



Response to:

ACMA - Response Paper - Draft allocation instrument 3.6 GHz

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Executive Summary:

Successful projects depend on meeting the needs and requirements of the stakeholders throughout the lifecycle. A project must also address the Physics and Maths of a real world or fail.

As stated in ISO/IEC/IEEE 15288

[6.4.2.1] The purpose of the Stakeholder Needs and Requirements Definition process is to define the stakeholder requirements for a system that can provide the capabilities needed by users and other stakeholders in a defined environment.

- The actual defined environment under consideration can not be stated simply. It is obvious that Metro Australia has a different environment o that of Central Australia - between these poles, micro-environments exist. By defining one single environment, to cover disparate, dissimilar, separate and vast environments, the stakeholder Needs and Requirements Definition process has been reduced to insignificance.
- However, complex systems can be engineered to have necessary sufficient adaptability to operate well in changing environments, responding to alterations and variations in appropriate and effective ways. Nevertheless no amount of great engineering can rescue a bad initial concept.

Complexity is a characteristic of more than just a technical system being developed. It is often created by the interaction of people, organizations, and the environment that are part of the complex system surrounding the technical system. -- INCOSE TP-2016-001-01.0

- To illustrate, submissions of stakeholders with modest requirements are being discounted and disparaged. This is true not only for the 3.6Ghz, but for many bands encompassing many user classes. The International communities recognise that the spectral space is a complex entity and needs to be regulated as such. A complex system provides a welcome kind of variety that can help provide control of different dimensions and enable the system to adapt to environmental change. New capabilities of graceful degradation, and re-organisation of its structure, responses, or patterns of parts engage stakeholders. WISPAU provides the Dynamic Spectrum Licensing Management (DSLIM) model as a proven engineering solution.

A different approach is necessary. Regional Australia has been forgotten.

Michael Parnell
President
WISPAU

Page	ACMA Statement	WISPAU Response
1	The ACMA welcomes comment on matters raised in this paper and <i>on any other issues relevant to the allocation of the 3.6 GHz band.</i>	WISPAU appreciates the invitation and thanks the ACMA for the opportunity.
3	Reallocation Periods - Seven years commencing at the start of 30 March 2018 for the regional area	This reallocation period has already begun. It suggests that the outcome of this consultation is a foregone conclusion and the consultation process is little more than a public relations exercise.
3	Legislative context - The key theme of the Principles is that maximising the overall public benefit from use of the radiofrequency spectrum requires a balanced application of both regulatory and market mechanisms.	We have repeatedly requested the High Value Use modeling relied on by ACMA but it has not been supplied. Has ACMA conducted discrete modeling for regional areas? We cannot obtain an answer.
3 / 4	<p>Objects of the Act</p> <p>> Maximising, by ensuring the efficient allocation and use of the spectrum, the overall public benefit derived from using the radiofrequency spectrum.</p> <p>> Providing a responsive and flexible approach to meeting the needs of users of the spectrum.</p> <p>> Providing an efficient, equitable and transparent system of charging for use of the spectrum, taking account of the value of both commercial and non-commercial use of spectrum.</p>	<p>WISPAU supports the internationally based Dynamic Spectrum Licensing Management (DSLIM) model for the efficient allocation and maximisation of public benefit.</p> <p>The proposed auction is not efficient, equitable or transparent.</p> <p>Highest Value Use modelling for regional areas or DSLIM has not been supplied.</p> <p>The ACMA has not addressed concerns raised by the WISPAU community in previous submissions.</p>
5	<p>Background History</p> <p>In 2008, the ACMA announced its intention to allow the use of the 3.6 GHz band to deploy site-based wireless broadband services authorised by apparatus licences in regional and remote areas of Australia as a short- to medium-term solution for the demand for broadband wireless access (BWA) services in these areas.</p>	<p>This seems to be a rewrite of history.</p> <p>In 2008 Documentation, the ACMA provide unmistakable direction that the use was intended as a stable long term solution, not merely short and medium term.</p> <p>Pursuant to the permanent nature of the solution, applicants were required to go through an auction process to obtain initial allocations of spectrum. This was followed by the required payment of substantial</p>

		<p>annual license fees.</p> <p>Without the inherent durability of the solution in ACMA's documented resolution, the Industry would not have been encouraged to invest substantial private capital in PmP infrastructure to develop a secure and robust regional WAS capability, nor continually re-invested and upgraded with new equipment.</p>
4	Principles for Spectrum Management - Principle 1 - Allocate spectrum to the highest value use or uses	<p>The Highest Value Use was not determined for regional areas or DSLM. - It is those parties that are most seriously affected by these decisions.</p> <p>The CEO of the NBN has publicly stated that 5G will be of little economic value in regional areas as the business case does not exist. The density requirement for deployment of effective 5G relies on high and geographically compact populations - i.e. cities.</p>
6	The ACMA recognised that the 3.6 GHz band was being targeted as a pioneer band for 5G services internationally	<p>Did the ACMA recognise the strategic value and importance of 3.4 - 3.7 GHz before it was gifted to the NBN for decades? That discussion is occurring about the potential for NBN to off load this spectrum indicates that ACMA's strategic foresight may be reasonably considered as somewhat lacking.</p> <p><i>27 Feb 2018 Senate Estimates Mr Tanner: I just make the comment that NBN actually holds a fair bit of spectrum in the range 3.4 to 3.5. Most of its 3.4 holdings are actually in the form of spectrum licences. Those are 15 year licences that are paid For up front. They were last renewed in 2015.</i></p> <p>Is the ACMA recognising IMT policy 3.3 - 3.4 GHz for fixed wireless?</p>
6	The seven-year reallocation period in regional Australia is one of several mitigation strategies to assist current services potentially displaced by the reallocation process.	<p>This is a grossly misleading statement, claiming the existence of several migration strategies implies migration is possible - there are currently no comparable alternative spectrum options available.</p> <p>There has already been two years of</p>

		<p>embargo stifling development of the regional markets.</p> <p>The ACMA has not considered any strategy for mitigating the costs of migration (assuming a realistic migration path was to be made available).</p>
6	Other strategies include opening up new spectrum for PMP services and the potential for migration of some existing 3.6 GHz services to other bands	No like for like bands for migration have been made available.
7	Referral to "Chapter 3"	There is no Chapter 3
8	Point 4 in Table Application Deadline - 30th Aug 18 > Pay Application Fee	<p>The imposition of a large fee creates a barrier to entry for smaller carriers.</p> <p>There are numerous additional unknown financial costs referred to including:</p> <ol style="list-style-type: none"> 1. Fees 2. Eligibility payment (value unknown) 3. Deed of financial security 4. Combination of 2 and 3 <p>For small incumbents these unknown cost are near impossible to plan for.</p>
9	An allocation determination may also impose limits on the aggregate amount of spectrum that can be allocated to a bidder.	The ACCC has not determined if there are to be aggregate caps. WISPAU strongly holds the view that cap limits must apply to facilitate auction participation by smaller carriers, and more importantly counter anti-competitive spectrum hoarding.
13	<p>Licence commencement and duration</p> <p>The ACMA is currently considering two options for licence commencement:</p> <p>i. Licences commence as soon as possible after payment of the winning price after conclusion of the auction. This will enable access to spectrum for successful bidders to begin deployment of mobile broadband services, subject to protection of incumbent licensees until the end of the relevant reallocation period.</p>	If this option is chosen, protection of incumbents must be guaranteed.
13	ISSUE FOR COMMENT 1 - Licence	Any utilisation of spectrum within existing

	<p>Commencement</p> <p>ACMA seeks stakeholder views on whether spectrum licences for the 3.6GHz band should commence asap after the auction, or at the end of the two-year allocation period in metropolitan areas</p>	<p>license allocation areas should only be done so with the expressed consent of the incumbent.</p> <p>Commencement should be at the end of the two-year reallocation period</p>
13	<p>The ACMA proposes that all spectrum licences for the 3.6 GHz band metropolitan and regional lots expire on 13 December 2030. This expiry date is designed to align with spectrum licences issued in the adjacent 3.4 GHz band, as both bands are likely to be used for fixed and mobile wireless broadband technologies. A common expiry date will facilitate spectrum trading between the bands and foster a smooth administrative process for licensees in the band upon expiry. Depending on the chosen option for licence commencement, 3.6 GHz band licences will have a term of approximately 11 or 12 years.</p>	<p>WISPAU believes the current reallocation process has been unnecessarily fast-tracked. International sharing models have been ignored.</p> <p>A decision made now will remain in force for over a decade, based on a false premise of High Value Use in the regional areas. This will be to the detriment of regional communities and businesses.</p>
13	<p>ISSUE FOR COMMENT 2 — Amendment to the Tax Determination</p> <p>The ACMA seeks stakeholder views on the proposed amendment to the Tax Determination to set an annual licence tax rate of \$0.0039/MHz/pop.</p>	<p>This pricing model blatantly assumes mass market products and implies sale of market share.</p> <p>Highest Value Use in regional areas is unlikely to be based on population % use of the resource. It is an artificial calculation for regional areas given HVU modelling is unavailable for regional areas.</p> <p>WISPAU requests reasons why ACMA won't consider or allow incumbents to convert to a meg/pop basis and let the market work, rather than constantly interfering with it?</p> <p>If incumbents could move to 5G, then sharing can be facilitated by the self co-ordinating, self optimising networks. Why has this not been considered by ACMA?</p>
14	<p>Reallocation periods</p>	<p>Once the auction has completed smaller operators will have Zero leverage to exert</p>

	<p>After licences commence, spectrum licensees may begin to deploy in spectrum not used by incumbent licensees, subject to interference protection obligations. Incumbent licensees have the right to continue operation until the end of the relevant reallocation period, provided their apparatus licences are not cancelled or allowed to expire.</p>	<p>to obtain a reasonable commercial outcome with licence holders. Larger carriers will simply wait the incumbents out. Telstra has indicated deployment of 5G in the regions is unlikely within ten years. The ACMA process appears to present the worst scenario/options for small incumbents. WISPAU is concerned that a bias against smaller operators is now systemic in the ACMA.</p>
14	<p>Lot configuration</p> <p>The ACMA anticipates that the 3.6 GHz band will be used as a pioneer band for the deployment of 5G mobile networks and that the spectrum should be optimised for wide-area broadband deployments (mobile and fixed) over the entire 125 MHz.</p>	<p>We do not agree with this. WISPAU seeks technical clarification and evidence on the validity of this claim.</p>
14	<p>As discussed in the draft spectrum reallocation declaration recommendation, the ACMA proposes to offer the 125 MHz of spectrum based on lots of 5 MHz bandwidth. The major reasons for this proposal are:</p> <p>> it enables greater flexibility for potential bidders, including smaller companies, to obtain amounts of spectrum suited to their needs, for example, 20 MHz, 30 MHz.</p>	<p>This objective is undermined by the extremely high barriers to entry, including but not limited to high cost of applying for inclusion in the auction process and the requirement to pay a bond.</p> <p>This comment is political obfuscation. Nothing in the paper provides any confidence to smaller companies that this notional 'flexibility' will enable them to bid. The structure and bid price envisaged is a fait accompli barrier to entry.</p>
14	<p>...price exceeds the bidder's specified price point (see Chapter 3).</p>	<p>There is no chapter 3</p>
15	<p>If Option 2 is adopted, the lowest three lots (15 MHz) of the 3.6 GHz band will be subject to interference and may therefore be valued differently to other lots. For this option, the ACMA proposes to offer the lots as two separate categories:</p> <p>i. Lower band single lot: 1 x 15 MHz (3575–3590 MHz) — subject to interference.</p>	<p>This approach seems to address the lower market value of spectrum subject to interference.</p> <p>There needs to be pricing guidelines placed on this prior to auction.</p>
19	<p>Geographic regions</p> <p>Many stakeholders also recommended disaggregation of the single regional</p>	<p>Again a claim by the ACMA to be facilitating smaller carriers ability to bid in the auction.</p> <p>This objective is undermined by the</p>

	Australia lot, to enable smaller companies to purchase spectrum in targeted areas of interest.	<p>extremely high barriers to entry, including but not limited to high cost of applying for inclusion in the auction process and the requirement to pay a bond.</p> <p>The Geographic regions proposed also bundle small hamlets 200 km distant from Sydney, within the Sydney CBD tranche. To cover these regional areas smaller companies would have to bid - and win - full metropolitan coverage.</p>
19	<p>In response, the ACMA developed three options for geographic boundaries:</p> <p>> metropolitan lots aligned with the 3.4 GHz boundaries</p>	<p>Three options that are all the same, this particular geographic boundary seems to be a non-negotiable option. Alignment with the 3.4 GHz boundaries is not appropriate.</p> <p>It also includes astonishing anomalies. The tiny township of Tea Gardens, (200km north of Sydney), Newcastle and the central coast regional hamlets en route are all included in the Sydney metropolitan geographic boundary. Wollongong, closer to Sydney than Newcastle, is not. If this anomaly stands, it will be to the disadvantage of regions like the Hunter who will occupy the back seat to the metropolitan 'roll out'. No doubt other examples of geographic inconsistency exist.</p> <p>This is poor attention to detail which has a deleterious impact on regional communities.</p>
22	The HCIS identifiers for each region are found at Attachment C.	There is no Attachment C.
24	<p>ISSUE FOR COMMENT 3 - Draft Spectrum marketing plan (3.6 GHz band).</p> <p>The ACMA seeks stakeholder views on the draft spectrum marketing plan (3.6 GHz band), especially geographic lot configurations and multiple lot categories in Perth.</p>	<p>WISPAU is strongly of the view that the current marketing plan should be discontinued.</p> <p>Shortcomings include but are not limited to:</p> <ol style="list-style-type: none"> 1. Boundary anomalies such as small regional hamlets being defined as Sydney CBD. 2. Foregone opportunity to await the commencement of the new spectrum ACT. 3. Further engineering review required of internationally operational DSLM shared spectrum

		<p>models. A review of ACMA responses to Senate Estimates questions reveals a lack of appreciation of how the international models of DSLM work. The ACMA have conflated the issue with ‘white space’ band management which is incorrect and serves to obfuscate and confuse.</p> <p>4. The impending change of government.</p>
25	<p>Draft allocation determination</p> <p>Allocation methodology The ACMA must allocate the 3.6 GHz band lots in accordance with section 60 of the Act—that is, via auction, via tender or for a predetermined or negotiated price.</p> <p>When demand is likely to be greater than supply, market-based allocation (that is, by auction or tender) is more appropriate than an administrative allocation, such as for a predetermined or negotiated price. Of the two market-based options, the ACMA ordinarily allocates spectrum licences by auction.</p>	<p>There is no evidence that demand is greater than supply in regional areas. This is a major point of contention.</p>
28	<p>At the industry tune-up on 10 April 2018, participants raised a question about ‘accidental’ reduction of eligibility points. The scenario related to a case where a decrease bid is partially applied, so that a corresponding increase bid cannot be fully applied due to insufficient eligibility, resulting in an overall reduction of eligibility. The ACMA is consulting with its auction software vendor to clarify this issue and will advise potential bidders of the outcome as soon as possible.</p>	<p>There are acknowledged and unaddressed flaws in the auction process.</p>
29	<p>Application and registration process</p> <p>...applicants are required to pay a non-refundable application fee, proposed to be \$10,000, as well as pay an eligibility payment or give a deed of financial security</p>	<p>This requirement is inconsistent with the stated goal of including smaller carriers.</p>

30	<p>Lot ratings and starting prices</p> <p>At the application stage, each bidder nominates the number of lots they are interested in acquiring in each region and calculates the total of the eligibility points attached to them. This determines the bidder's maximum eligibility to bid in the first round, and the initial eligibility payment they must pay.</p>	<p>This requirement is inconsistent with the stated goal of including smaller carriers.</p>
30	<p>Competition limits</p> <p>Due to the timing of this consultation, the ACMA is unable to include any information about competition limits in the draft allocation determination</p>	<p>The timing is of the ACMA's own making, the exclusion of competition limits preclude any comments on them before the final allocation determination.</p> <p>This is a disappointing lack of transparency.</p>
32	<p>Spectrum licence tax</p> <p>The annual licence tax amount for a spectrum licence is calculated on the basis of the bandwidth (in MHz) and the population covered by each licence.</p>	<p>ACMA's view of spectrum value assumes mass market adoption. This is not the HVU.</p> <p><i>"Companies put a value on preventing their competitors or potential competitors getting access to spectrum. This means that a large part of the value of spectrum is actually in reducing competition." SIMMS ACCC 2018</i></p>
33	<p>ISSUE FOR COMMENT 4 - The draft 3.6GHz band allocation determination.</p> <p>The ACMA seeks stakeholder views on the draft allocation determination and the auction rules for the 3.6GHz band auction</p>	<p>It is noted that the auction process proposed is untried and untested, to the extent that bidders will be expected to 'trial' the platform prior to the auction. It is an expensive and complex process which in itself represents a further barrier to entry for smaller incumbents.</p>
35	<p>ISSUE FOR COMMENT 5 - Amendment to the SLT Determination.</p> <p>The ACMA seeks stakeholder views on the proposal to amend Table 1 of the SLT Determination to include the 3.6GHz band with frequency range of (3575 - 3700 Mhz), total spectrum of 125 MHz and a base amount of \$69,180.</p>	<p>WISPAU view is that the SLT determination is fatally flawed in the absence of modelling for High Value Use in regional areas. Without this modelling comment is moot as the underpinning premise is compromised.</p>