

## Lambda Communications Submission – 19<sup>th</sup> December 2014

Lambda Communications consider these Proposed Rules for Engineering Licences in Managed Spectrum Parks as a very positive initiative and strongly supports their introduction. The existing rules in PIB39 – “SPECTRUM LICENCE CERTIFICATION RULES for CROWN MANAGEMENT RIGHTS”, would seem to largely predate the concept of a Managed Spectrum Park, are largely focused on broadcast communications and are open to interpretation on many of the key aspects specific to fixed and mobile broadband wireless access solutions.

1. It should be noted that the default MPIS value of 34 dB $\mu$ V/m relates to a 5MHz channel size and would need to be adjusted for larger channel sizes or a dB $\mu$ V/m/MHz value should be stated.
2. The +17 dBi nominal antenna gain, refer page 10 of the report, for determining the edge of coverage seems somewhat arbitrary. Can it be assumed that this can be adjusted for actual antenna gains in each case?
3. As Lambda doesn't hold the agency for any particular vendor's product it's not a particular issue for Lambda, but the proposed channel plan, while pragmatic, may not suit all products on the market. Should the flexibility be provided to vary the channel plan through a mutually acceptable coordination agreement?
4. Although not addressed in the report the following section of PIB39 needs clarification

### **“PIB 39 - SPECTRUM LICENCE CERTIFICATION RULES for CROWN MANAGEMENT RIGHTS**

#### **2.8 Maximum Permitted Interfering Signal (MPIS) Level Requirements**

The Maximum Permitted Interfering Signal (MPIS) concept is not specified in the Act as a requirement of a spectrum licence.”

Given that the proposed rules are heavily based on the concept of a MPIS, it need to be made known that while there is no obligation to include a MPIS on a licence, where one has been included and it is in compliance with these new rules, then it must be respected.

5. The following comment is made on page 9 of the report:

“For the initial conservative co-ordination analysis an antenna can be assumed to have a gain of 0 dBi beyond the -6 dB beam width, although beyond 180°, high gain antennas usually discriminate below 0 dBi.”

For any antenna with a nominal gain of greater than 6dBi this assumption doesn't appear to achieve the desired aim of a conservative analysis. Would it be possible for the rules to define a default or series of default 'conservative' antenna masks that would be applicable for standard antenna beam widths, subject to more accurate antenna patterns being available.

6. Section 2.7 of PIB39 – Protection Locations, defines the selection of appropriate locations and provides the principles for selecting protection locations for broadcast spectrum licences. Further clarification is required on how these principles are applied for MSP licences. If these protection locations aren't defined as the vertices of the defined protection area in the licence, the boundary of which doesn't always co-inside with the principles for selecting protection locations, then where and how should the protection locations be recorded?

Regards,  
**Stephen Atkinson**  
Consulting Engineer



© **Lambda Communications Limited**  
Level 1, 79 Grafton Road, Auckland 1149, New Zealand