



**INFORMATION AND COMMUNICATION
TECHNOLOGIES AUTHORITY (ICTA)**

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**Response to Public Consultation Paper and Conclusions of the
ICT Authority – Proposed Modification of Licensing
Procedure for Private Mobile Radio (PMR) (*Ref. 2004/3*)**

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1.0 Introduction

The ICT Authority conducted a consultation exercise on “Proposed Modification of Licensing Procedure for Private Mobile Radio (PMR)”, from the 29 November 2004 to the 15 December 2004. Three contributions were received from:-

1. New FEDCO Ltd;
2. Atlas Communication Ltd, and,
3. Motorola South Africa.

This document summarises the views and comments expressed by the said companies, and presents the views of the Authority thereon. Finally, the recommendations of the Authority, made in the light of the consultation exercise, are presented.

2.0 Summary of Contributions

Contributors unanimously welcomed the principle of licensing for spectrum usage rather than on a per device basis. It is to be noted that the effort of the Authority to improve on the efficiency of spectrum usage and on the effectiveness of the licensing procedure have been commended. One of the contributors however requested that spectrum charges be reduced for localised usage as compared with island-wide operation. It was also proposed that all criteria, as determined by the ICT Authority, be published to enable applicants to ensure that their submissions are complete.

As regards the use of PMR446, the class licensing regime proposed was generally well accepted by the contributors. It was pointed out however that it would be difficult to restrict the use of PMR446 to indoor use only, though it was agreed that power limitation and antenna restriction would considerably help to minimise interference. One of the contributors also noted that according to him, the PMR 446 service will greatly stimulate economic and social development in Mauritius, as this promotes efficient use of the frequency spectrum and the PMR446 radios are cheaper as compared to professional two-way radios and generally require no licensing burden.

The idea of free circulation of PMR446 radios in Mauritius was also widely supported and one of the respondents noted that this will allow visitors to bring their personal PMR446 for temporary use in Mauritius. It was also noted that travellers have to be sensitised as to which type of PMR 446 or conventional PMR are allowed to be used in Mauritius, and which penalties they are likely to incur in case of breach of the law.

It was also proposed that Customs officers be given the necessary training to verify whether PMRs brought into the country are type-approved to be used locally; and if not, to quarantine the radio. It was further suggested that the Customs be provided with an updated database of type-approved PMRs for ease of reference.

3.0 Results of Consultation exercise

The consultation exercise on “Proposed Modification of Licensing Procedure for Private Mobile Radio (PMR)” has been very satisfactory. The views, comments and contributions received have been particularly helpful to the Authority.

In the light of the views, comments and contributions received, the ICT Authority concludes as follows:-

A. Modified Licensing Procedure for Conventional PMR

The licensing procedure for conventional PMR is to be modified as follows:-

- a) PMR applications are not to be included in the prescribed list of licences for which the notification requirements as specified in Section 24 of the ICT Act 2001 as amended applies;
- b) Spectrum licensing is to be applied to PMR instead of the current apparatus licensing as follows:-
 - i. Assign single frequency channels primarily for low power (i.e. transmitted power of 5W eirp or less) PMR networks, especially for handheld-to-handheld portable communications in a confined area (e.g. within a building compound or a manufacturing plant site). A base station operated in this configuration to be limited to 5W eirp;
 - ii. Existing PMR networks using simplex mode for mobile to base communication are to continue to be allowed using base stations limited to 15W eirp and mobile units limited to 25W eirp; however no new PMR network may be allowed with this configuration;
 - iii. Assignment of two frequency channels for high power transmitted power (i.e. max. of 25W eirp for mobile units and max. of 15W eirp for base stations) PMR networks where the intended service coverage is large, subject to the determination of the Authority. Repeater mode of operation may be allowed on a two-frequency network.
 - iv. The future spectrum allocation to be dependent on the number of portables/mobiles in the fleet as shown below:-

| Type of PMR system | Minimum Number of portable/mobile units | Maximum Allowable eirp (W) | Nature of Frequency Assignment |
|--------------------|---|--|---|
| Single frequency | 5 | Portable unit: 2 W No Base Station No mobile station | Shared (portable to portable communication in a confined area as determined by the Authority) |
| Single frequency | 20 | Portable unit: 5 W Base station: 5 W No mobile station | Shared (portable to portable and portable to base station (and vice versa) communication in a confined area of operation as determined by the Authority) |
| Two frequencies | 25 | Portable unit: 5 W Base Station: 15 W Repeater unit: 15 W Mobile unit: 25 W | Exclusive (Wide area) |

The Information and Communication Technologies (Amendment of Schedule) Regulations 2003 to be amended to include:-

| Type | Description |
|---------------|---|
| SPL.1a | Network Spectrum Licence for PMR network using shared spectrum in the frequency band below 500 MHz |
| SPL.1b | Network Spectrum Licence for PMR network using exclusive spectrum in the frequency band below 500 MHz |

The Information and Communication Technologies (Amendment of Schedule) Regulations 2003 to be amended to include Private Mobile Radio Network Licences (PMR.01 and PMR.02) under the Private Network Licence category (Category 2) as follows:-

| Type | Description |
|---------------|--|
| PMR.01 | Private Mobile Radio Network (Local) To establish a Private Mobile Radio (PMR) network in a confined area not exceeding a radius of 2km allowing portable to portable communication and/or base station to portable communication (and vice versa). Base station to base station communication is not allowed. The PMR network may be used by organisations or corporate entities for their internal use only with no connectivity to a public PSTN or PLMN network. The PMR network owner shall be required to take out the appropriate Network Spectrum Licence, in addition to the PMR.01 licence. |

| | |
|---------------|---|
| PMR.02 | <p>Private Mobile Radio Network (Wide area) To establish a wide area Private Mobile Radio (PMR) network allowing base station to mobile/portable communication (and vice versa) and mobile/portable to mobile/portable communication. This PMR network may also include repeater stations. Base station to base station communication is not allowed. The PMR network may be used by organisations or corporate entities for their internal use only with no connectivity to a public PSTN or PLMN network. The PMR network owner shall be required to take out the appropriate Network Spectrum Licence, in addition to the PMR.02 licence.</p> |
|---------------|---|

The PMR Network licence to be of duration of 5 years;

Existing PMR licensees will not be required to change their network configurations except where same allows base station to base station communication. However, upon the coming into force of the new licensing procedure, existing network owners shall be governed by the new regime and a time frame will be specified so as to enable all existing PMR networks to comply with the PMR.01 and PMR.02 specifications.;

Licence fees payable to be in relation to spectrum usage and not to the number of devices, as is the case currently;

Once the above licensing procedure is in place, the ICT Authority would then be in a position to grant approval to successful applicants within **2 weeks** of submission of application, provided that the applicants have submitted all the necessary information and clarifications requested by the ICT Authority for evaluation purposes and that the applicants have paid all outstanding licence fees.

B. Modified Licensing Procedure for PMRTS devices, PMR 446 and PMR devices used exclusively within a Community Repeater System

- a. A class licensing regime is to be applied to:-
 - i. Duly type approved PMR apparatus that are to be used exclusively in a licensed PMRTS;
 - ii. Duly type approved PMR 446 apparatus;
 - iii. Duly type approved PMR apparatus that are to be used exclusively in a licensed Community Repeater System;
- b. Amendments have to be brought to the ICT Act 2001 so as to include provisions with regard to:-
 - i. Individual Licensing;
 - ii. Class Licensing, and,
 - iii. Licence exemption.
- c. PMR units operating exclusively in a PMRTS and not requiring spot frequency assignment are to be exempted from spectrum charges;

- d. It is proposed to restructure of the application of licence fees for PMRTS service based on the fact that no licence fees shall be applicable in respect of PMR units operating exclusively in a PMRTS;
- e. As regards spectrum charges, PMRTS operators are to continue to be governed by the existing SPL1 licence;
- f. PMR 446 with technical characteristics including but not limited to the following may be type approved to be marketed and used in Mauritius:-
 - a) The PMR 446 is a **hand-portable, low power, short-range voice only** communication radio equipment;
 - b) The frequency of operation is 446 – 446.1 MHz;
 - c) The PMR 446 radio equipment employs frequency modulation technique for voice communications;
 - d) The frequencies specified in (b) above to be used on a non-interference, non-protected and shared-use basis;
 - e) The maximum effective radiated power (e.r.p) of the radio equipment shall not exceed **500 mW**;
 - f) The radio equipment shall only use **integral antenna** and it shall be designed to ensure that no antenna other than that furnished by the manufacturer shall be used with the equipment;
 - g) Repeaters and amplifiers are not allowed to be used in conjunction with the radio equipment with a view to extending the range of coverage;
 - h) The equipment should have been tested against, and shall strictly comply with, the requirements stipulated under the **ETSI EN 300 296**.

C. Steps to curtail illegal entry of PMR 446 and other radio apparatus

With a view to curtailing illegal entry of PMR 446 and other radio apparatus, a sensitization campaign is proposed to be launched as follows, by the ICT Authority as particularised below:-

- a) Publish leaflet to sensitize passengers on departure at the Seaport and Airport on the dangers of using radiocommunication apparatus which are not type approved to be used in Mauritius and on the legal implications of operating such radios without a proper licence;
- b) Affix posters at the Seaport and Airport so as to encourage passengers to declare at the customs, any radio communication apparatus which they may have in their possession upon arrival;
- c) Involve the Customs Department and the Police so as to make them aware of the dangers of illegal entry of radio communication apparatus on the Mauritian territory;

4.0 Way Ahead

The putting into place of the above proposed procedures requires that amendments be brought to the Information and Communication Technologies Act 2001 and also to the Information and Communication Technologies (Amendment of Schedule) Regulations 2003. The Authority is making the appropriate recommendations to the legislator in this regard.

5.0 Conclusion

In this paper, a summary of the contributions obtained by the Authority in the context of the consultation exercise on “*Proposed Modification of Licensing Procedure for Private Mobile Radio (PMR)*” has been presented. The results of the said consultation including the changes which have to be brought in the legislation and in the current licensing regulations have also been explained. It has been noted finally that the proposals resulting from the consultation exercise will become applicable when the appropriate amendments have been brought to the legislation.