ရက်နေ့	အဆိုပါ Joint Taskforce ၏ ပထမအကြိမ် ညီးနှင့်အစည်းအဝေးကို (၂၄.၂၀၁၉) ရက်နေ့နှင့် (၃၄.၂၀၁၉) ရက်နေ့တွင်လည်းကောင်း၊ ဒုတိယ အကြိမ် ညီးနှင့် အစည်းအဝေးကို (၁၀.၄.၂၀၁၉) ရက်နေ့တွင် လည်းကောင်း ကျင်းပပြုလုပ်ခဲ့ပါသည်။	အဆိုပါအစည်းအဝေးတွင် 900 MHz Band တွင် ဖြစ်ပေါ်ခဲ့သော လိုင်းနှင့်နောင့်ယှက်မှုများကြောင့် Ooredoo Myanmar Limited ကန်စာဆုံးရှုံးခဲ့ရမှုများနှင့်စပ်လျဉ်း၍ နည်းပညာ ပိုင်းဆိုင်ရာ လေ့လာဆန်းစစ်ခြင်း (Diagnosis)၊ လိုင်းနှင့်နောင့်ယှက်ခံရခြင်းမှ လျော့နည်းသက်သာစေရန် ဆောင်ရွက်ခဲ့သည့် ကုစားမှု အစီအစဉ် (Remediation) နှင့်လိုင်းနှင့်နောင့်ယှက်ခံရ ခြင်းမှ လျော့နည်းသက်သာ စေရန် Ooredoo Myanmar Limited က ဆောင်ရွက်ခဲ့ရမှု များအတွက် ကုန်ကျစရိတ်များ၊ အခြားနှစ်နာဆုံးရှုံးမှုများနှင့် စပ်လျဉ်း၍ ဆောင်ရွက်ပေးနိုင်မည့် အစီအစဉ်များ (Compensation) ဟူ၍ အပိုင်း (၃) ပိုင်းခွဲ၍ ဆွေးနွေးညီးနှင့် ခဲ့ကြပါသည်။
၂။	၆.၅.၂၀၁၉	Joint Taskforce ၏ (၃) ကြိမ်မြောက် ညီးနှင့်အစည်းအဝေးကိုကျင်းပပြုလုပ်ခဲ့ပါသည်။	အဆိုပါအစည်းအဝေးတွင် OML ကတင်ပြထားသည့်ဆုံးရှုံးနှစ်နာမှုတန်ဖိုးနှင့်စပ်လျဉ်း၍ အမှန်တကယ် ဆုံးရှုံးနှစ်နာမှုတန်ဖိုးဖြစ်စေရေး ဆွေးနွေးခဲ့ကြပါသည်။
၃။	၁၀.၅.၂၀၁၉	Joint Taskforce ၏ (၄) ကြိမ်မြောက် ညီးနှင့်အစည်းအဝေးကိုကျင်းပပြုလုပ်ခဲ့ပါသည်။	အဆိုပါအစည်းအဝေးတွင် OML ၏နှစ်နာဆုံးရှုံးမှုပမာဏ နှင့်စပ်လျဉ်း၍ ညီးနှင့်ဆွေးနွေးခဲ့ကြပြီး OML မှင်း၏နှစ်နာဆုံးရှုံးမှုပမာဏကို ယခင်အဆိုပြုခဲ့သည့်အမေရိကန်ဒေါ်လာ (၄၉၄) သန်းအစားအမေရိကန်ဒေါ်လာ(၁၇၅) သန်းဖြင့်

			ပြင်ဆင် သတ်မှတ်ပေးရန်နှင့် ယင်းပမာဏအတိုင်း လိုင်းနှင့် အသုံးပြုခများအဖြစ်ခုနှစ်များရန်အဆိုပြုတင်ပြခဲ့ပါသည်။
၄။	၁၀.၇.၂၀၁၉ ရက်နေ့	OML Interference နှင့်စပ်လျဉ်း၍ ဆောင်ရွက်ပြီးစီးမှုအခြေအနေအပေါ် နှစ်ဖက်တာဝန်ရှိသူများနှင့်အတူရှင်းလင်း ဆွေးနွေးခြင်း (Joint Taskforce ၈၅ (၅) ကြိမ်မြောက်ညို့နှင့်အစည်းအဝေး)	Interference ဖြစ်ပွားမှုနှင့်စပ်လျဉ်း၍ PTD နှင့် OML နှစ်ဖက်လုံးတွင် တာဝန်ရှိကြောင်း၊ အဓိကအားဖြင့် Interference ဖြစ်ပေါ်သော် အကြောင်းအရင်း (၂) ခုမှာ CDMA issue နှင့် Repeater issue ဖြစ်ကြောင်း၊ တရားမဝင် Repeater များ အသုံးပြုနေမှုကို ဖယ်ရှား ရှင်းလင်းရေးနှင့်စပ်လျဉ်း၍ PTD အနေဖြင့် တာဝန်ယူ ဆောင်ရွက်သွားမည်ဖြစ်ကြောင်း၊ PTD အနေဖြင့် Compensation နှင့်စပ်လျဉ်း၍ အကြံပေးနိုင်ရေး အတွက် Third Party Advisor ငါးရမ်း၍ ဆောင်ရွက်သွားမည် ဖြစ်ကြောင်းနှင့် ဆွေးနွေးမှုကာလကို သက်တမ်းတိုးမြှင့်လိုကြောင်း စသည့်အချက်အလက်များကို ဆွေးနွေးခဲ့ကြပါသည်။
၅။	၄.၉.၂၀၁၉ ရက်နေ့ နှင့် ၁၇.၉.၂၀၁၉ ရက်နေ့	Joint Taskforce ၈၅ (၆) ကြိမ်မြောက် ညို့နှင့် အစည်းအဝေးကို ကျင်းပပြုလုပ်ခဲ့ပါသည်။ (Pricewaterhouse Coopers Consulting (Singapore) Pte Ltd မှ တာဝန်ရှိသူများသည် လိုင်းနှုန်းနှောင့်ယုက်မှုကြောင့် ဖြစ်ပေါ်ခဲ့သည့် OML ၈၅ဆုံးရုံးနှစ်နာမူများအတွက် ဖြေရှင်း ဆောင်ရွက်ပေးနိုင်ရေး ကန္ဒိုးဆွေးနွေးမှုများပြုလုပ်ခဲ့ပါသည်။)	PTD မှတာဝန်ရှိသူများ၊ OML မှတာဝန်ရှိသူများနှင့် Pricewaterhouse Coopers Consulting(Singapore) Pte Ltd မှ တာဝန်ရှိသူများသည် လိုင်းနှုန်းနှောင့်ယုက်မှုကြောင့် ဖြစ်ပေါ်ခဲ့သည့် OML ၈၅ဆုံးရုံးနှစ်နာမူများအတွက် ဖြေရှင်း ဆောင်ရွက်ပေးနိုင်ရေး ကန္ဒိုးဆွေးနွေးမှုများပြုလုပ်ခဲ့ပါသည်။

၆။	၂၃.၉.၂၀၁၉ရက်နေ့ နှင့် ၂၄.၉.၂၀၁၉ ရက်နေ့	Joint Taskforce ၅၈ (၇) ကြိမ်မြောက် ညီနှင့် အစည်းအဝေးကိုကျင်းပပြုလုပ်ခဲ့ ပါသည်။ (Pricewaterhouse Coopers Consulting (Singapore) Pte Ltd မှ တာဝန်ရှိသူများနှင့် အတူဆွေးနွေးခဲ့ပါ သည်။)	အဆိုပါအစည်းအဝေးတွင် နှစ်ဦးနှစ်ဖက်သဘောတူညီသည့် အဖြေတစ်ခုကိုရရှိနိုင်ရေးအတွက် ဆက်လက်ဆောင်ရွက်သွား မည့် လုပ်ငန်းစဉ်နှင့်စပ်လျဉ်း၍ဆွေးနွေးခဲ့ကြပါသည်။
၇။	၁၃.၁၁.၂၀၁၉	Joint Taskforce ၅၈ (၈) ကြိမ်မြောက် ညီနှင့် အစည်းအဝေးကို ကျင်းပ ပြုလုပ် ခဲ့ပါသည်။	အဆိုပါအစည်းအဝေးတွင် နှစ်ဦးနှစ်ဖက် သဘောတူသည့် အဖြေတစ်ခုကိုရရှိနိုင်ရေး ညီနှင့်ဆောင်ရွက်သွားမည့်ကာလ ကို (၃၁.၁၂.၂၀၁၉) ရက်နေ့အထိ သက်တမ်းတိုးမြှင့်သွားရန် သဘောတူညီခဲ့ကြပါသည်။
၈။	၂၃.၁၂.၂၀၁၉	Joint Taskforce ၅၈ (၉) ကြိမ်မြောက် ညီနှင့် အစည်းအဝေးကို ကျင်းပ ပြုလုပ် ခဲ့ပါသည်။	အဆိုပါအစည်းအဝေးတွင် 800 MHz Band (Band 20) အတွင်း ရိုလိုင်းနှင့်ကို Regionwide အနေဖြင့် ထပ်မံချထား ပေးခြင်း ဖြင့် OML က 900 MHz Band အတွင်း လိုင်းနှင့်နောင့်ယှက်မှ ဖြစ်ပေါ်ခဲ့မှုကြောင့် ဆုံးရှုံးနစ်နာခဲ့မှုများ အတွက် ပြန်လည် ကုစားပေးနိုင်ရေး ဆွေးနွေးခဲ့ပါသည်။ အဆိုပါကိစ္စနှင့်စပ် လျဉ်း၍ OML မှ လက်ရှိ 900 MHz နှင့် 2100 MHz Spectrum License သက်တမ်းနှင့်အတူ 800 MHz Band (Band 20) အတွင်းရှိ (2x5 MHz) ကို Nationwide အနေဖြင့် ချထားပေးစေလိုပါကြောင်းနှင့် OML၏ Settlement Proposal ကို ဦးစီးဌာနသို့ စာဖြင့် ပေးပို့သွားမည် ဖြစ်ကြောင်း ဆွေးနွေးခဲ့ကြပါသည်။

၉။	၃.၁.၂၀၂၀	OML၏ Settlement Proposalကို ဦးစီးဌာနသို့ ပြန်လည်တင်ပြလာပါသည်။	
၁၀။	၂၂.၁.၂၀၂၀	Joint Taskforce ၅၀ (၁၀) ကြိမ်မြောက် ညို့နှင့် အစည်းအဝေးကို ကျင်းပ ပြုလုပ် ခဲ့ပါသည်။	အဆိုပါ အစည်းအဝေးတွင် 800 MHz (Band 20) အတွင်းရှိ (2x5 MHz) ကို Regions (၉) ခု အတွက် အသုံးပြုခွင့်ကာလ (၅) နှစ်သတ်မှတ်၍ ခွင့်ပြုပေးနိုင်ရေး စဉ်းစားဆောင်ရွက်သွားမည် ဖြစ်ကြောင်း အဆိုပြုဆွေးနွေးခဲ့ရာ OML အနေဖြင့် Regions (၉) ခု အတွက် အသုံးပြုခွင့် ကာလ (၉) နှစ် သတ်မှတ်၍ ခွင့်ပြုပေးစေလိုကြောင်းနှင့် မည့်သည့် Region အတွက် လိုင်းနှင့် သတ်မှတ်ပေးစေလိုကြောင်းကို ပြန်လည်တင်ပြသွား မည် ဖြစ်ကြောင်း ဆွေးနွေးတင်ပြခဲ့ပါသည်။
၁၁။	၄.၂.၂၀၂၀	Joint Taskforce ၅၀ (၁၁) ကြိမ်မြောက် ညို့နှင့် အစည်းအဝေးကို ကျင်းပ ပြုလုပ် ခဲ့ပါသည်။	အဆိုပါအစည်းအဝေးတွင် OMLမှ ငင်းတို့အနေဖြင့် Nationwide အတွက် အသုံးပြုခွင့်ကာလ (၈) နှစ် သတ်မှတ်၍ ခွင့်ပြုပေးစေ လိုကြောင်း တင်ပြခဲ့ပြီး ဆက်သွယ်ရေးညွှန်ကြားမှု ဦးစီးဌာနမှ အဆိုပါကိစ္စနှင့်စပ်လျဉ်း၍ ဌာနတွင်း ဆွေးနွေးမှုများ ပြုလုပ်၍ ဝန်ကြီးဌာနသို့ တင်ပြသွားမည် ဖြစ်ကြောင်း ပြောကြားခဲ့ပါသည်။



**U Soe Thein
Permanent Secretary
Ministry of Transport and Communications
Building No 2
Nay Pyi Taw**

Doha 26 March 26, 2020

Dear U Soe Thein,

I sincerely hope that you are well under the current very trying circumstances.

I would like to thank you, and your team, for the very constructive discussions that we have had over the last year on the spectrum interference issue. I am very pleased that we were able to come to an understanding and grateful to you and your team for the professionalism and courtesy you have showed us and the hard work that has been put into this project.

I am pleased to confirm that the Ooredoo Group Management has decided to recommend to its Board of Directors to accept the settlement proposal received from the Ministry of Transport and Communications on the 16th of March. I know that other aspects, such as remediation, have been discussed between the parties earlier and would also form part of the settlement.

To summarise, our understanding of the position is set out below.

In recognition of the interference that Ooredoo Myanmar Limited (OML) has been subject to in its allocated 900MHz spectrum and as full settlement for all, past and future, costs and losses suffered or alleged by OML and its shareholders as a consequence, the MOTC has proposed the following:

1. **Spectrum allocation** - OML will with no acquisition cost be allocated a regional spectrum licence of 2x5MHz in the 800MHz band (Band 20) with a validity for 7 years from the effective date. The following Regions/States will be included:
 - Yangon
 - Mandalay
 - Shan
 - Bago
 - Sagain
 - Mon (OML's election)
 2. **Remediation Plan** - a remediation plan to clean the 900MHz spectrum allocated to OML will be implemented. This includes
 - the forming of a Technical Committee, with participants from the MOTC, the MOD and OML. The objective of the committee is to analyze and implement actions necessary to mitigate uplink interference in OML's 900MHz spectrum from the CDMA850 network.
 - continuation of the ongoing action by OML and PTD of identifying the use of and the closing down of illegal repeaters and jammers.



3. **Questions and Answers** – Ooredoo Group and OML will assist and support the MOTC and PTD in preparing questions and answers regarding this settlement.

I trust the above accurately reflects the understanding we have. As has been discussed, both sides need to seek final approval in line with compliance rules. As noted above Ooredoo Group will now start that procedure. In the interest of time and pending final approval, I suggest that we ask our respective teams to jointly prepare a draft agreement. To this end I would suggest that Ooredoo prepare a first draft in English and the Myanmar language which we will provide to your office for review.

We are of course available to discuss further if that would be helpful to you.

Best Regards,

Hans Kuropatwa
Group Chief Mergers & Acquisitions Officer

7 Years, 6 Regions (with 2014 Census Population)

Sr	State and Division	Total Population of state and division (Million) (with 2014 Census Population)	Estimated USD (Million) Based on Regions	Total Estimated USD (Million) Based on Regions	Numbers of interfered sites by OML Proposal
1	Yangon	7.360	10.461	10.461	297
2	Mandalay	6.165	8.762	19.223	107
3	Shan	5.824	8.278	27.500	67
4	Bago	4.867	6.917	34.418	49
5	Sagaing	5.325	7.568	41.986	47
6	Mon	2.054	2.919	44.905	41
	Total		44.905		

EGSM (2x2.2) MHz for 5 year(with Nationwide basis) = 23 Mil USD အပေါ်အခြေထွက်ချက်ထားပါသည်။

ဥပမာ-ရန်ကုန်တိုင်းဒေသကြီးအတွက် ကျသင့်မည့် ထိုင်းနှစ်းအသုံးပြုခတွက်ချက်မှူး

2x2.2 MHz (with 51.49 million Population)=23 Million USD

2x5 MHz (with 7.36 million Population)=[(2x5x7.36x7)/(2x2.2x51.49x5)]x23=10.461 Million USD