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Vector Limited
101 Carlton Gore Road
PO Box 99882, Newmarket
Auckland 1149, New Zealand
www.vector.co.nz
Corporate Telephone
+64-9-978 7788
Corporate Facsimile
+64-9-978 7799

Policy and Planning
Radio Spectrum Management
Ministry of Business, Innovation and Employment
PO Box 2847
Wellington

By email: radio.spectrum@mbie.govt.nz

Submission on the Review of the Radiocommunications Act 1989: Discussion Document

Introduction

1. Vector Limited ("Vector") welcomes the opportunity to make this submission on the Ministry of Business, Innovation and Employment's ("the Ministry") *Review of the Radiocommunications Act 1989: Discussion Document*, dated 30 July 2014.

2. Vector also appreciates the Ministry's engagement with stakeholders through workshops on the Review in Wellington, Auckland and Christchurch in September 2014.

3. We generally agree with the Discussion Document's assumption that "the fundamentals of radio spectrum management in New Zealand are sound and the current dual regimes of management rights and administrative radio licencing remains appropriate for the New Zealand context".

4. There are areas, however, where we believe significant improvements can be made. These include minimising the regulatory burden and promoting competition in the spectrum market by removing significant barriers to spectrum access, particularly for the deployment of new technologies.

5. Our responses to selected questions in the Discussion Document are set out below.

6. No part of this submission is confidential and we are happy for it to be made publicly available.

7. Vector's contact person for this submission is:

Luz Rose
Senior Regulatory Analyst
Luz.Rose@vector.co.nz
(04) 803 9051

The Review

8. The radio spectrum is becoming an increasingly valuable resource not only for traditional users in broadcasting and telecommunications but also for new and potential users from other sectors. Its role as an enabler of greater efficiency and innovation across the economy makes it critical that the regime underpinning its allocation remains flexible and is able to efficiently accommodate future technologies and standards. We believe that a more dynamic and competitive spectrum market, where spectrum remains accessible to multiple stakeholders across the economy, would be a positive outcome of this Review.

9. Overall, the Review does not appear to indicate the presence of systemic problems in the regulatory regime underpinning the management and allocation of spectrum in New Zealand.

10. Our submission therefore focuses on the questions and issues that are most relevant to our businesses and have implications for the state of competition in the spectrum market.

Responses to selected questions

1) Should the current dual spectrum management regimes (management rights and administrative radio licencing) be retained?

2) Should more spectrum frequencies be placed under the management rights regime? If so, which bands should be transferred to management rights and why?

11. Vector agrees that the dual spectrum management regime of management rights and administrative radio licencing be retained.

12. However, we believe that more spectrum frequencies should be migrated to the management rights regime over time, subject to competition safeguards. More contestable allocation of spectrum would promote efficiency by moving more of this resource to those who value it the most and to its highest value use. It would produce price signals to right holders and interested parties (promoting transparency and reducing search costs) and reduce the regulatory burden on the Ministry and industry participants.

13. We suggest that the Ministry identify and conduct an inventory of candidate bands for migration to management rights, in consultation with stakeholders. For particular frequencies, the Ministry could, for example, assess: 1) the demand for that spectrum in recent years based on expressions by stakeholders and auction/allocation results, 2) prices fetched by that spectrum in recent allocations, 3) congestion in that band, and 4) potential technological applications that could run on that band in the near future. We do not see why this process could not be

undertaken on a regular basis and independent of any changes to the *Radiocommunications Act 1989* ("the Act") arising from this Review.

14. Further, we believe that the allocation of higher value spectrum under the management rights regime should be subject to competition safeguards, traditional or otherwise, and whether undertaken by the Ministry itself or by the Commerce Commission. This would ensure any significant barriers to spectrum access will not be perpetuated.

3) Should additional matters relating to radio spectrum management be covered by the Act? If so, what other matters should be included?

4) Should the Act provide a comprehensive regulatory regime for all aspects of radio spectrum management and how can this be achieved without imposing any unnecessary regulatory burden on licence allocations?

15. We agree with the Discussion Document (page 6) that the Act is "intended to minimise the regulatory burden associated with managing radio spectrum".

16. We also agree with the regulatory principles against which the current provisions of the Act are being assessed: proportionality, certainty, flexibility and durability, transparency and accountability, capable regulators, consistency, and growth supporting. We would also add technology neutrality as a policy objective, to the extent achievable.

17. In our view, it is not necessary to add provisions to the Act unless they: reduce the regulatory burden on the Ministry or industry participants, deliver improved outcomes for consumers, and/or promote or reinforce any of the above regulatory principles.

5) Should the Act be more prescriptive around particular matters or processes? If so, what areas should be more prescribed and how?

6) Should the application of the government policy statement issued under section 112 be extended to cover the government's intentions for the management rights regime?

18. No, there is no need for the Act to become more prescriptive. As more and more spectrum is allocated under the management rights regime, the need for greater prescription should fall away.

19. We consider the use of "advisory documents" (e.g. Public Information Brochures – "PIBs") on the RSM website or guidelines communicated to stakeholders to be appropriate. This strikes a reasonable balance between providing certainty to those

who should adhere to technical and other requirements, and flexibility to accommodate unforeseen changes in technology.

20. We have no issue with government policy statements ("GPSs") issued under section 112 of the Act being extended to cover the Government's intentions for the management rights regime. We consider GPSs to be effective tools in achieving a 'shared understanding' of the Government's policy intentions between the Government of the day, the regulator(s) and stakeholders. We prefer the use of GPSs rather than 'hard-coding' more prescriptive provisions into the Act, where updating or amending them would be costly and time-consuming, if not potentially contentious. The issuance of GPSs has worked reasonably well in other sectors, for example, in the telecommunications sector (GPS to the Commerce Commission) and the gas sector (GPS to the Gas Industry Company).

29) Should the Crown, through the Ministry, be involved in interference management in frequency bands subject to private management rights?

21. The Crown should have very limited involvement in interference management in frequency bands under private management rights. Allowing the Crown to interfere at any time defeats the purpose of granting property rights and the policy objective of minimising the regulatory burden associated with managing spectrum. There has to be a very compelling reason for Crown interference, for example, when public safety is being compromised.

39) Should greater flexibility be allowed to modify management rights once they have been created? If so, what modifications should be allowed with the agreement of whom (i.e. managers, rightholders or others)? Should this include aggregation of rights with different expiry dates?

40) Should the Crown, with the consent of the manager and/or rightholder(s), have the ability to cancel or terminate management rights? If so, what limitations, if any, should be applied to this power?

41) Should any changes to the ability to modify or cancel management rights be applicable to existing management right or only as new management rights are created?

22. Yes, we believe management right holders should be able to aggregate (or disaggregate) their spectrum rights with different expiry dates. This would promote greater efficiency by freeing up some spectrum that would otherwise be indivisible, and facilitate market entry and competition by allowing more parties access to slices of that spectrum.

23. We agree with the Discussion Document (page 26) that "[t]he Ministry does not consider that a power for the Crown to modify or cancel a management right without the consent of the manager and/or rightholders is necessary".

24. We prefer that any changes to management rights be applicable at the time the rights are created rather than after they had been allocated. This would provide right holders certainty over their property rights (i.e. that the Crown would not intervene at any time during the lifetime of the right), and greater flexibility in managing those rights to suit their and access seekers' needs and putting that spectrum to its highest value use.

44) Should the nature and type of conditions the Crown (as the initial manager and before sale or transfer) is able to place on a management right be extended? If so, what types of conditions should be allowed on management rights (for example ownership caps, limitations on the use of, or transfer of, management rights)?

45) Should the Act include provisions to ensure that spectrum is put to use to provide services for consumers? If so, what form should these provisions take?

25. We do not believe it is appropriate for private management right holders (or that they are willing) to act as *de facto* regulators once they assume ownership of a particular spectrum. It is not their role to assess the state of competition or determine the appropriate regulatory measures to impose on users of their property. It is the regulatory regime's/regulators' role to ensure management right holders face the right incentives to optimise the use of their private property (spectrum), including flexibility in granting access to other parties who can derive higher value from the spectrum.

26. When spectrum is being allocated or reallocated to higher value uses (as reflected, for example, in a final auction price that is higher than its previous purchase price), it is reasonable to conclude that it will be used to deliver improved or new and more innovative services that consumers value, e.g. from voice to more data managed services. Allocating spectrum more efficiently makes it unnecessary to prescribe how it should be used.

27. In addition, future uses of spectrum and the services spectrum enables cannot all be anticipated well in advance. For instance, there is increasing demand for spectrum for machine-to-machine applications, which do not deliver services to consumers directly, but are for their ultimate benefit.

28. We believe the appropriate role of the statutory regime (and regulators) is to ensure that 1) spectrum is allocated efficiently, and 2) competition is present/sustained in the spectrum market, where price levels do not prohibit access to spectrum by future users. It is end consumers who ultimately benefit on both counts.

51) What is the relationship between regional management rights (and demand for this) and any future deployment of technologies such as white space networks?

52) If regional management rights are introduced, should the decision to create regional rights lie solely with the Crown at the time of primary allocation, or should existing nationwide management right holders be empowered to subdivide their rights? If so, how could this be achieved? What are the benefits and costs for regional management techniques?

53) If regional management rights are introduced, how should the areas covered by the rights, signal strengths, and boundary conditions be defined?

29. In principle, the allocation of regional spectrum rights would promote efficiency, including greater use of white space. Importantly, it would be conducive to market competition as it would enable spectrum to be accessed by more than a single party in any region.

30. The allocation of regional rights, however, could be problematic in practice. While this could be straightforward to implement in rural or less populated regions, where incumbent national right holders may be willing to forego their use of spectrum in those regions, the same right holders may not be induced to do so in the more commercially attractive Auckland region. Some of these management rights would not be expiring for many years.

31. The Discussion Document (page 31) notes the international trend towards allocating spectrum rights on a national basis. This raises the question of the desirability of regional allocation in a country the size of New Zealand, where transaction costs could easily outweigh the benefits of this arrangement.

32. There is also the potential of interference across artificially-constructed regional boundaries. This could require more active interference management by the Ministry, the relevant parties, or an independent party, which is not costless.

33. In the case of electricity distribution businesses, artificially constructed regional boundaries almost certainly would not align with the commercial or operational boundaries of parties potentially interested in utilising regionally allocated spectrum. The 29 electricity distribution businesses have well defined boundaries that are unlikely to align with any regional spectrum rights. These businesses sometimes operate embedded networks in other electricity distribution areas, which would add to the complexity of allocating spectrum rights by region.

34. In our submission on the Ministry's *Draft Radio Spectrum Five Year Outlook, 2012-2016*, dated 19 October 2012, we recommended that the Ministry assess the costs and benefits of allocating spectrum rights on a regional basis before implementing this proposal, i.e. who benefits, who loses, can it be applied consistently across regions, would a consistent application produce different outcomes, etc. Such an

assessment could also consider whether regional rights would stunt the development of a liquid secondary market. For clarity, in our view, the Act should provide for regional management rights – this recommended assessment would be helpful to inform decisions on implementing regional rights, not whether they are provided for in the Act.

35. The Ministry should look into removing significant barriers for management right holders to 'subdivide' spectrum in their possession for regional use or use in particular locations only. Such voluntary arrangements (if they aren't already being adopted) would avoid costs to the Ministry of administering or monitoring these transactions.

59) Should the subordinate legislation or regulation making powers under the Act be extended to cover additional matters? If so, what additional matters should be covered?

60) Should the role and status of some or all of the PIBs be recognised in the Act and/or Regulations? If so, how should this be achieved and what types of PIBs should this cover?

36. As stated in our response to Questions 3 and 4 above, it is not necessary for the Act or Regulations to include additional matters that do not result in reducing the regulatory burden on regulators and industry participants, and/or if it does not promote or reinforce any of the regulatory principles against which the Act's current provisions are being assessed.

37. While we do not have any objection with some or all of the PIBs being recognised in the Act or Regulations, the Discussion Document does not indicate whether there are systemic problems or widespread complaints from stakeholders about current practice and the treatment of these advisory documents. If this is not the case, we do not see any compelling reason for them to be explicitly covered by the Act or Regulations. This is particularly the case where updating the Act/Regulations would require a significant amount of the Ministry's time for no overriding benefit, i.e. 'gold plating' the system.

61) Should the current overlap between government policy setting and the role of the Commerce Commission in spectrum allocations be clarified? If so, how?

38. Yes, definitely. This would reduce confusion and unnecessary compliance costs, make identifying any regulatory gaps easier, and promote consistency across regulators. This could be expressly provided for in the Act, or through arrangements governed by a Memorandum of Understanding ("MoU").

39. An MoU between the Ministry and the Commerce Commission may be sufficient. MoU arrangements have worked reasonably well, for instance, between the

Commerce Commission and Gas Industry Company in the regulation of gas pipeline services.[1]

40. We suggest that the Ministry be required to consult with the Commerce Commission on all future decisions regarding the allocation or reallocation of management rights. The convergence of technologies and associated services would make the definition of the "relevant market" for regulatory purposes more challenging in the future. Commerce Commission involvement would enable allocation decisions to be considered from a more strategic and cross-sector perspective, and would bring to the table the Commission's expertise and experience in market competition assessment (e.g. in the energy, telecommunications and broadcasting markets).

41. While a wider consideration of the interrelationships between the Act and other relevant legislation (most notably the *Commerce Act 1986*, *Telecommunications Act 2001* and *Broadcasting Act 1989*) may appear to be ideal, the Review's assumption that the fundamentals of radio spectrum management in New Zealand are sound, which we agree with, makes an 'evolutionary' change more appropriate than an overhaul of the Act. We consider the challenges to be more about anticipating future spectrum needs by stakeholders, which are increasing in number and diversity, and ensuring the regulatory regime would be able to meet those needs in a competitive environment.

62) *Are spectrum caps still necessary, either initially or for the longer term, and if so, should they have a legislative basis?*

63) *In setting spectrum caps, should total spectrum holdings be considered or should spectrum caps solely relate to particular bands? How should broader caps be determined?*

42. We consider the imposition of spectrum caps to be a necessary *ex-ante* measure in particular instances to address high concentrations of spectrum in the hands of one or a few parties, avoid 'spectrum hoarding' where spectrum is not being used or is unlikely to be of optimal use, and ensure competition. Because particular bands are more suited to particular technologies/applications, and in the context of a virtually non-existent secondary market, we believe that spectrum caps should continue to be considered and applied on a case-by-case basis.

43. We depart, however, from the Ministry's current practice of imposing spectrum caps on particular bands. In our submission to the Ministry on the *Review of Acquisition Limits in the 2.1 GHz Band*, dated 3 April 2014, we proposed a more strategic "portfolio approach" to assessing various right holders' spectrum ownership and how spectrum caps should be imposed.

[1] http://www.gasindustry.co.nz/about-us/memoranda-of-understanding/

44. We propose an approach where spectrum caps may be imposed based on the overall holdings of the relevant parties and not on their holdings in particular bands. Further, this assessment could be made separately for holdings below and above the 1 GHz mark, recognising the differing characteristics and potential use of frequencies on both sides of this 'arbitrary' but convenient demarcation.

45. A portfolio approach to the application of spectrum caps would:

- provide incentives and greater flexibility for right holders to use spectrum more efficiently and manage a portfolio of spectrum property rights to meet the unique needs of their business and consumers, rather than look at their holdings in each band in isolation. Right holders can dispose of spectrum that is least valuable to them, promoting allocative efficiency;

- promote economies of scale as right holders can choose to increase their holdings of spectrum that are of highest value to them, lowering their costs and costs to consumers;

- ensure no party can acquire or hoard spectrum that is not necessary for their efficient operation, retaining competitive pressures in the spectrum market;

- promote policy consistency across bands (at least of similar use), ensuring greater regulatory and investment certainty for current and future right holders;

- potentially release some spectrum for non-traditional users, benefiting the wider economy; and

- promote dynamic efficiency. Greater flexibility would incentivise future spectrum owners to move away from focusing mainly on voice to more service-oriented approaches, i.e. managed data services that would meet the requirements of the digital economy and more exacting consumer expectations.

46. The Ministry could review the efficacy of spectrum caps, in conjunction with other *ex-ante* measures, in the future should the spectrum market become more liquid and dynamic than is currently the case.

64) Should any legislative mechanisms to apply spectrum caps be generic and flexible enough to apply to all high-value spectrum uses, or should they be specific to particular uses? How could flexibility for technology changes be incorporated?

47. Yes, any proposed provision on caps on high-value (premium) spectrum in the Act should be generic and flexible, i.e. not specific to particular uses or bands. This would ensure technology neutrality, to the extent possible, and promote allocative

and dynamic efficiency for the reasons stated above (see response to Questions 62 and 63).

48. While we do not object to the Ministry's/Minister's ability to impose spectrum caps being explicitly provided for in the Act, we question its absolute necessity and limiting impact on flexibility. The Ministry's ability to impose a spectrum cap effectively during initial allocation does not appear to be hampered under current arrangements. Current practice, which uses deeds and agreements, should enable the Ministry to make decisions on the application of this *ex-ante* measure using a portfolio approach (as suggested in our response to Questions 62 and 63) and with input from the Commerce Commission.

49. We do not see any significant value in 'hard-coding' into the Act what is working reasonably well in practice (i.e. there are no systemic problems indicated in the Discussion Document or that we are aware of), subject to some improvements such as in the assessment of the relevant market. We believe a 'non-legislated' approach would better provide the Ministry with the nimbleness required to respond to fast-changing technologies with shorter lifecycles and new forms of disruptive technologies and services.

65) What are the most appropriate mechanisms to implement competition safeguards in radio spectrum using markets? Are the current deeds and agreements sufficient or should competition safeguards have a legislative basis?

66) If spectrum caps are given a legislative basis, how should they be affected?

50. The Ministry could consider the following existing, amended and new mechanisms, in combination with each other and on a case-by-case basis, to safeguard competition through market means:

- imposing spectrum caps based on a portfolio assessment of the relevant parties' overall spectrum holdings rather than their holdings in a particular band, which we discuss above in our response to Questions 62 and 63;
- setting a ubiquitous management rights cap in any single band of, say 40% for any right holder until such time that competition emerges;
- imposing use-it-or-lose-it or use-it-or-sell-it requirements regardless of use or technology;
- reducing the duration of management rights to reflect the shortening of technological lifecycles;
- exploring innovative allocation approaches such as spectrum sharing under the management rights regime; and

- the Ministry consulting with the Commerce Commission on management rights allocation or reallocation. As indicated in our response to Question 61, this process can be established through an MoU between the two regulators. The views of the Commission could then be reflected in the Ministry's subsequent consultation with stakeholders.

51. As indicated in our response to Question 64, we believe it is not absolutely necessary for the above safeguards to be embedded in the Act. Principles governing their use would be useful guides in the Act, but mandating the conditions in which they should be implemented would hamper the Ministry's ability to flexibly respond to rapid technological and market changes.

67) Should spectrum caps be applied at the initial allocation for a limited number of years with a periodic review of whether they remain necessary, or for the entire length of the management right?

68) Should any process, criteria, or framework for the review of spectrum caps be included in the Act?

69) Should the Commerce Commission be involved in any review of spectrum caps? If so, how?

52. Consistent with our preference for reducing the regulatory burden and promoting competition in the spectrum market, we believe spectrum caps should be applied at the initial allocation and for a limited number of years. A review of a cap could then be done every few years or the market process could be allowed to take its course, as appropriate.

53. Applying a cap for the entire duration of a management right would limit the options of the right holder, who may wish to offload some of the spectrum, and lock out other potential users who could put that spectrum to more valuable use. Again, the application of caps should be determined on a case-by-case basis because they may not be needed in some allocations. This would also be influenced by the nature and evolution of the technologies applicable to that band, and that band's commercial attractiveness and actual and future uses.

54. For the reasons indicated in our responses to Questions 62-64, we prefer that the application of spectrum caps and its implementation details not be mandated in the Act. The Act could, however, set out the principles that the Ministry/Minister should adhere to when using spectrum caps and other *ex-ante* measures.

55. Further, for the reasons indicated in our responses to Questions 61 and 64-66, we suggest that the Commerce Commission be consulted on the imposition and any review of spectrum caps, particularly under the management rights regime.

71) What competition issues may arise from the deployment of new technologies?

56. The deployment of new technologies, or the expanded use of existing technologies in other sectors, could require spectrum that is already used or owned by other parties. Significant barriers to access by other users could include 1) the unavailability of a suitable spectrum, and/or 2) prohibitive access prices.

57. While we support the continued use of some of the tools that are already at the Ministry's disposal, we encourage the Ministry to also explore innovative approaches to promote competition and more efficient allocation such as spectrum sharing under the management rights regime. We believe this would assist in ensuring the allocation process remains flexible and not lock out particular spectrum for other uses and users in the near future.

58. For example, our proposal for the Commerce Commission to be consulted on all future allocation or reallocation decisions by the Ministry in relation to management rights would ensure the consideration of competition issues would be more comprehensive and strategic, and informed by lessons from other sectors.

59. In our view, a desirable outcome of this Review would be a spectrum allocation regime that ensures that price and availability of spectrum do not become barriers to market entry and the deployment of new and innovative technologies in New Zealand in future years.

60. Some members of the Electricity Networks Association have considered, if not trialled, the use of white space for smart grids. It would be reasonable to expect them to re-evaluate their positions when the rules on access to white space are developed and finalised.

72) Are there any legislative barriers to an active secondary market for radio spectrum in New Zealand? If so, how should they be addressed? Are there other barriers to be addressed?

61. We do not believe that barriers to the emergence of an active secondary market are ingrained in the Act *per se* or would require its overhaul. The Ministry currently has tools at its disposal to promote competition (i.e. remove barriers to spectrum access) and efficiency that would inject liquidity into the spectrum market and potentially encourage secondary trading. Our response to Questions 65 and 66 identify some of these existing tools (e.g. spectrum caps, use-it-or-lose-it requirements) and new ones (e.g. shortening the duration of management rights, enlisting Commerce Commission input in all future allocation or reallocation of management rights).

62. It is not unreasonable to expect the secondary market to become a 'burgeoning' rather than a 'thinning' market in the future, as interest and demand for spectrum

increases from existing and potential (non-traditional) users. Demand would not only come from the deployment of new technologies but also from the use of new and current technologies in other sectors, e.g. energy, agriculture, transport, retail and financial services.

75) Should management rights created in the future place more obligations on the owner to allow spectrum sharing? Are there ways to increase sharing in management rights without decreasing the value of the right to the owner?

63. We support the sharing of spectrum, particularly for new and emerging technologies (including for smart networks), and believe efficient sharing should be incentivised. We are open to innovative ways of spectrum sharing and support trials to determine how this can be carried out under the management rights regime without harmful interference, and ensure property rights are protected.

76) Should the Act be amended to provide for greater flexibility to accommodate dynamic spectrum sharing technologies? If so, how?

64. As stated in our response to Question 75, we support greater flexibility in the spectrum allocation regime to accommodate dynamic spectrum sharing and other new technologies.

65. Given the nascent and preliminary nature of these technologies, we prefer that the Ministry explore innovative allocation approaches without needing to amend the Act.

Concluding comments

66. Vector is actively involved, through its leadership of the Spectrum Working Group of the Electricity Networks Association, in exploring potential frequencies for smart energy networks and emergency services. We are happy to engage with and provide updates to the Ministry on any significant developments and findings arising from this initiative.

67. We are also happy to discuss any aspect of this submission with Ministry officials.

Yours sincerely

Ian Ferguson
Regulatory Policy Manager