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| **Public Consultation** |
| **Private Mobile Radio (PMR)** |
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| **Commencement Date: 22 September 2015****Response Date: 20 October 2015** |

Preface and Notes to Potential Respondents

TRA Regulations “Private Mobile Radio”, Version 1.0” dated 30 December 2009 sets the technical rules for authorization of radio stations for private mobile radio applications. In keeping with its values of transparency and sector engagement, the TRA wishes to consult on these regulations and proposed changes.

The purpose of this document is to invite comments from any organizations that would be impacted by the proposed changes in this document, which the TRA will then consider prior to making a final decision.

All concerned should respond to this consultation in writing to the TRA on or before the response date stated on the front cover of this document. The comments which are contained in any response to this consultation should be clearly identified with respect to the specific question in this consultation to which such comments refer. Any comments which are of a general nature and not in response to a particular question should be clearly identified as such.

Responses to this consultation should be made in writing and provided electronically in MS Word format, on or before the response date stated on the front cover of this document. Responses must be accompanied by the full contacts details (contact name, e-mail address and phone and fax numbers) of the respondent to:

**spectrumconsultation@tra.gov.ae**

Telecommunications Regulatory Authority

P.O. Box 26662

Abu Dhabi, UAE

Respondents are advised that it will be the general intention of the TRA to publish in full the responses received to this consultation. Additionally, the TRA may, at its discretion generate and publish a “Summary of Responses” document at the conclusion of this consultation. Accordingly, the Summary of Responses may include references to and citations (in whole or in part) of comments which have been received. The TRA recognizes that certain responses may include commercially sensitive and confidential information which the respondent may not wish to be published. In the event that a response contains confidential information, it shall be the responsibility of the respondent to clearly mark any information which is considered to be of a confidential nature.

In any event the respondent shall be required to submit two versions of its response to the TRA as follows:

* A full copy of its response in MS Word format with any confidential information clearly marked. The TRA will not publish the Word document and will only use it for internal purposes.
* A publishable copy of its response in Adobe PDF format. The TRA will publish the PDF version in its entirety. Thus, the respondent should take care to redact any commercially sensitive and confidential information in the PDF version of its response.

By participating in this consultation and by providing a PDF version of its response the respondent expressly authorizes the TRA to publish the submitted PDF version of its response in full.

It should be noted that none of the ideas expressed or comments made in this consultation document will necessarily result in formal decisions by the TRA and nothing contained herein shall limit or otherwise restrict the TRA’s powers to regulate the telecommunications sector at any time.

If any Person or entity seeks to clarify or discuss any part of this outline can request for a meeting in writing again to the above E-mail before and then TRA will set the meetings in the period from 11-13 October 2015 so that formal comments can still be received by **1200 hours on 20 October 2015.**

Consultation Schedule

22 September 2015: Publishing of consultation document

11-13 October 2015: Meetings with stakeholders if requested by stakeholders

20 October 2015: Close of consultation

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# Introduction

## The TRA is in the process of reviewing the spectrum regulations related to the authorization of Public Mobile Radio as detailed in the Articles of “Regulations: Public Mobile Radio (PMR) Service, Version 1.0” dated 30 December 2009.

## Following a competitive tender process, the TRA appointed specialist telecoms market consultants LS telcom (“the Consultants”) to undertake review of the existing regulations.

## The Consultant has examined the regulation “Public Mobile Radio (PMR) Service, Version 1.0” dated 30 December 2009 and compared these against those in a series of benchmark countries. The benchmark countries used consisted of a combination of countries where relevant spectrum regulations are publicly available and whose spectrum regimes are well developed. Focus has been set on countries from ITU-Region 1 and countries within the region. Benchmark countries comprise:

* Germany
* Qatar
* United Kingdom
* Switzerland
* Ireland

## In examining the UAE spectrum regulations and comparing them to international benchmarks, a number of principles have been used in guiding the proposals:

* Changes in the way services are defined or implemented in the UAE should be incorporated
* Changes in relevant ITU-R publications and industry changes should be incorporated to reflect latest developments and changes in technology
* Wherever possible technical information and frequency tables should be presented in line with the text, references to annexes should be avoided
* Wherever possible references to ITU-R publications and industry standards should be used instead of repeating text from these documents
* Non-technical regulations should be reduced to the relevant service specific regulations to avoid unnecessary overlap with other more general TRA regulations
* The different technical regulations reviewed should be harmonized in terms of structure and wording

## The remainder of this document is structured as follows:

* Section 2 presents details the Consultants proposed changes to the regulatory instrument
* Section 3 presents a summary of the proposed changes.

## Note that only those articles for which changes are proposed are discussed.

# Proposed Changes

## **New Article: Scope of Document**

### In order to define the scope of the document and give guidance on other relevant TRA regulations we propose to include a new article at the beginning of the document stating:

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| *0.1 This document comprises technical regulations for the authorization of Private Mobile Radio (PMR). It shall be read in conjunction with the following documents available from the TRA website at www.tra.gov.ae:* 0.1.1 *Spectrum Allocation and Assignment Regulations* *0.1.2 Spectrum Fees Regulations* *0.1.3 Interference Management Regulations* *0.1.4 National Spectrum Plan and National Table of Frequency Allocation* |

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| Question 1: | Do Stakeholders have any views on the proposed introduction of a new article defining the scope of document and relevant other regulations? |

### In addition to that we propose to align the wording of Article 4.1 with the new wording of Article 2.1 and move it to the definitions section of the document:

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| *4.1 Private land mobile systems (PLM) are radio communications system for terrestrial use. They consist of a network of radios which may contain one or more Base Stations, Repeaters, vehicle mounted radio and handheld including walkie-talkie. The Base Station and Repeaters are fixed while vehicle mounted radio and handheld are mobile.* |

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| Question 2: | Do Stakeholders have any views on the proposed rewording of the definition for Public Land Mobile systems? |

## **Change of systems covered by the regulation (Article 2)**

### Article 2.1 defines the systems that are covered by the regulation. The current Article 2.1 includes “Aeronautical mobile radio (Ground–to–Air)” and “Maritime mobile radio (Shore-to-ship). We propose to remove these two PMR applications from the scope of the document as these are covered by Aeronautical and Maritime Regulations respectively. We furthermore propose to change the term “Land mobile radio” used in 2.1.1 to “Private Land mobile systems” to avoid confusion with the more general ITU-Term “Land mobile” that encompasses much more systems than covered by this regulation. With this the proposed new Article 2.1 reads:

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| *2.1 The Application for Private Mobile Radio (PMR) can be made for the following systems:**2.1.1 Private Land Mobile systems**2.1.2 Paging systems**2.1.3 Trunking mobile radio systems**2.1.4 Other* |

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| Question 3: | Do Stakeholders have any comments on the proposed modifications on Article 2.1 and the limitation of the regulation’s scope to the systems stated above? |

## **Move of sections from Article 4 under Article 2 and rewording of sections to increase readability**

### Currently the PMR regulation consists of 11 Articles detailing regulatory and technical requirements. In order to increase the readability of the document we propose to merge several articles with non-technical requirements to a re-named Article 2 “Frequency Spectrum uses related to Private Mobile Radio (PMR)”. More specifically we propose to move the following Sections / Articles under Article 2:

* Article 4.2, 4.6, 4.9, 4.15, 7.1 (first part)

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| Question 4: | Do Stakeholders agree to the proposed merging of articles as stated above? |

### For better readability, we propose to modify article 4.2 to the following:

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| *4.2 Applications can be made for systems to be operated at any location within the UAE. The system can be for indoor or outdoor use at a specific location.* |

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| Question 5: | Do Stakeholders have any comments on the proposed rewording? |

### Furthermore we propose to use class authorization for PMR 446 and to cover this service under the short range devices regulation. In consequence we propose to modify and merge Article 4.6 with Article 4.9 to the following:

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| *4.6 LPD433, PMR446 and SRD860 is allowed in the UAE with Class license with technical parameter as specified in the regulation on Short Range Devices* |

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| Question 6: | Do Stakeholders have any comments on the proposed modification of Article 4.6.? |

### We propose to extend the first part of Article 7.1 with a definition of “licensee” in the context of this regulation:

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| *7.1 Public paging service is limited to Licensees whereas license means such entities as may be licensed by the Authority pursuant to the provisions of the Law and its Executive Order.* |

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| Question 7: | Do Stakeholders have any comments on the proposed extension of Article 7.1? |

## **Technical Requirements (Article 3)**

### We propose to extend the technical requirements listed in Article 3 by adding an Article 3.1 and modifying the table of available frequency bands as following:

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| *3.1 The following table provides guidance on available frequency bands, preferred channel arrangements and recommended maximum transmit power for base stations and repeater for PMR services:* |

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| **Frequency Band** | **Application** | **Preferred Channel Bandwidth** | **Recommended max. Power for Base Station / Repeater in ERP** |
| 2-30 MHz | Private Land MobilePaging | PLM: 6.25 kHz, 12.5 kHzPaging: 25 kHz | PLM : 25 WPaging: 0.5 W |
| 30-47 MHz | Private Land MobilePaging | PLM: 6.25 kHz, 12.5 kHzPaging: 25 kHz | PLM: 25 WPaging: 10 W |
| 66-87.5 MHz | Private Land Mobile | PLM: 6.25 kHz, 12.5 kHz | PLM: 25 W |
| 118-173 MHz | PLM for ground to ground communications for Airport operations | 8.33 kHz, 25 kHz | 5 Watt |
| 137-144 MHz | Private Land MobilePaging([[1]](#footnote-1)) | PLM: 6.25 kHz, 12.5 kHz | PLM: 25 W |
| 146-156 MHz | Private Land MobileIn-house pagingPaging | PLM: 6.25 kHz, 12.5 kHzPaging: 25 kHz | PLM: 25 WPaging: In-house: 2 W Local 5 W Wide area 25 W |
| 156-162.1 MHz | Private Land Mobile on Secondary Basis in areas away from UAE waters. The Band 156-164 MHz shall have a priority for Maritime applications | PLM: 6.25 kHz, 12.5 kHz | PLM: 25 W |
| 162.1-174 MHz | Private Land mobile. In-house Paging in Band 169 to 170 MHz | PLM: 6.25 kHz, 12.5 kHzPaging: 25 kHz | PLM: 25 WIn-house Paging: 2 W |
| 350-380 MHz | Radio systems for camel race tracks and camel race training areas on a secondary basis. | PLM: 6.25 kHz, 12.5 kHz | PLM: 25 W |
| 380-400 MHz | Trunked system for governmental use | 25 kHz | Trunked: 50 W |
| 400.15-406 MHz | Private Land Mobile on Secondary Basis and with protection to Meteorological Aids | PLM: 6.25 kHz, 12.5 kHz | PLM: 25 W |
| 406.1-410 MHz | Private Land Mobile | PLM: 6.25 kHz, 12.5 kHz | PLM: 5 W |
| 410-430 MHz | Private Land MobileTrunked systems | PLM: 6.25 kHz, 12.5 kHzTrunked: 12.5 KHz, 25 kHz | PLM: 25 WTrunked: 50 W |
| 430-433.05 MHz | Private Land MobileTrunked systems | PLM: 6.25 kHz, 12.5 kHzTrunked: 12.5 KHz, 25 kHz | PLM: 25 WTrunked: 50 W |
| 434.79-450 MHz | Private Land MobileTrunked systems | PLM: 6.25 kHz, 12.5 kHzTrunked: 12.5 KHz, 25 kHz | PLM: 25 WTrunked: 50 W |
| 450-470 MHz | Private Land Mobile for Governmental UseSurveying equipment in sub-band 450-451 MHz may be considered by the TRA | 6.25 kHz, 12.5 kHz, 25 kHz | PLM: 25 WTrunked: 50 W |
| 915-921 MHz | High Power RFID Applications |  ≤ 400 kHz | 4 to 10 W |

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| Question 8: | Do Stakeholders have any views on the proposed modification of the table, included frequency bands, applications, channel arrangements and transmit power limitations? |

### We furthermore propose to move the content of following articles with technical specifications under new sections in Article 3:

* Articles 4.4, 4.11, 4.12, 4.13 and 4.14
* Article 8.1
* Articles 9.2, 9.3 and 9.4

In addition to that we propose to modify and extend the wording of some of these articles to the following section with technical specifications:

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| *3.2 The TRA encourages the deployment of systems that make efficient use of the radio spectrum and will apply frequency re-use based on the coverage authorized in the license. The applicant shall therefore consider the following while dimensioning the system:* *3.2.1 The maximum radiated power shall be selected with due consideration of the required coverage area including relevant parameter like building penetration losses.**3.1.2 Maximum transmit powers for base stations and repeaters as given in the table under 3.1 shall serve as guidance; however the operational transmit powers shall be determined on the basis of the required coverage and intended use as indicated in the application and will be specified as a licence condition.* *3.1.3 For larger coverage areas preference shall be to use several Repeaters or base stations with low radiated power instead of a single repeater or base station with high radiated power.**3.1.4 Wherever applicable directive antennas shall be preferred over omni-directional antennas or dipoles to focus the transmitted power to the coverage area.**3.1.4 Maximum transmit power for vehicle mounted devices shall be limited to 10 W ERP; for handheld and portable devices maximum 5 W ERP shall be permitted. In cases where in the Table under 3.1 lower transmit powers for base stations are defined the lower figures from the table shall also be used for the mobiles.* *3.1.5 For crane operations simplex frequencies can be assigned with a maximum radiated power of 1 Watt. Only in cases where the concrete structure limits the propagation, higher radiated power can be considered by the TRA.* *3.3 For coverage requirements beyond 1 square kilometre (like for taxi companies etc.) detailed justification shall be submitted to the TRA with the application. The TRA shall evaluate such requests and reject if adequate justification to the satisfaction of the TRA is not provided.**3.4 The TRA will determine the number of frequency assignments per system based on the intended use and the requirements as stated in the application. The applicant shall therefore consider the following while dimensioning the system:**3.4.1 For networks requiring more than ten frequency Assignments, it is preferred to consider using trunking systems to increase spectral efficiency. The TRA may reject an application if more than ten frequency Assignments are requested without due consideration to the trunking system option.**3.4.2 For networks using repeaters, duplex frequencies can be requested but the Applicant shall justify the number of channels required for transmission through Base Station or Repeater. Minimum number of frequencies shall be allowed for coverage beyond 1 square kilometre.**3.5 The TRA does not support any particular trunking standard or technology. Therefore any trunking system can be applied for in the given frequency ranges.*  |

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| Question 9: | Do Stakeholders have any comments on the proposed move of technical articles under article 3 and on the proposed modification and extension? |

## **Deletion of sections (Articles 4 to 9 and Article 11)**

### As a consequence of the proposed modification of the table with frequency bands (as stated in section 2.4.2 above) and the scope of the document several articles become obsolete because the included information is either merged into the table with frequency bands or is no longer required. We therefore propose to delete the following articles:

* Article 4.5, 4.10, 4.16
* Article 5
* Article 6
* Article 7 including second part of Article 7.1 with frequency definitions
* Article 8
* Article 9 including Article 9.1

Furthermore we propose to delete the following sections to avoid overlap with other regulatory documents and within the document itself:

* Article 4.3,4.7, 4.8
* Article 11

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| Question 10: | Do Stakeholders agree to the proposed deletion of the articles listed above? |

## **Rewording of text on “Spectrum coordination” to harmonise text over different regulations (Article 10)**

### Currently the Article “Spectrum Coordination” (Article 10) contains different texts in different spectrum regulations. We propose to use the following service independent text to harmonize the Article over all spectrum regulations:

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| ***Article (10) Spectrum Coordination and Notification****8.1 Coordination of Radio Frequencies for the radio stations at the national, regional and international levels shall be made through the Authority, as it is the sole body responsible for Radio Frequency coordination.**8.2 Notifying and Registering of Radio Frequencies of these Stations in the ITU shall be made through the Authority according to the procedures outlined in the Radio Regulations.**8.3 The applicant agrees to participate fully in any subsequent coordination procedures* |

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| Question 11: | Do Stakeholders have any views on the proposed use of a harmonized wording for the article on “Spectrum Coordination and Notification”? |

# Summary of consultation questions

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| Question 1: | Do Stakeholders have any views on the proposed introduction of a new article defining the scope of document and relevant other regulations? |
| Question 2 | Do Stakeholders have any views on the proposed rewording of the definition for Public Land Mobile systems? |
| Question 3: | Do Stakeholders have any comments on the proposed modifications on Article 2.1 and the limitation of the regulation’s scope to the systems stated above? |
| Question 4: | Do Stakeholders agree to the proposed merging of articles as stated above? |
| Question 5: | Do Stakeholders have any comments on the proposed rewording? |
| Question 6: | Do Stakeholders have any comments on the proposed modification of Article 4.6.? |
| Question 7: | Do Stakeholders have any comments on the proposed extension of Article 7.1? |
| Question 8: | Do Stakeholders have any views on the proposed modification of the table, included frequency bands, applications, channel arrangements and transmit power limitations? |
| Question 9: | Do Stakeholders have any comments on the proposed move of technical articles under article 3 and on the proposed modification and extension? |
| Question 10: | Do Stakeholders agree to the proposed deletion of the articles listed above? |
| Question 11: | Do Stakeholders have any views on the proposed use of a harmonized wording for the article on “Spectrum Coordination and Notification”? |

1. () Existing authorizations for camel race tracks and camel race training areas in Band 138 – 140 MHz will be renewed until equipment for the 350-380 MHz band is available. [↑](#footnote-ref-1)