**Department of Communications**

**Spectrum Review**

**Public Consultation**

Response to Terms of Reference

Whilst the author is currently a consultant in Australia for clients in the satellite industry, this submission represents a personal point of view which also draws on experience as a regulator with AUSTEL and its successor, the Australian Communications Authority. Some examples from the satellite industry are provided because of their current value.

**PREFACING REMARKS**

Spectrum – like energy – cannot be created or destroyed. It merely exists. Also like energy, it can assume many different forms, in terms of applications. The applications and the efficiency by which they use spectrum come about because of technology advances and economic boundaries which apply to this limited natural resource. The scale of implementation of applications follows market demand and international determination.

Once a backwater reserved to the attention of an exclusive group of technocrats, spectrum came to broader visibility on a political and larger industry scale with the onset of spectrum auctions designed to cope with spectrum scarcity which began to appear especially below 6 GHz. Treasuries became aware of the value of spectrum through windfall gains from auctions and thereupon extracted public recompense for the use of the natural resource on a level never seen before. At the same time, these were funds usually lost to the specific communications industry forever and mobile carriers in particular. This was the first of broader consequence of spectrum management initiatives beyond the clinical valuation and sale process. Today, mobile carriage is a commodity business – creation of value and profits comes with “over-the-top” IP services riding on these networks - and the deep pockets of pure carriage providers are a thing of history. Survival for mobile carriage operators is now a serious concern and misleading information on spectrum needs can be financially ruinous.

Since the creation of the Radiocommunications Act, the importance of communications has grown significantly, especially with convergence. Communications – that is telecommunications, radio communications and broadcasting – has formed the bedrock of broadband policies and their implementation throughout the world. In Australia, Communications has been a Cabinet Portfolio for some time, recognising its importance. At the same time, the creation of national broadband policies has sought to embrace all forms of government portfolios and programs together with the broadest range of industry and social inclusion. Not to do this would consign broadband policy to failure.

Telecommunications regulation in Australia has seen a modernised adaptation to the current environment with the outsourcing of many regulatory functions to industry over the past decade or so. This has occurred, for instance, with the previous myriad of subordinate legislation involving codes and standards, together with simplifications to licensing overheads. The creation of ACIF and its successor the Communications Alliance and their performance bears witness to the successful investment of confidence in industry to take on regulatory functions and to reduce the need for government involvement and sometimes secondary priority setting by a government regulator in a dynamic market place. The approach has also eased what would otherwise have been an unrealistic budget demand. Radiocommunications has yet to undergo such radical surgery.

The ACMA has done a formidable job in radiocommunications within the constraints of its remit. The noble aim of becoming the World’s best converged regulator is a good aspiration and rallying cry, and the ACMA has done its best to achieve that. It has established a reputation amongst its peers for innovation and timely and sensible outcomes.

Despite this, the ACMA is a victim of narrowly cast legislation and structure provided for in the current Radiocommunications Act and the ACMA Act. The Object of the Radiocommunications Act centres around Communications Policy objectives only, and these are framed in technical efficiency and technology terms, and the valuation and charging for spectrum. In its role of implementing policy, the ACMA Act is obliged to continue this narrow constraint and the ACMA is virtually left on its own to feel its way forward in interpreting the practical meaning of Parliament’s intentions. Neither is the ACMA subject to a formalised continuous oversight working relationship with policy makers in the Department of Communications who could conceivably bring in broader perspectives.

There are unintended consequences – even collateral damage – which can arise through lack of a broader evaluation of the effect of spectrum management decisions. For instance, in the satellite industry, an issue over the future use of C-band in Australia – whether this should be adapted for terrestrial IMT applications or retained for use by satellite communications has some consequences :

* Australia’s regional neighbours in the Pacific are highly dependent on C-band which is virtually a lifeline service. Australia’s foreign policy would indicate that Australia’s role as a regional leader should be taken into account in a supportive way in arriving at C-band decisions in the international arena
* The resources industry in Australia has significant investments in Africa (with $27b poised for investment). This industry is controlled 24/7 from Perth via a C-band network. The consequences of electronic isolation from the workface of this industry by the demise of C-band would cause it to walk away from being established in Australia, and an unintended consequential loss estimated at some $8bpa to the tax take. This indicates that parties which are not primary stakeholders for the ACMA are not accounted for in decisions.
* At the last count, the ACMA estimated some 200,000 C-band earth stations in Australia receiving Direct to the Home transmissions in C-band. Many of these are via fortuitous reception from foreign broadcasters. Yet the ACMA steadfastly refuses to accept and offer protection to ubiquitous satellite reception as being a valid market. This is in contrast to the 10-year strategy of OFCOM in the UK which welcomes the viable future of DTH in the UK. It is also in contrast with the ACMA acceptance of ubiquitous mobile terrestrial terminals. Ubiquity is a fact of life in the industry and a proposal from the UK intended for the ITU-R Working Party 5D in June 2014 adequately captures the appropriate sentiment :

“*Users should be able to receive ubiquitous access to the services that they desire from any device, anywhere, anytime – whether they are in an urban, sub-urban or rural area. To achieve this, it will be necessary to integrate various access technologies, which might include a combination of different fixed, terrestrial mobile and* ***satellite*** *networks.  The key characteristic of this convergence is that each component should not only play its own important role but should also be integrated with other components to provide ubiquitous and seamless coverage of IMT capabilities*.”

The UK also offers a useful structural model for spectrum management involving oversight of the regulatory decisions by OFCOM, by a Committee of the Department on spectrum matters. This enables a broader caucus of consideration of regulatory decisions and policy advice by various Government portfolio representatives, together with inputs from a parallel industry body feeding into the Committee. OFCOM can then get on with the job with a clear implementation perspective.

By contrast, in Australia we have had a degree of broader oversight and interaction through the ACMA’s International Radiocommunications Advisory Committee (now in demise), and the Radiocommunications Consultative Committee (which has not met for 2 years). It appears that the ACMA has retreated from broader consultation, except for public discussion papers - at a time when such consultation is very valid. Even with the public consultation which occurs, this is often one way, and resulting ACMA decisions are often not substantiated with publicised reasons. Therefore, it seems the ACMA could assist better in this regard, but would still be limited by its formal mandate.

Thus, as an introductory summary, a root and branch approach to reviewing spectrum management in Australia is appropriate. The root is the legislation and structures which are created in the Acts. These need a better national vision which captures the importance, the spreading influence, the scale, and the international nature of spectrum. Industry should play a more leading role and take up some of the current burden of regulation which should also ease budgetary constraints or apply government resources to more prioritised needs. Industry could play a more vital part in national and international processes, and be given a more trusted role. The closeted spectrum regulation of past decades, and a command and control style of spectrum management should remain a feature of the past.

Some comments related to the particular terms of reference are as follows.

1. **Simplify the framework to reduce its complexity and impact on spectrum users and administrators, and eliminate unnecessary and excessive regulatory provisions**

*Planning, allocation, licensing and re-issue processes are unnecessarily complex. Some simplification of processes could see a more technology neutral approach, more class licensing, and an emphasis on self-certification of regulatory compliance. Licensing and associated instructions could have a greater component of industry responsibility.*

*Outsourcing for what is currently subordinate legislation is now overdue in radio communications. The parallels which were undertaken in the telecommunications area over a decade ago offer a useful example, where – because of increasing technology complexity, industry availability of professional competence, and the incentives within industry of the real needs of the market place - much regulatory activity was outsourced to industry eg. with codes, standards etc. which can still be registered or called up by the regulator.*

*This led to the creation of ACIF and more recently Communications Alliance, which could probably adapt to an increased role in radiocommunications.*

*The budget for these activities could also be outsourced – at a reduced level and on a shared responsibility basis with industry – thus achieving both aims of reducing overbearing intervention by government in regulation as well as reducing the bottom line of un-necessary costs for government regulation.*

1. **Improve the flexibility of the framework and its ability to facilitate new and emerging services including advancements that offer greater potential for efficient spectrum use, while continuing to manage interference and providing certainty for incumbents**

*The ACMA should remain the steward for the Australian Radiofrequency Spectrum Plan. Its relationship to the ITU-R spectrum planning process should be made more readily discernable to spectrum end-users who would then be in a better informed position.*

*There is no doubt that greater flexibility in spectrum sharing by incumbents and potentially new users leads to more efficient use of spectrum questions. What conditions dictate fairness, though, is a key consideration. The current debate in Australia over WRC-15 AI 1.1 poses a severe threat to incumbents’ use of certain spectrum (not just satellite spectrum) by a powerful and influential lobby arguing that it requires greater access to spectrum for mobile services. These potential new users of the spectrum have far superior resources to argue the case leading to a possible outcome that is not merit based.*

1. **Ensure efficient allocation, ongoing use and management of spectrum, and incentivise its efficient use by all commercial, public and community spectrum users**

*The current pricing of spectrum is unidimensional. Under narrow technical or economic assessments, affluent spectrum users are able to dictate the terms of spectrum allocation and have undue influence over spectrum sharing. The inability of other spectrum users to match the advocacy leads to a lack of “merit” based outcomes. This consideration also allows pre-emptive purchasing and hording as a counter to other would be competitors. This goes against a secondary spectrum market and associated competition in services. The Review needs to balance out the unfair consequences of a wide variation in the resources available to spectrum users.*

*Fundamentally the ACMA can do little, given the narrow definition of its purpose and means within the Acts at its disposal. Inevitably, the ACMA tends to rely on technical and economic concepts which lead to a version of what is the most valued application of spectrum. The ACMA is also a victim of its own lack of broader consultation available (witness the demise of the Radiocommunications Consultative Committee and the International Radiocommunications Advisory Committee, followed by a greater degree of the ACMA pulling back within its shell). A more widespread effect of the ACMA’s decision making may appear in collateral effects on foreign affairs, trade and overseas investment, a lack of socio-economic and even humanitarian considerations, all of which are beyond the scope and current vision given to the ACMA.*

1. **Consider institutional arrangements and ensure an appropriate level of Ministerial oversight of spectrum policy and management, by identifying appropriate roles for the Minister, the Australian Communications and Media Authority, the Department of Communications and others involved in spectrum management**

*The roles assigned to the Minister, the Department of Communications and the ACMA under the Radiocommunications Act and the ACMA Act form the framework and the structure for spectrum management. The Department and the Authority need to be re-resourced with better balance to undertake these roles. Spectrum policy-making should remain the exclusive purview of the Department and the Authority’s sole role with regard to spectrum policy should be its implementation. It should not have the burden of interpreting policy in an ongoing way – constant feedback and closer integration with the Department would be beneficial.*

*The ACMA should continue to be resourced well enough to enable it to take a lead role in spectrum harmonisation at peak meetings both within the region through the APT and globally through the ITU-R. This should involve active participation and leadership at ITU-R Study Groups and associated Working Party meetings and better use of the capabilities of industry to do this at non-treaty meetings. The Spectrum Review needs to address this issue and the wider matter of industry consultation and participation in these efforts.*

*The roles assigned to the Minister, the Department of Communications and the ACMA under the Act could also be re-cast in a clearer way. Spectrum policy-making should remain the exclusive purview of the Minister and the Department with the Authority’s sole role with regard to spectrum policy being its implementation. However, the broader implication of national and international decision making and how policy is interpreted by the ACMA needs to graduate from the present open circuit arrangements for the ACMA. There is a need for a higher level of accountability (eg. as with OFCOM and the Government in the UK) and greater exposure to the needs of other portfolios of Government and industry with direct and indirect interests. This can be done by the Department of Communications having a Committee oversight responsibility for both national and international spectrum matters.*

*Spectrum harmonisation both within the region through the APT and globally through the ITU-R should involve better active participation and leadership at ITU-R Study Groups and associated Working Party meetings through industry participants. Quite often, industry is instructed to adopt a “follow discussion” position, despite industry having the competence and ideas to progress further interactive discussion to Australia’s benefit. This still can be achieved within the constraints of a Delegation Brief. In other words, ACMA’s command style of management of Australia’s involvement is well short of optimal. There also is no reason why the Australian Radio Study Groups structure and operations could not be excised from the ACMA to industry. Already industry does much of the work. The role of the should be enshrined better in the legislation*

1. **Promote consistency across legislation and sectors, including in relation to compliance mechanisms, technical regulation and the planning and licensing of spectrum**

*All spectrum users, regardless of their size or deployed technology should be treated consistently and transparently by the ACMA. Industry participation in spectrum planning needs to be mandated through legislation and/or regulation to ensure it happens consistently.*

*The time is ripe to bring about similar changes as have been achieved in the telecommunications area, as mentioned previously.*

1. **Develop an appropriate framework to consider public interest spectrum**

*Legislation should provide unambiguous definitions of public interest and clarify expectations of how, and at what, if any, cost public interest services gain access to spectrum*

*The concepts of what is in the public interest should also be run past a test of a broader level of accountability such as would occur by a Departmental oversight committee.*

1. **Develop a whole-of-government approach to spectrum policy**

*Legislation should provide for an industry/government advisory committee chaired by the Department of Communications whose role is to provide interpretation and advice on international developments, the assessment of the impact of new and emerging technologies on spectrum management and provide guidance to the ACMA on the implementation of spectrum policy from a broader input and perspective of direct and indirect stakeholders. Australian participation in regional (APT) and global (ITU-R) fora would be a primary international focus of such a committee. The committee would also be expected to ensure, wherever possible, that Australian spectrum use is harmonised with regional and global practice, attends to effects on all spectrum users in Australia, and maintains consistency with general government plans and policies.*

1. **Develop a whole-of-economy approach to valuation of spectrum that includes consideration of the broader economic and social benefits.**

*The secondary level of social, economic and global interests by entities which are not necessarily direct ACMA stakeholders is way beyond the narrow views of the ACMA. As a result, there is significant latent and actual collateral damage which can be caused. A re-casting of the objects of legislation and relationship structures would greatly assist this.*

*Regarding direct stakeholders, the Review should consider the current system of determining the cost of spectrum with a view to introducing far greater transparency in how spectrum is priced. Moreover, industry needs to be given a formal role in determining spectrum pricing to ensure that the government’s need for revenue does not become the major driver of how spectrum is priced.*

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