

Wireless Camera Consultation Document: Re-planning of 2200 -2290 MHz band

11 June 2007

Closing date: 9 July 2007

Purpose of Paper

The purpose of this consultation document is to put forward proposals to re-plan the 2200-2290 MHz band. It seeks views on the proposals from the wider Wireless Camera Industry, including broadcasters, manufacturers and hirers etc. If responses are favourable then JFMG will work with users to amend the band plan and will seek agreement from them to sign-up to the power limits put forward.

Background

On Friday 25 May 2007 JFMG held, at the request of the industry, a forum on Spectrum for Wireless Cameras. The forum provided an environment for both users and manufacturers to share their thoughts and ideas on the imminent changes to their spectrum provision, as well as on a number of existing operational difficulties. One area of concern was the perceived and real coexistence difficulties within the 2200 – 2290 MHz band. A number of mitigation ideas were put forward and JFMG agreed to facilitate a workable solution in the form of this open consultation.

This paper is just the first of a number of tasks JFMG have undertaken as a result of the Spectrum for Wireless Cameras Forum.

Terminology

There are two types of use (User Group) discussed in this document and it is important that readers fully understand the differences between them in order to generate a view on the proposals.

1. Ongoing Use

Ongoing can be characterised as long-term assignments covering a wide area. This enables the licensee to use the frequency at any time within a defined area (this could be UK wide) without requiring any coordination by JFMG. This is most commonly used for News operations where equipment is used on a daily basis and there is little time to organise access to frequencies for 'breaking news' events.

2. Temporary Use

Temporary allows users to book a frequency for use at a defined location. This use is coordinated by JFMG to prevent interference from adjacent and co-channel users. This is most commonly used for planned Outside Broadcasts covering routine and special events.

Proposals

The proposals can be separated into 4 distinct areas:

1. Ongoing use to be strictly 100mW ERP

Discussions have highlighted a number of difficulties when multiple News operations on adjacent channels have appeared within the same location. The voluntary reduction of radiated power for Ongoing use could significantly reduce these occurrences.

If these proposals were to go ahead JFMG would seek to amend all Ongoing licences to reflect the 100mW ERP limit and reissue assignments as necessary.

2. Ongoing use to be re-aligned to 20MHz spacing

In addition to proposal 1, increasing the spacing between existing Ongoing users to at least 20MHz as opposed to 10MHz would further reduce the likelihood of co-sited interference problems.

If these proposals were to go ahead JFMG would need to re-plan the 2200 – 2290MHz band and work with affected Ongoing licensees to move to new allocations.

3. Temporary use to be re-aligned to 20MHz spacing interleaved with Ongoing use

If we are to resolve Ongoing use difficulties by introducing 20MHz spacing between their allocations then it follows that some Temporary use channels will need to be moved to facilitate this. Interleaving Temporary and Ongoing use will ensure 20MHz spacing between not only the Ongoing use, but also the Temporary. This would ease the coordination of wireless cameras for routine sport and special events.

4. Temporary use to be permitted at up to 1W ERP

Whilst our proposals suggest reducing the radiated power for Ongoing use to 100mW ERP we believe that higher powers will need to remain for Temporary use to enable longer range operation at some sporting events. We therefore propose that Temporary use be permitted a radiated power of up to 1W ERP. Temporary use interleaved with lower power Ongoing use may increase the risk of interaction between channels if they are co-sited, but on these occasions other mitigating measures should be possible, including coordination by JFMG and cooperation on the ground.

Re-alignment Plan

Proposals number 2 and 3 would require a number of users to move their existing frequencies. The plan in Fig.1 illustrates the resulting bandplan and where existing users would be required to move.

Frequency (MHz)	NOW			PROPOSED	
	Temporary	Ongoing		Ongoing	Temporary
2205	Bookable		↘	News 1	
2215		News 1			Bookable
2225		News 2	→	News 2	
2235		News 3	↘		Bookable
2245	Bookable			News 3	
2255		News 4	↘		Bookable
2265	Bookable			News 4	
2275		News 5	↘		Bookable
2285	Bookable			News 5	

Fig.1 2200 – 2290 MHz re-alignment plan

Features & Benefits of proposals

- The 20MHz separation between members of the same user group (Ongoing or Temporary) improves performance when co-located
- 100mW limit will improve performance in multi-user environments due to reduced out of band levels and reduced risk of overloading neighbouring receivers
- Provision for 1W for bookable (Temporary) use enables longer range operation where required (Golf, Marathon etc)
- 1W ERP limit reflects the geographic restrictions to protect the primary user which are based on 1W ERP; omni-directional low-gain antennas are typical
- The adjacent channel performance of typical equipment is currently compliant with IR2038 at up to 100mW output, applying EN 302 064 as the Reference Standard



- Interleaved plan reflects that, in general, some physical separation between the two user groups (Ongoing and Temporary) is typical

Questions

There are three questions which we would like to hear your opinions on:

1. Do you agree with our proposal to limit the power of Ongoing use of the 2200 – 2290 MHz band to 100mW ERP? If not why?
2. Do you agree with our proposal to allow up to 1W ERP for Temporary use of the 2200 – 2290 MHz band? If not why?
3. Do you agree with our proposal to realign the 2200 – 2290 MHz band so that Ongoing and Temporary use is interleaved to allow 20MHz spacing between members of the same user groups? If not why?

How to respond

If you would like to respond to these proposals, please send your views (preferably by email) to:

Amanda Houchen (Amanda.houchen@jfm.co.uk)
Strategy & Communications Manager
JFMG Ltd
33-34 Alfred Place
London
WC1E 7DP

If you would be happy for us to make your views public please let us know.

Closing date for responses: 9 July 2007

Next Steps

After the closing date JFMG will analyse responses and determine whether there is sufficient support for the proposals to be implemented. We will then inform the industry of the outcome and publish a summary of the feedback received.

If the proposals receive sufficient support to be implemented JFMG will contact affected Ongoing users directly to facilitate a move from the old bandplan to the new. We will also look at licences and where necessary reissue them to reflect the new radiated power limits.