



## WIRELESS INSTITUTE OF AUSTRALIA

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26 November 2018

Att: Phil Freeman  
Australian Communications and Media Authority  
Procurement  
Red Building, Benjamin Offices,  
Chan St,  
Belconnen ACT 2617

RE: Amateur radio licencing and administration Approach to Market (18ACMA148)

Dear Mr Freeman,

The Wireless Institute of Australia (WIA) understands that the Australian Communications and Media Authority is seeking appropriately qualified and resourced organisations for the provision of certain statutory functions and administrative services associated with amateur radio licencing.

The requirements were detailed in the Amateur radio licencing and administration - Approach to Market (18ACMA148) documents and the WIA is pleased to submit its response to this request.

If there is any further information required then please contact Aidan Mountford, WIA Director on 0417 849 852 or email [aidan@mountford.org](mailto:aidan@mountford.org).

I thank you for the opportunity to submit a response and look forward to further contact.

On behalf of the WIA Board

Justin Giles-Clark

**President, Wireless Institute of Australia**

[president@wia.org.au](mailto:president@wia.org.au)

Encl.



**Response  
to  
Australian Communications and Media  
Authority  
Approach to Market  
(18ACMA148)**

Version: Final

25th November 2018

**Prepared by:**

WIA Education Group

**Approved for release to ACMA by:**

Justin Giles-Clark on behalf of the WIA Board

A handwritten signature in black ink, appearing to read 'Justin Giles-Clark', is positioned below the text of the approver.

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**Part 1 - Potential Supplier's Details**

Full legal business name: The Wireless Institute of Australia  
Registered business address: 11 Havelock St, Bayswater, VIC, 3153  
ABN (if applicable): 56 004 920 745

Web address: [www.wia.org.au](http://www.wia.org.au)  
What is the entity's legal status : Public Company Limited by Guarantee

Is the above entity a non-government employer with more than 100 employees? No

Is the above entity an Indigenous owned (50% or more) business? No

**Contact Officer**

For all matters relating to this Response, the Potential Supplier's Contact Officer will be:

Name: Aidan Mountford  
Position title: Director  
Telephone: 0417 849 852  
Email: [aidan@mountford.org](mailto:aidan@mountford.org)  
Postal Address: PO Box 2042, Bayswater, VIC, 3153

**Address for Notices** (if different from the Contact Officer):

Name: The Secretary  
Position title: Secretary  
Email: [Secretary@wia.org.au](mailto:Secretary@wia.org.au)  
Postal Address: PO Box 2042, Bayswater, VIC, 3153

**Deed Manager** (if different from the Contact Officer)

Refer to contact officer.

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## Part 2 - Executive Summary

The Wireless Institute of Australia (WIA) would like to thank the Australian Communications and Media Authority (ACMA) and the Department of Communications and the Arts (DOCA) for the opportunity to respond to the Approach To Market for Examination and Callsign services for the Amateur Service in Australia.

In responding to the Approach to Market (ATM) we have not only met the requirements of delivering the statutory and non-statutory requirements of the ATM but have exceeded them by delivering the desired requirement of an RTO and adopting much broader vision that seeks to satisfy the social aspects of amateur radio and adopts a vigorous approach to examination and callsign approval and management.

We offer the following high level future vision of amateur licencing and qualification:

***“A candidate books an exam online and submits the relevant information for their callsign recommendation and licence application and pays an appropriate fee.***

***2 hours later, in the comfort of their own home, anywhere in the world, they sit the examination and pass.***

***Within a few hours they receive their endorsed electronic Amateur Operator Certificate of Proficiency, callsign recommendation and an invoice from the ACMA the funds for which have already been remitted on their behalf.***

***They are now on air..”***

It is our view that achieving this vision is neither revolutionary, nor is cutting edge. In fact, in 2019, delivery of this vision is merely hygiene. For amateur radio to exist in the future - it needs to, at a minimum, meet the basic community expectations of the present.

The activities of qualification and callsign management are all enablers for the hobby of amateur radio. In the past these processes whilst effective have been resource intensive and inwardly facing which has resulted in the limited resources of amateur radio being focussed on enablement rather than promotion, development and delivery of value to the broader community.

Our proposal places significant emphasis on ensuring that future solutions to amateur radio examination and qualification scale readily to meet both expanding and contracting demand. Our solution employs contemporary technology and, where appropriate, best of breed third party services to expand the geographic reach of our services, increase depth of penetration within the community, permit tighter turnaround times and reduce the ongoing management cost to the ACMA, WIA and amateur community.

We trust the proposal contained in this response provides a clear understanding of the WIA's vision for Amateur Radio and the intrinsic role that we will continue to provide to Australian amateur operators and the broader community in general.

Should you have any questions regarding this response please do not hesitate to contact Aidan Mountford on 0417 849 852.

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## Part 3 - Ability to meet the requirement

### Background

The WIA is the oldest representative body for Amateur Radio in the world, founded in 1910. There have been a number of changes in the makeup and governance of the organisation, and it is now an incorporated Not-for-Profit national organisation.

The WIA has always supported the Australian Amateur Radio community, both members and non-members, ensuring that the voice of our community of experimenters is heard by both Australian and International regulatory bodies alike.

It must be recognised that the “Value” of Amateur Radio has evolved beyond that which is expressed in Article 1.56 of the ITU Radio Regulations. The 150 affiliated Radio Amateur clubs of the WIA provide:

- A forum for improving the overall health of men and women. (Amateur operators are in the main, male, although this is changing);
- Communications support for local and regional community and sporting events;
- Support for emergency services communication in times of disaster (<https://wicen.org.au/>);
- A forum for self-training and technical investigation;
- Building social capital for operators, their partners and others both “face to face” and “on the air”

The WIA has demonstrable existing capability to undertake reliably all the functions requested, having been the incumbent supplier for almost 10 years since the inception of the current 2009 deed.

Over the course of 2018 the ACMA undertook a public consultation on approaches to the mechanisms by which Amateur Radio qualifications are made available. This work has resulted in the Approach to Market (ATM) to which this response relates.

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In responding to the approach to market the WIA has addressed not only the Customer's primary outcomes as identified in the approach to market which include:

1. Examination Services
2. Certificate Services
3. Administrative Services
4. Callsign Recommendation and database
5. Recognition of Prior Learning
6. Fee related services
7. Negotiations in relation to legislative change
8. Syllabus Review; and
9. Reporting

but also the broader social and existential challenges that face the hobby of amateur radio which are inextricably linked to the success of any party delivering the statutory functions.

During 2018 a number of strategy and planning exercises were undertaken by the WIA to seek to understand in more detail the processes by which the WIA and the Australian Amateur Community could add the greatest value to the broader Australian community. This vision, known as "Beyond 2020" outlines several key principles for ensuring long-term societal value is derived from the Amateur community and the spectral assets that the community has entrusted to Amateur Radio.

Several of the principles enshrined in "Beyond 2020" are relevant to the delivery of the statutory and non-statutory functions identified in the ATM.

1. **Self determination**

The ability for the Amateur community to self-determine its future is critical to the long-term survival of the hobby. We applaud the ACMA for the decision to allow the opportunity for Amateur related organisations to continue performing the functions of qualification and examination.

The proposal contained herein demonstrates the commitment the WIA has to ensuring this can be achieved by providing a framework for the delivery not only of the proposed statutory and non-statutory functions but functions that, through future negotiation with the ACMA we would hope to create a simpler, less costly amateur service in Australia (for example, simplified licencing and regulatory arrangements, amateur community codes of conduct and [REDACTED])

[REDACTED]

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## 2. Community Value

Ensuring the long-term survival of Amateur Radio involves it in delivering visible benefit to the communities in which Amateurs operate. There are several mechanisms through which this can be achieved.

- a. Reducing the communities contribution to Amateur radio by taking steps to reduce the co-contribution from the Federal Government to the hobby through deeper self-governance.
- b. Broadening the value proposition that Amateurs and their associated clubs deliver to their local communities (for example, provision of vocational and non-vocational training, delivery of communications services to other community organisations, creation of new spaces for communities of technical experimenters that have historically not been a part of the Amateur community)
- c. Ensuring that the positive benefits associated with the social aspects of Amateur Radio clubs continue to be delivered into the future. The social aspects and benefits of Amateur Radio are considered in Appendix 3 - "Topics of Conversation".

The WIA is the peak body for Amateur Radio in Australia and is represented in the International Amateur Radio Union (IARU), the International Telecommunication Union (ITU), Standards Australia and other forums either alongside, or at the invitation of the Department of Communications and the Arts( DOCA) and the ACMA.

This representation is funded by members through both direct membership and the membership of affiliated clubs. On this basis the WIA represents over 45% of the amateur community in Australia.

It is anticipated that through initiatives such as those described in this proposal we can realise the one key objective of the WIA that every Australian Amateur operator is a member not because they have paid a membership fee but merely because they are part of the Australian community of amateur operators.

Another way the WIA directly supports the community through amateur radio is through the provision of public liability insurance for affiliated clubs and this currently covers nearly 5000 amateur radio operators and the public around Australia where those amateurs operate.

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## WIA Solution Overview

The WIA has considered a number of models for achieving both the ACMA's requirements as outlined in the ATM and the community outcomes necessary for amateur radio to maintain long term community relevance.

### The RTO Challenge

Under the current 2009 deed, the WIA is required to have a WIA Nominated Training Organisation (NTO), an RTO or like organisation.

The NTO is defined in the 2009 deed as “... a *Registered Training Organisation registered in accordance with the Australian Quality Training Framework or other like organisation appointed by the WIA to qualify Assessors and Learning Facilitators and generally assist the WIA in the performance of its Statutory Functions.*”

The NTO was not directly accountable for the delivery of AOCP examinations nor was it responsible for the delivery of AOCP related training.

In developing our solution whilst seeking to achieve the *ATM desired requirement* of having a Registered Training Organisation (RTO) oversee examinations; the WIA explored three options in addition to the proposal presented. Each of these options prima facie fails to meet the strategic requirements of the hobby:

- ***Not having an RTO***

During the ACMA's consultation process the WIA received feedback that the community was strongly against the notion of a registered training organisation being involved in amateur radio qualifications.

Following an analysis of the responses received the WIA formed a view that:

- a. the broader community lacked the understanding of the original arrangements associated with the 2009 deed during which our Nominated Training Organisation was indeed an RTO;
- b. Whilst the AOCP is not a vocational qualification (and indeed Amateur Radio is, by definition, not a vocation) many of the elements of the AOCP have broad vocational application;
- c. The objective of attracting younger people to the hobby necessitates the making the pathway to the hobby vocationally useful. It is clear from our research that many older operator's gained significant vocational value from their early experimenting associated with amateur radio.

As was outlined in the WIA's response to the ACMA's earlier consultation on the matter an RTO presents an opportunity for the hobby to demonstrate relevance to a younger cohort as long as the existence of the same does not represent a barrier to entry or otherwise diminish the social outcomes of the hobby.

- ***The WIA becoming an RTO***

There are a number of challenges associated with the WIA becoming an RTO that cannot be overlooked. To understand these we must review the WIA's charter which reads:

*“to promote, advance and represent in any way it thinks fit Amateur Radio and the interests of Radio Amateurs, and without limiting the generality of the forgoing,  
to protect and enhance the privileges of Radio Amateurs,  
to encourage an awareness of the value of Amateur Radio,  
to educate and encourage potential Radio Amateurs,  
to represent Radio Amateurs both nationally and internationally,  
to provide services for Radio Amateurs and those interested in Amateur Radio”*

The (entirely reasonable) references to Radio Amateurs and Amateur Radio present an obstacle to the general mission of an RTO in that the Amateur Radio Service (as defined in article 1.56 of the ITU Radio Regulations) states:

*“amateur service: A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.”*

while an RTO's mission is generally one of a vocational nature.

*For example, from Upskilled*

<https://www.upskilled.edu.au/about-upskilled/mission.aspx>

*“Every moment, we strive to be the best we can be to each other, and to our participants, vendors, partners, and clients*

*“Every day, we endeavour to provide a superior learning experiences to working professionals and career-minded individuals*

*“Every week, we enhance overall capability and productivity in businesses all around the nation through outstanding training*

*“Every month, we facilitate the building of skills to achieve positive change in both the personal and professional”*

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- **Partnering with an 3rd party RTO**

It would be expected that a commercial third party RTO joining a partnership with WIA would need to conduct examinations according to their stated methods for vocational assessment.

This would break the connection between the Amateur Radio Club system and the provision of examinations. This connection is part of the current system of ongoing training and support for radio amateurs, and delivers significant social and financial benefit to those communities and clubs that participate in the education of new operators (this includes access to new members, fees received for provision of training and donations received through the training process.)

The engagement of commercial third party RTOs in the examination activity presents an existential risk to the WIA examination team and material risk to the relevance of amateur radio clubs in which the examination team operates.

### **WIA RTO Solution**

The WIA will create a separate and distinct education “inhouse” entity that will be an RTO. This approach avoids the conflicts noted above that would nominally preclude the WIA itself being registered as an RTO.

The working name for this RTO is Australian Technical Experimenters Academy Limited<sup>1</sup> (ATEAL)

This will add value to the hobby by promoting continuous and lifelong learning. The task split will be:

- ATEAL will be responsible for learning and qualification activities.
- WIA will be responsible for issuing callsigns, advising on spectrum management, representation of the hobby nationally and internationally as well as promotion of the hobby.

The creation of ATEAL will ensure that:

- there is a broadening of social objectives;
- the existing cohort of well educated and committed technical experimenters that comprise the Amateur Radio community continue to be utilised; and
- material value is added to the hobby by promoting continuous lifelong learning.

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<sup>1</sup> Australian Technical Experimenters Academy Limited is a working title that will be finalised prior to registration in early 2019.

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This is preferred over a third party RTO arrangement because ATEAL will remain tightly coupled to the WIA and Amateur Radio.

ATEAL will be a charity, regulated by the Australian Charities and Non-Profits Commission (ACNC). Its sole mandate is to ensure that all Australian experimenters have the opportunity to access vocational and non-vocational learning outcomes across various technical fields of endeavor including but not limited to radio, communications, electronics & information technology.

ATEAL will draw on and consolidate the existing network of WIA resources including 150+ Affiliated Clubs and 300 Learning Facilitators and Assessors to deliver these outcomes in the short term whilst leveraging its broader learning mandate to attract other community organisations to assist in the delivery of its mission.

The WIA expects that registering ATEAL as an RTO will be completed prior Q4 2019.

In the interim, the WIA and ATEAL will adopt, from the date of execution of the deed, the relevant practices and governance principles from the RTO Standard as they apply to non-vocational examination and the essence of those elements of the standard that are required to be adopted to fulfill the Customer's requirements, meet community expectations and withstand scrutiny. These standards are not less than the standards that were in use by the NTO under the 2009 deed.

In the event that it is agreed that the current system of examination should continue for a transition period the WIA will not be in a position to qualify new assessors and learning facilitators under the model used under the existing deed, however, examinations can continue whilst still enforcing the agreed governance principles.

We believe that this approach provides the best possible platform for the delivery of examinations for Amateur Radio and other similar qualifications because:

- The WIA has a demonstrated track record for delivering training and assessment of amateur radio qualifications in Australia.
- ATEAL will utilise existing resources of the Wireless Institute of Australia where appropriate:
  - Intellectual and Physical Property
  - People
  - Process and Procedure
  - Capital
- ATEAL is a broad-based vehicle for exposing amateur radio to potential participants across a greater demographic and geographic footprint than is currently possible.

- 
- ATEAL provides a roadmap for expanding and developing new delivery platforms whilst preserving the critical personal and community outcomes delivered by the existing WIA framework.

### **Critical Success Factors**

It is recognised that the process of examination that has existed for the past 10 years, whilst serving the amateur community well, has failed to keep pace with technology. This has resulted in a business model that contains significant manual processing and inelastic costs.

This lack of elasticity creates challenges in an environment where demand is (currently) both highly variable and unpredictable.

In designing our solution we have undertaken a review of the existing processes and developed a series of critical success factors that, if not achieved, will materially impact the future of Amateur Radio. The resultant solution must:

- Scale - As demand increases, cost per unit of activity must decrease.
- Reduce to the extent possible the requirement of human intervention in the delivery of statutory, non-statutory and administrative services.
- Provide the ability to understand and predict demand for services in advance of services being delivered to ensure resources are available and community/customer expectations are reliably met
- Enable a roadmap to materially reducing barriers to entry through:
  - Reduced cost
  - Greater accessibility
  - Higher reliability
- Not dilute the WIAs long standing commitment to the principles of assessment as enshrined in the “Standards for Registered Training Organisations (RTOs) 2015”
- Allow a number of funding models to be contemplated for ensuring long term success (including surpluses from commercial activities, grants, bequests and donations)
- Provide roadmaps that ensure the social outcomes that Amateur Radio delivers can continue to be delivered into the future
- Creates an opportunity for expansion that will deliver social outcomes across a broader cross section of the Australian community.

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In meeting these success factors the we propose that the statutory and non-statutory functions identified in the ATM be divided into two components:

1. examination and qualification based activities which will be undertaken ATEAL; and
2. Licence issuance and callsign management activities which will be remain with the WIA.

It is our belief that this approach will deliver a number of outcomes:

- Meets the needs of the ACMA in delivery of AOCP certifications;
- Provides an evolutionary pathway for the WIA's cohort of affiliated clubs and associations to provide greater value to the communities in which they operate;
- Provides growth opportunities for the amateur radio community; and
- Creates a vehicle that will enable other non-amateur technical and experimenter groups within the Australian community to deliver lifelong learning outcomes to their members and local communities.

**Solution Workflow**

ATEAL will utilise several technology based initiatives to ensure that the cost base associated with the delivery of statutory and non statutory functions declines over time. These initiatives include but are not limited to:

- Online examination capabilities
- Online question bank analysis and management
- Remote video invigilation
- Automated delivery of exam results into student management system
- Automated creation of certificates (including delivery to ACMA) to qualified operators
- Electronic signing of all certificates (including replacement certificates) to ensure validity
- Automated delivery of licence applications, callsign recommendations & qualifications into ACMA Spectra system
- Expanded online automated callsign management:
  - Online auctions for vanity callsigns
  - Callsign reservation
- “Pay by the month” direct debit / credit card for payment of ACMA (and other) fees
- SMS reminders of upcoming licence expiry.

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## Solution Detail

### Examination Strategy

In developing a strategy for the execution of examinations against the syllabus (as prescribed in the ATM) careful consideration has been given to need to:

1. enhance the accessibility of amateur radio qualifications;
2. reduce the long term cost of providing amateur radio qualifications; and
3. comply with the structure of the syllabus in its current form;

Notwithstanding the applicability of Section 1 of the *Standards of Registered Training Organisations 2015 (Cth)* to non-vocational examinations, a community expectation requires that the principles described in the Standard in Table 1.8-1, Principles of Assessment, and Table 1.8-2 Rules of Evidence are enforced.

We note that the syllabus has not been reviewed in detail for a considerable period of time. The methodologies that are prescribed therein may not consider recent advances in technology that could alter the mechanics of the examination process. To this end we have sought to solve not only for a current state environment but a predicted future state environment.

We propose that under the direction of ATEAL, examinations are delivered using an expanded delivery framework which includes, but not limited to:

- Traditional paper based examination techniques
- Video invigilated remote examinations
- Online examinations invigilated locally by Volunteer Examiners
- Video based practical examinations
- Computer simulated practical examinations
- Assessor led special examinations

Materially expanding the array of examination options will allow:

- easy remote access to examinations;
- local clubs to remain relevant as a delivery vehicle for low cost volunteer delivered examinations;
- access to specialised assessment by duly qualified assessors for those with special needs.

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It is proposed that to the extent possible the use of electronic delivery of examinations be promoted as this allows the delivery of the assessment to be managed and monitored from the moment it is requested by a candidate to the time it is complete.

In order to ensure that these technologies are available upon execution of the deed we propose the use [REDACTED]

[REDACTED] and provides the feature set required to rapidly deliver on the promise of higher levels of automation and therefore lower cost.

Furthermore, the statistical information gathered by [REDACTED] will allow the question bank to be effortlessly curated, revised and managed.

The [REDACTED] platform permits offline assessments (ie: without internet), [REDACTED] video invigilation and is capable of supporting the requirements identified in the Rules of Evidence including, if required, video recording of the candidate being examined.

It is appreciated that during a transition period there will be circumstances where paper based assessments may be required, however, the accessibility and reduced service times provided by an electronic process are expected to ensure these events are in the minority.

The shift towards electronic delivery necessitates a rethink of the existing structure of Nominated Assessors, Learning Facilitators and Assessors.

We propose that under the new deed we replace Learning Facilitators and Assessors with technology, and the concept of "Volunteer Examiners" who, whilst trained in the process and mechanics of conducting examinations, are not required to make a valued judgement as to the competence of a candidate.

This is a material change to the current approach that is designed to improve access to suitably qualified "examiners" and allow a broader cross-section of educators to become "Volunteer Examiners" without requiring them to undertake additional vocational training.

It is anticipated that these steps will allow ATEAL far greater penetration of AOCP and other non-vocational training programmes into the community.

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Examination strategies for typical AOCPC examinations include:

- **Local Examination**

Candidate: *General member of public wishing to acquire an AOCPC*

Environment: *At an amateur radio club, high school, makerspace, scout hall etc*

Delivery Method - Theory: *Electronic/Online*

Delivery Method - Practical: *Video, Online, Simulated*

Endorsed By: *Volunteer Examiner, Assessor, Examination Partner*

High level workflow:

1. Examination is booked and paid for online.
2. Booking time date and location is confirmed with candidate.
3. Candidate conducts examination in the presence of Volunteer Examiners using online portal that provides appropriate questions (Multiple Choice Questions (MCQ), video, simulated, etc)
4. Examination portal provides immediate feedback of pass/fail
5. Candidate results uploaded to student management system
6. If qualification requirements are fulfilled certificate is generated and marked for electronic certification (eg DocuSign) by assessor.
7. Assessor certifies completion
8. Electronic certificate transmitted to candidate and, if desired by candidate, physical parchment is also produced.

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- **Remote Examination**

Candidate: *General member of public wishing to acquire an AOCP, located in a remote location within Australia or in a country outside Australia*

Environment: *At any location with Internet access and video.*

Delivery Method - *Theory: Electronic/Online*

Delivery Method - *Practical: Video, Online, Simulated*

Endorsed By: *Assessor, Examination Partner, Video Invigilator*

High level workflow:

1. Examination is booked and paid for online.
2. Booking time date is confirmed with candidate and the remote invigilator.
3. Candidate conducts examination in the presence of an online remote invigilator using a video invigilator using online portal that provides appropriate questions (MCQ, video, simulated, etc)
4. Examination portal provides immediate feedback of pass/fail
5. Candidate results and feedback from remote video invigilator uploaded to student management system
6. If qualification requirements are fulfilled certificate is generated and marked for electronic certification (eg DocuSign) by assessor.
7. Assessor certifies completion
8. Electronic certificate transmitted to candidate and, if desired by candidate, physical parchment is also produced.

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- **Special Examination**

Candidate: *Any candidate that has a bonafide reason why the preferred methodologies are not appropriate. This could include medical conditions, issues with literacy/numeracy, etc.*

Environment: *as determined between assessor and candidate.*

Delivery Method - Theory: *as determined between assessor and candidate.*

Delivery Method - Practical: *as determined between assessor and candidate.*

Endorsed By: *Assessor, Alternate Assessor*

High level workflow:

1. Examination is booked and paid for online.
2. Assessor determines most appropriate way of assessing candidate after conversing with candidate and any other relevant people
3. Booking time date is confirmed with candidate and the assessor
4. Candidate conducts examination using the methodology agreed with the assessor
5. Assessor uploads results and relevant evidence to student management system
6. If qualification requirements are fulfilled certificate is generated and marked for electronic certification (eg DocuSign) by assessor.
7. Alternate assessor certifies completion
8. Electronic certificate transmitted to candidate and, if desired by candidate, physical parchment is also produced.

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## **Certificate Issuance Strategy**

### ***Present State Challenges***

Historically “Certificates of Proficiency” have been issued in physical form on a parchment bearing:

1. The WIA emblem;
2. The Australian Government Emblem;
3. A signed photograph of the candidate that is glued to the certificate;
4. Signature of the candidate (signed after the candidate receives the certificate);
5. Signature of the authorising person; and
6. The embossed seal of the Wireless Institute of Australia.

The certificates, once issued, are mailed to the candidate. They are also scanned and emailed to the ACMA.

The current process creates a number of challenges that we seek to resolve on a go forward basis.

1. Obtaining a photograph, of the correct dimensions and correctly is often incorrectly prosecuted requiring the candidate to be pursued to provide the photograph.
2. If the photograph is provided after the exam there is no mechanism for validating that the photograph that is provided is that of the candidate (other than casual review of the signature thereon)
3. The process of assembling and scanning the certificate is time consuming.
4. The level of manual processing and postal interaction results in service levels that fail to meet the expectations of the community in 2019.
5. The process is subject to “key person risks” that cannot be easily resolved as a consequence of the need to have physical access to the parchment, the embossing tool other tools associated with certificate issuance

### ***Future State Vision***

We propose to materially alter this process and employ digital signing techniques to demonstrate the authenticity of Certificates of Proficiency with distribution being provided through electronic means with a physical certificate to be made available if requested (either in a parchment form, or a “credit card” format).

Whilst it is appreciated that the photograph may not add material value from an “identification” perspective our research into expectations of the amateur community suggests that the community prefers the photo to exist. In order to reduce the cost of photo management and meet the community expectation candidates would be expected to upload their photo during the enrollment phase of the exam, or the examiner would take a photograph (for example, with their mobile phone) and upload it during the course of the examination. In either case the examiner would be required to attest that the photograph is a true and accurate representation of the candidate. (This can be done using any of the examination mechanisms contemplated)

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Once a candidate has completed an examination and the student management system identifies that the requirements of a Certificate of Proficiency have been met an automated process:

1. Creates a proforma certificate containing all relevant information and the photograph
2. Queue the certificate to be endorsed by at least two of:
  - The most recent examiner
  - A suitably qualified assessor
  - A representative of the authority issuing the certificate (eg: a director or chief executive).
3. Once this process is complete the certificate will, in the first instance, be emailed to the candidate with instructions on how to request a physical version if desired.

This process is entirely automated and uses an electronic signing provider (eg: DocuSign) to certify each document. The use of an online signing provider allow service levels to be managed and for the responsiveness of those endorsing the certificate to be readily monitored and will permit automatic escalation of certificates that are not signed with service levels

Our service level target for this activity is no more than 5 working days from completion of examination to the candidate receiving their electronic certificate with a goal of “within 24 hours”.

The benefit of adopting this strategy for delivery of issuing certificates is clearly demonstrated:

- In FY17/18 there were over 600 certificates issued by the WIA. A recent time and motion study suggests that the current certificate issuing process takes around 15 minutes (including related customer support activities).
- The annual cost apportioned to the issuance of certificates based on this study was around \$9,000.
- Under the new model this is expected to reduce to around 5 minutes, however, because the work is undertaken by volunteer examiners, assessors and directors the cost attributed to the same number of certificates in the new model is expected to be around 10% of the existing system (excluding amortisation of capital costs).
- Because there are multiple people who can endorse the certificate and physical access is not required to release the electronic version of the certificate, operational single-point risks associated with performance of this function is limited to the correct functioning of the electronic processes.

In proposing this solution to issuance of certificates we are mindful of the need to ensure that at all times the processes that are implemented maintain a high degree of security, auditability and will withstand operational scrutiny.

**Example Electronic Certificate**

DocuSign Envelope ID: 8786A6DE-C30A-4FE7-A67A-C984626ED9CB



**Australian Government**

**Australian Communications  
and Media Authority**



Cert. No. 3129

## AMATEUR OPERATOR'S CERTIFICATE OF PROFICIENCY (ADVANCED)

*Radiocommunications Act 1992*

This is to certify that

### Aidan Philip Mountford

is a qualified operator in relation to a transmitter licence for an amateur Advanced station in accordance with the provisions of the *Radiocommunications Act 1992* (the Act).

The holder has demonstrated the required level of knowledge of:

- (a) electrical and radiocommunication theory;
- (b) the International Telecommunication Union (ITU) *Radio Regulations*, the provisions of the Act and the subordinate legislation including the licence conditions relating to the operation of an amateur station; and
- (c) the operation of an amateur station.

*The competency standards to which this certificate relate accord with ITU recommendation ITU-RM. 1544  
Les normes de compétence auxquelles ce certificat se rapporte, s'accordent avec la recommandation ITU-RM. 1544  
Die Kompetenzstandards, auf denen diese Bescheinigung beziehen, stimmen mit ITU-Empfehlung ITU-RM 1544 ueberein.*

*The holder has passed an examination meeting the requirements described in CEPT Recommendation T/R 61-02 (HAREC).  
Le titulaire de ce certificat a réussi un examen répondant aux exigences décrits dans la Recommandation CEPT T/R 61-02 (HAREC).  
Der Inhaber hat eine Prüfung bestanden, die den Anforderungen genuegt, die in der CEPT-Empfehlung T/R 61-02 (HAREC) beschrieben werden.*

**Description of Holder**

Height 173 cm

Distinguishing Features Hazel eyes; brown hair

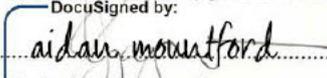
Date of Birth 21/07/1973

Place of Birth Adelaide, South Australia

Signature of Holder ..... 



This certificate of proficiency is issued by The Wireless Institute of Australia, a body approved by written instrument by the Australian Communications and Media Authority to conduct an approved examination pursuant to section 122 (2) of the Act and delegated by the Australian Communications and Media Authority pursuant to section 122A (1) of the Act to issue this certificate of proficiency.

**DocuSigned by:**  
 ..... Date of Issue Thursday, 12 September 2013

Authorised Representative  
The Wireless Institute of Australia



**Certificate Of Completion**

Envelope Id: 8786A6DEC30A4FE7A67AC984626ED9CB	Status: Completed
Subject: Please DocuSign: aocp.pdf	
Source Envelope:	
Document Pages: 1	Signatures: 1
Certificate Pages: 1	Initials: 0
AutoNav: Enabled	Envelope Originator:
Envelope Stamping: Enabled	aidan.mountford@fuuzio.com.au
Time Zone: (UTC-08:00) Pacific Time (US & Canada)	IP Address: 138.217.165.41

**Record Tracking**

Status: Original	Holder: aidan.mountford	Location: DocuSign
11/23/2018 8:39:54 PM	aidan.mountford@fuuzio.com.au	

**Signer Events**

aidan.mountford  
 aidan.mountford@fuuzio.com.au  
 Fuuzio  
 Security Level: Email, Account Authentication (None)

**Signature**

DocuSigned by:  
  
0B0427D8C6C5438  
 Signature Adoption: Pre-selected Style  
 Using IP Address: 138.217.165.41

**Timestamp**

Sent: 11/23/2018 8:40:14 PM  
 Viewed: 11/23/2018 8:40:28 PM  
 Signed: 11/23/2018 8:41:34 PM  
 Freeform Signing

Electronic Record and Signature Disclosure:  
 Not Offered via DocuSign

In Person Signer Events	Signature	Timestamp
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Editor Delivery Events	Status	Timestamp
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Agent Delivery Events	Status	Timestamp
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Intermediary Delivery Events	Status	Timestamp
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Certified Delivery Events	Status	Timestamp
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Carbon Copy Events	Status	Timestamp
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Aidan Mountford aidan@mountford.org Security Level: Email, Account Authentication (None)	<b>COPIED</b>	Sent: 11/23/2018 8:41:37 PM
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Electronic Record and Signature Disclosure:  
 Not Offered via DocuSign

Notary Events	Signature	Timestamp
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Envelope Summary Events	Status	Timestamps
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Envelope Sent	Hashed/Encrypted	11/23/2018 8:41:37 PM
Certified Delivered	Security Checked	11/23/2018 8:40:28 PM
Signing Complete	Security Checked	11/23/2018 8:41:37 PM
Completed	Security Checked	11/23/2018 8:41:37 PM

Payment Events	Status	Timestamps
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## Callsign Recommendation Strategy

### *Future State Vision*

There are a number of circumstances that may result in a callsign allocation being required, these include, but are not limited to:

1. As a requirement of a new licence application that has resulted from a successful examination resulting in a qualification;
2. As a requirement for a new licence application for an already qualified operator (including repeaters and beacons);
3. A reservation for an unqualified operator that is seeking future qualification (including bequeathed callsigns);

It is proposed that not only is the list of available callsigns available online, the process of obtaining a callsign be made available online as a component of requesting specific services from the WIA, for example:

- *Booking an examination*  
During the booking process a candidate will be asked to select a callsign from the available list. The selected callsign will then be reserved for a period of up to 12 months or until the candidate completes their assessment and/or a licence decision is made by the ACMA.
- *Requesting a repeater or beacon licence*  
During the process of applying for a repeater or beacon licence the applicant will be asked to select a callsign from the available list. This callsign will then be allocated to the applicant and reserved for a period of 6 month or until a licence determination has been made by the ACMA.
- *Reserving a callsign for future use*  
It is proposed that suitably qualified applicants will be able to apply for a callsign recommendation which can then be used:
  - alongside an application made directly to the ACMA or utilised alongside a future licence application.
  - in a future licence application made through the WIA.

This will permit the reservation of callsigns for period of up to 12 months or until a future licence determination has been made by the ACMA.
- *Reservation of a callsign as part of a bequest*  
A callsign reservation for a period of up to 2 years following the expiration of the licence on notification of a bequest.

Each of the activities above will result in a callsign recommendation or callsign reservation being produced in a PDF format and approved by WIA administrators using an electronic signing process.

Each callsign recommendation/reservation will specify:

- The callsign that is the subject of the recommendation/reservation
- The identifying details (including ACMA customer number, name, address, etc) of the entity that holds the callsign recommendation/reservation
- The expiry date of the callsign recommendation/reservation
- Any conditions that may be associated with the recommendation/reservation.

It is expected that embedding the callsign management activity inside other key processes will virtually eliminate the costs associated with this activity whilst providing a cohesive customer experience.

The complexity associated with obtaining this information during the examination process will also be eliminated allowing the implementation of remote video invigilation.

### ***Callsign Auctions/Lotteries***

It is proposed that callsign auctions/lotteries for high-demand “vanity” (for example 2 letter) callsigns in high density areas be undertaken online.

These auctions/lotteries will ensure that vanity callsigns are promoted prior to becoming available.

Given the scarcity and popularity of some of these callsigns a determination can be made as to whether each vanity callsign is offered:

- Tier 1: By auction at a variable price, with a reserve
- Tier 2: By lottery at a fixed price; or
- Tier 3: At a fixed price

### ***Special Callsigns***

Special callsigns are those that fall outside the callsign allocation template that has been approved by the WIA and agreed with the ACMA.

These callsigns follow the same processes as above, however, they have an additional approval requirement of the Board of the WIA.

This approval requirement will be implemented using the electronic signing methodologies used for other activities.

## **Licence Processing Strategy**

The existing processes for licence management are both cumbersome and, from a customer service perspective, fail to deliver the level of “instant gratification” that is expected in our present time.

### ***Future State Vision***

It is our view that the process of application for a licence should be an exercise in instant gratification.

Assuming the applicant has the relevant qualifications the process of obtaining a non-assigned licence should take no more than 24-48 hours.

In order to achieve this we propose implementing a “straight through” licencing process that begins with an online transaction and ends with an invoice from the ACMA for the relevant spectrum tax and administration fee.

It is proposed that the relevant information for licence forms to be submitted be collected online as part of a customer initiating a relevant transaction:

- Applying for a licence; or
- Booking an examination the qualification for which results in the ability to apply for a licence;

During this process, and as part of our terms and conditions we will seek to act as the customer’s delegate in licencing matters with the ACMA. The purpose of this is to remove the requirement for the customer to sign R057 or similar forms and allow the WIA to make the declaration that we are operating on the customer’s behalf.

If a customer is unwilling to endorse us in this capacity we will utilise the previously identified electronic signing processes to allow the customer to endorse any forms that are required.

It is proposed that when the conditions have been met for a licence to be issued:

- the person/entity is qualified;
- callsign recommendation is complete;
- appropriate fees have been remitted; and
- in the case of a repeater/beacon, assignment has been completed

we will then electronically submit the required information to the ACMA for licence issuance. We propose a short term and long term solution to this.

**Short Term Submission Process**

In the short term we propose to engage ACMA in this process by emailing an information/application pack containing:

- endorsed qualification of the person;
- endorsed callsign recommendation;
- facsimile of the relevant form or forms containing the key information that the ACMA require to process the application in an order that is convenient for ACMA staff that is:
  - Endorsed by the WIA if we are acting customer's agent; or
  - Electronically endorsed by the customer if not.

The ACMA can then process this using the existing mechanism.

**Long Term Submission Process**

In an effort to reduce the cost imposed by amateur radio on the ACMA and to further improve the customer experience we believe that the best long term approach to submission of licence applications is to employ an Application Programming Interface (API) to deliver non-assigned licence applications directly into the ACMA's spectrum management system - Spectra.

By doing this we have the ability to completely remove manual processing of licence applications where the applicant is qualified and has a callsign reservation and, in the event that these hurdles are not met, limit manual processing to endorsement of callsign recommendations and qualifications.

This is consistent with the current ACMA model of allowing "Accredited Persons" to submit assigned licences and our international peers who are permitted by their regulator(s) to submit amateur licences on behalf of candidates.

## **Recognition of Prior Learning Strategy**

The WIA will provide mechanisms for recognition of prior learning using both the agreed framework (as documented in the ATM) plus an extended framework that will seek to identify those elements of the syllabus that map to existing qualifications and units within the AQF.

RPL analysis will be undertaken by assessors within ATEAL and as new units/qualifications are identified they will be added to a publically accessible RPL map/matrix.

If possible we would seek to add these equivalencies as footnotes to the relevant modules in the AQF so that those undertaking vocational courses with other providers are aware of the possibility that elements of their qualification will transfer to the AOCF.

In order for RPL to work well there is a need to divide the existing syllabus into discrete modules to allow the highest possibility of being able to gain value from previous learning in seeking an AOCF. This issue is discussed in more detail under "Continuous Improvement".

During the process of developing the solution presented herein we have formed the view that RPL activities should be divided into three tiers:

- *RPL Tier 1*  
This applies where the evidence supporting the prior learning activities has not been previously identified as meeting the requirements of one or more modules in the AOCF syllabus.

The process for assessing RPL under these circumstances is a manual one and must be entirely conducted by a suitably qualified assessor.

- *RPL Tier 2*  
Where the evidence supporting a candidate's RPL application has already been identified as demonstrating knowledge or competency in modules of the AOCF syllabus, the RPL process is an administrative one.

Under these circumstances an administrator will review and collate the evidence and supply the recommendation to an appropriately qualified assessor to endorse.

- *RPL Tier 3*  
Tier 3 RPL is designed to encourage participation from people who have undertaken vocational studies to obtain their AOCP.

Where a candidate is seeking to utilise recognised units or modules from the AQF to support their RPL requirement an administrator will review and collate the evidence and supply a recommendation to an appropriately qualified assessor to endorse.

In all cases those that are found to not meet the requirements all the requirements of the AOCP will need to sit examinations for those elements of the syllabus where they fall short.

In the case of Tier 3 RPL a discount will be provided to these candidates to complete the Regulations, Practical and, if required, other modules for which they did not receive RPL to further encourage participation.

## **Continuous Improvement Strategy**

### ***Complaints management***

The WIA acknowledges the requirement for complaint management in the ATM and will ensure that the required processes continue to be implemented under any future deed.

Over the course of 2018 the WIA has undertaken a complete review of its internal complaints management process.

Resulting from this review is a new complaint management process that has been developed around the principles of:

- Australian and New Zealand Standard Guidelines for complaint handling in organizations (AS/NZS 10002:2014)
- Handling Privacy Complaints' Office of the Australian Information Commissioner (October 2016)
- Australian Charities and Not-For-Profit Commission "Complaint Handling by Charities and Not for Profits Model Policy"

The WIA board has also voted to voluntarily join the Australian Charities and Non-Profits Commission in order to provide further governance and escalation paths.

The new complaint management process seeks to fulfill the needs of the ACMA and the WIA and will be provided to ATEAL as part of the intellectual property transfer from the WIA to ATEAL.

This document is annexed to our response in Appendix 4, entitled "Complaints Management Policy and Procedure".

### ***Reporting***

The WIA acknowledges the requirement for reporting in the ATM and will ensure that processes continue to be implemented to support this under any future deed.

It is expected that the use of contemporary technology and automation will allow greater reporting both in terms of timing and resolution.

The WIA will work with the ACMA to develop a reporting strategy that meets the needs of the ACMA whilst, in the main, requiring little manual intervention.

**Syllabus Review**

The WIA acknowledges the requirement to be part of the Syllabus Review Panel as a required element of any future deed and would like to thank the ACMA for our inclusion in the Syllabus Review Panel even if this response is unsuccessful in being awarded a contract for the future provision of examination services to the amateur community.

We note that the syllabus review panel must meet prior to examination services being provided by any party under any new deed. In the interest of ensuring continuity of examination services we offer the following suggested outcomes for the first meeting of the syllabus review panel.

1. That the existing syllabus be divided into modules and these modules be mapped into the three tiers of qualifications.
2. Modules have an identified weighting
3. The syllabus identify the number of questions to be considered for each of the modules.
4. The syllabus be altered to expand the techniques permitted for “demonstrating” competence to permit simulation, video, and other tools.
5. The syllabus review panel meet before in mid 2019 to begin the task of harmonising the syllabus with the CEPT syllabus.

Modularising the syllabus will assist in allowing easier access to RPL and reduce the testing burden (and therefore cost) for those that have competencies in some areas but not enough to satisfy RPL requirements for the entire AOCP.

It is our view that this approach will also make it easier to have these modules/units integrated into the AQF and adopted by other organisations - this will in turn have a positive impact on the amateur cohort. Over time ATEAL would seek to develop courseware to support these units/modules under the AQF and licence this to others.

**Legislative and Regulatory Evolution**

The WIA acknowledges the requirements to negotiate in good faith in seeking to alter the deed should the legislative or regulatory environment be changed with material impact during the course of the deed.

We would like to take this opportunity to highlight a number of initiatives that form part of legislative and regulatory evolution that we believe would reduce the burden on the ACMA, reduce barriers to entry for new amateurs and improve the overall value of amateur radio to the broader community.

These include but are not limited to:

- Removing the requirement for apparatus licences by making the amateur spectrum class licenced or spectrum licenced (or the equivalent is under new legislation)
- Split the Licence Conditions Determination (LCD) into two documents:
  - An LCD that focuses on those activities required to ensure reliable and predictable spectrum management that is managed by the ACMA; and
  - An “amateur operator’s code of conduct” that encompasses operational matters relating to amateur radio that is managed by the WIA as the peak representative body for amateur radio in Australia. .
- Expand the callsign allocation strategy:
  - Assign callsigns to entities, not stations (this is tightly coupled with the previous item relating to apparatus licences)
  - Removes the limitation of callsigns for Foundation and Standard.
  - Remove the perceived requirement for callsigns to be geographically allocated.
- Allow amateurs (and/or clubs) to be responsible for a station even if they are not directly supervising it (this would allow low power repeaters to be owned by clubs and used in their local community for special events without having to have each operator holding an amatuer licence so long as the activities are being undertaken with no pecuniary interest)

**Question Bank Maintenance**

During the process of building the online banks of multiple choice questions they will be expanded in number, with revision of the existing questions to ensure relevance and accuracy.

New questions will be added from available relevant sources (for example the ARRL and NZART) if considered appropriate.

A review of all questions will be made to ensure that they are focussed on understanding of the knowledge rather than concentrating on factual recall and those that are not will be flagged for later revision.

The online examination software will allow statistical analysis of the individual questions in the bank that will allow ongoing improvement:

- Concepts such as item difficulty and positive item discrimination will be used to remove questions which do not discriminate between competent and not yet competent candidates.
- Questions which are either overly easy or difficult can be identified and edited to provide a more reliable and valid examination.

As this will require a number of examinations to provide statistically significant results, consideration will be given to collating recent past results for analysis.

Using the online examination's question bank management workflow will permit questions to be accepted from a broad cross section of the amateur community that are then validated, curated by the ATEAL team prior to their publication.

It is anticipated that this process will allow ongoing evolution of the exam bank to take place in an organic manner without requiring the substantial investment of resources required for periodic complete reviews.

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## Transitional Arrangements

In delivering this outcome there are a number of phases that will be executed concurrently.

1. NTO: Establishment of RTO
2. Creation of online testing capability
3. Delivery of technical integration

It is anticipated that the delivery of online testing capability, uploading of the question bank will be concluded within 6 weeks of execution of the deed at which point the new pricing will be made available to candidates.

Completion of technical integration and establishment of additional questions will be delivered within 6 months of the execution of the deed (It should be noted that the lack of completion of these activities will not impact the ability to deliver services)

Whilst the incorporation of ATEAL will occur in early 2019 the process of registering the organisation to become an RTO will take around 9 months with completion anticipated in October 2019 (9 months from deed execution).

Under the 2009 deed the WIA's NTO, Trainsafe, was accountable for the training and accreditation of assessors, learning facilitators and nominated assessors. The new model for the delivery of training and assessment will see assessors and learning facilitators become volunteer examiners.

A bridging course and assessment in the process and procedures will be made available to assessors and learning facilitators that are grandfathered into the new model as volunteer examiners.

In order to ensure examination continuity we propose a transition period of no more than 6 months from the effective date. During this time we propose, albeit subject to negotiation:

- Existing paper based examinations delivered under the old model would be accepted.
- No new examination papers would be printed.
- Volunteer Assessors would be required to complete bridging training and assessment to ensure that they are aware of the new examination requirements.
- Nominated assessors that have the appropriate level of qualification (as described in the Standards for Registered Training Organisations 2015) will become assessors within the ATEAL organisation.
- RPL activities will continue to be conducted by assessors within the ATEAL organisation.

Note: The WIA has identified an RTO with which an interim NTO arrangement can be established to oversee the operation of ATEAL whilst the RTO registration is undertaken if this is desired by the Customer.

## **Information Technology**

During 2018 the WIA conducted a review into the IT systems that it uses to manage operations. This review identified a number of areas where material improvement needed to be made to legacy IT systems.

In Q3 2018 the WIA sought to rebuild its IT management team adding a number of IT professionals who are vocationally active in the Information Technology industry. These professionals have knowledge of, and experience with, contemporary systems engineering.

## **Operational Support Systems**

The WIA has traditionally relied on “on site” servers to provide services to its office staff in Victoria.

During our review it was determined that this model was:

- Negatively impacting the ability for our team to innovate
- Not scalable
- Prevented the broader team of WIA volunteers from being able to participate fully in the activities that they had been assigned.
- Creating unnecessary work for our office team by requiring them to be the “gatekeeper” for all transactions.

In order to resolve this the WIA has begun the move to migrate these services into contemporary cloud platforms that meet requisite information security standards.

The selected platforms that were chose are:

- Amazon Web Services - Elastic Cloud 2 (AWS EC2) for compute and storage requirements.
- Google for business data, collaboration and backup service.

***Customer Support and Workflow Management***

In early 2018 the WIA introduced a trial of Service Management and workflow management tools that are engineered to deliver a more transparent customer experience whilst allowing a number of important activities to be carried out including:

- realtime reporting on the volume of work that is being addressed;
- the depth of the backlog;
- performance against SLA;
- activity recording; and
- recording of communication between our teams and customers.

The trial focussed on office workflow and, in Q3 2018 was deemed successful, and the system was then placed into production.

Having placed this system in production we are now moving the various business units' activities into this system and training volunteers in its use.

A critical success factor of implementation of this system was controlling who had access to information that is contained therein and restricting the flow of information to uncontrolled (ie non-wia) email accounts.

The system operates by eliminating the flow of information regarding a query (either internal or external notes/comments) from the system to our volunteers.

Furthermore, recognising that we have a need for large numbers of volunteers to participate in WIA activities, the system is compartmentalised so that volunteers can only see information related to their activities.

It is anticipated that all WIA services (via a Service Catalogue) will be migrated into this platform by mid 2019.

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### **Core Business Systems**

Part of our review into IT systems identified a need to manage corporate knowledge more effectively. The existing process maintaining information in local hard drives or within private PCs was considered problematic and, in Q3 2018 the WIA sought, and received, [REDACTED] access to the Google GSuite product.

It will take some time to migrate all business units to this platform, however, at this time a number of critical groups have been migrated including:

- The Board
- Strategy Committee
- Education Group
- Information Technology Group
- Marketing Group

The implementation of GSuite across the business allows:

- Protection of corporate data assets;
- Prevention of corporate memory loss;
- Auditing of document changes.
- Remote backup of all relevant corporate data to protect against data loss
- A platform for managing access to corporate data.
- Video conferencing and collaboration tools that ease the process of managing a large geographically diverse team
- GMail to be made available to all members of the WIA to add further value to further value to our members

### **Website**

As is evident from our proposal, the implementation of our vision relies heavily on the use of contemporary internet based technologies.

To this end our IT team has begun the process of reconstructing the WIA website to better reflect the needs and expectations of our community.

This process is expected to be completed in mid 2019 and will deliver:

- Contemporary web platform for affiliated clubs
- eCommerce facilities
- Better online member management
- More advanced member self service.

Following the implementation of the new site the legacy site will be shut down.

## **Information Security**

During our IT review information security was identified as a critical element of any future design.

A review of the data that we hold was undertaken to classify it against the federal government Information Security Manual (ISM). This analysis concluded that the highest classification was "Sensitive:Personal".

With this in mind we have sought to build IT solutions that are based around this classification and was a material selection criteria in selecting our compute provider.

## **Amazon Web Services**

AWS provides numerous services that have achieved Information Security Registered Assessors Program (IRAP) certification of which the WIA plans to utilise in the hosting, storage, and delivery of WIA technology solutions.

AWS has been certified under the Information Security Registered Assessors Program (IRAP). This letter of compliance is available in appendix 5.

## **Other Information Security Controls**

In handling of information the WIA has considered both the Australian Privacy Principles and the ISM.

The WIA technology team have researched and read through the Australian Signals Directorate's (ASD) Information Security Manual (ISM) and will implement policies regarding the WIA's technology solutions which are connected to services provided to the ACMA. Policies will either meet or surpass the ISM. These include but are not limited to:

- Introduction of Media Handling, usage, sanitisation, destruction and disposal policies.
- Document for every user to sign and acknowledge before handling any content
- Not storing any information on local peripherals outside WIA management--supported by cloud systems.
- Software / Operating System package updating, patching and maintenance Policies.
- Database audit logging and access control with backups.
- Access control policy to Identify, authenticate and authorise any user.
- Event logging
- Network security policies
  - For any relevant system accessing the network, within the network or systems administrators maintaining the network
  - Firewall Policies ensuring safe defaults and whitelist access.
  - Cryptographic tools for ensuring the secure transmission of information when communicating, disseminating, or accessing information.

***Information Security Registered Assessors Program (IRAP)***

The WIA has engaged with IRAP auditors and through discussion have concluded that we are not directly required to have this accreditation.

The WIA will, however, introduce best practice with security handling according to the ISM and where appropriate leverage the certifications of our 3rd party providers.

**External Consultants**

During the course of designing this solution the WIA has engaged with external consultant [REDACTED] and leveraged their extensive experience in building solutions for the non-profit and startup sector including digital learning and information systems for [REDACTED]  
[REDACTED]

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## **Part 4 - Potential Supplier's Proven Capacity**

### **Statement of Skills and Experience**

The WIA has been performing the activity of examination and callsign recommendation under delegation from the the ACMA under the existing deed since 2009 and prior to this under arrangements with the former Australian Communications Authority.

Since 2009 the WIA has performed 30,123 work units related to the 2009 deed consisting of:

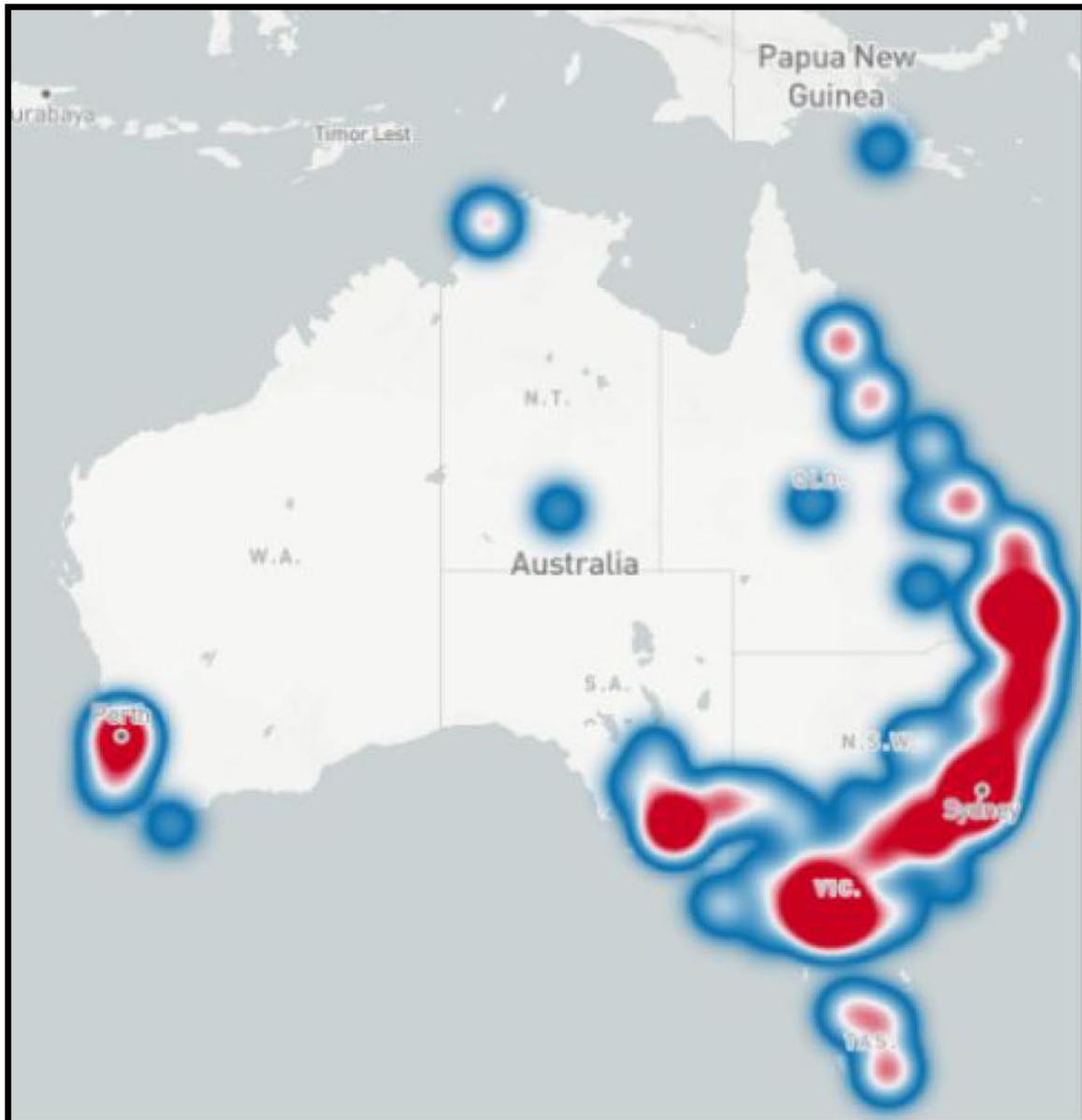
- conducting 13,249 examinations
- issuance of 6,038 certificates of proficiency
- made 10,836 callsign recommendations

These activities have been undertaken by a team of staff members, assessors, nominated assessors and learning facilitators both locally and internationally.

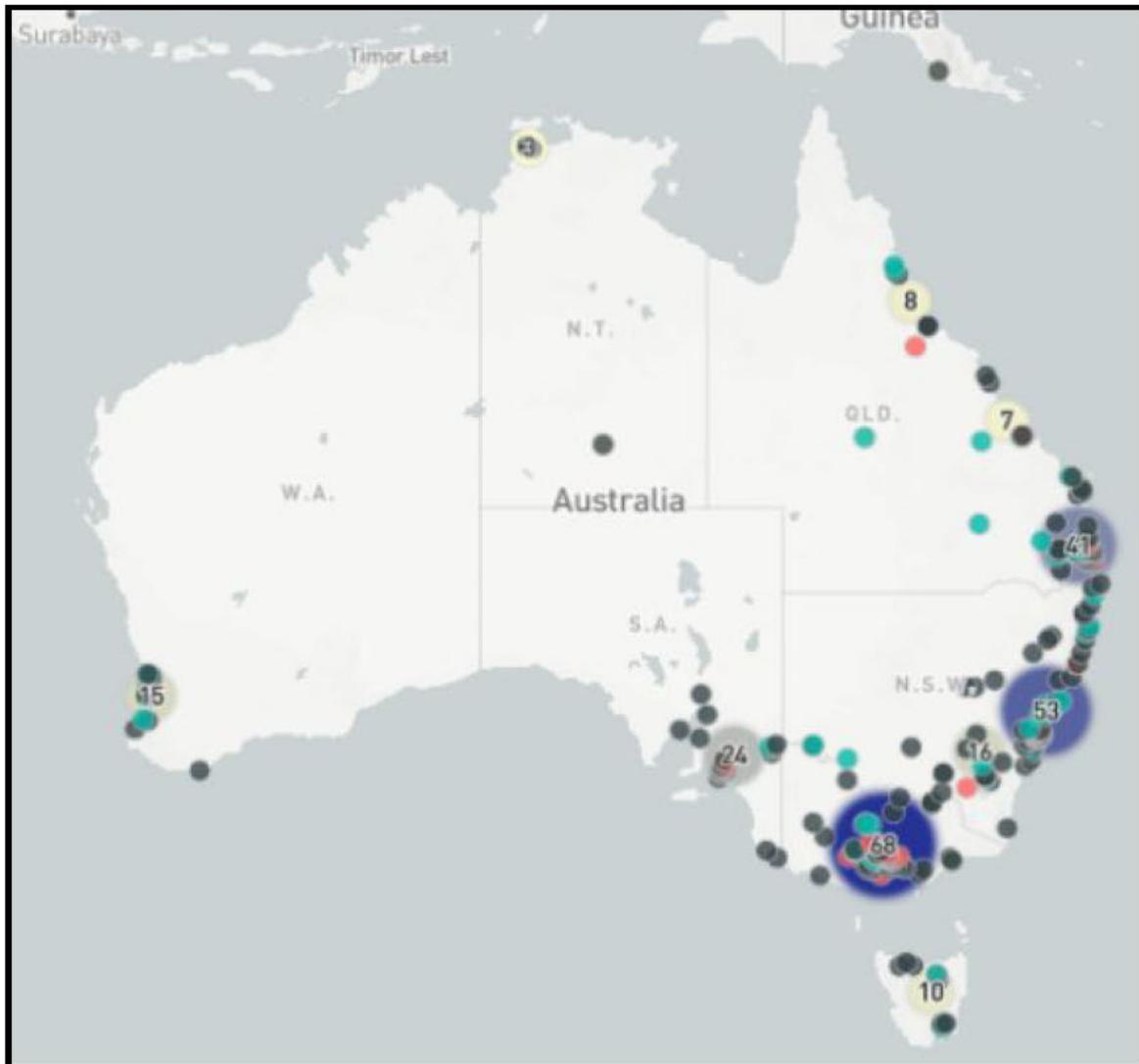
Whilst this process has not been entirely free of complaints the number of complaints lodged that relate to statutory functions delivered over the course of the 2009 deed number is 5 representing 0.0002% of the total number of deed related work units.

One of these complaints involved the Human Rights Commission and all complaints have been resolved either within the statutory timeframe or where this was not possible all parties were informed of the delays.

The distribution of our examination team covers most populated areas of Australia as demonstrated in the following “heat” map:



The following cluster map demonstrates distribution matching the populated areas.



In total, Q4 2018, there are 295 members of the examination team comprising:

- 25 Nominated Assessors
- 216 Assessors
- 54 Learning Facilitators

There were 2541 audits of Assessors and Learning Facilitators undertaken by the Nominated Assessors over the period of the deed averaging 271 audits each year.

There were 157 assessment queries requested over the period of the deed averaging 16 per year.

	<b>Assessors</b>	<b>Nominated Assessors</b>	<b>Learning Facilitators</b>	<b>Total</b>
<b>ACT</b>	5	1	1	7
<b>NSW</b>	67	5	14	86
<b>VIC</b>	59	5	10	74
<b>QLD</b>	40	6	17	63
<b>SA</b>	21	4	1	26
<b>WA</b>	10	2	5	17
<b>TAS</b>	6	2	4	12
<b>NT</b>	6		2	8
<b>PNG</b>	1			1
<b>Seychelles</b>	1			1
<b>Total</b>	<b>216</b>	<b>25</b>	<b>54</b>	<b>295</b>

It should be noted that there is one team member providing support to the population of Seychelles and another team member providing support to the population of Papua New Guinea by conducting training and assessment of the Australia Amateur Operator's Certificate of Proficiency for qualification of operators within those countries.

Provision of training for assessors, learning facilitators and nominated assessors has, for the past 10 years, been undertaken by Trainsafe - our Nominated Training Organisation with each team member trained to a minimum level of:

- Nominated Assessor
  - Minimum of Cert 4 in Workplace Assessment and Training
- Assessor
  - MEM17002B Conduct Workplace Assessment or equivalent
  - MEM17001B Assist in Development and Deliver Training in the Workplace, or equivalent
- Learning Facilitator
  - MEM17001B Assist in Development and Deliver Training in the Workplace, or equivalent.

Despite the fact that the mechanics behind the conduct of examination have changed little over the past 10 years these processes have allowed the WIA examination team to successfully carry out examinations in a number of extremely challenging environments without compromising the validity of the examination.

The capability and capacity to perform robust assessment and examinations in challenging circumstances is pivotal to ensuring accessibility to amateur radio for all those who wish to participate.

We present below three case studies demonstrating the complexity of the some of the "corner case" examinations that we have performed under the 2009 deed on behalf of the Customer and the ACMA.

**Case Study 1 - International remote assessment.**

An Australian living and working in India requested a remote assessment for Standard Theory, Regulations and Practical. The part of India, where the candidate was located, had no postal service. There was reasonable internet and telephone connection available. Courier delivery of assessment documents was investigated and found to be much too expensive. Remote assessments of any type are always conducted by WIA Nominated Assessors. At the remote exam location a suitable Remote Supervisor is required. The candidate was able to nominate the company solicitor as remote supervisor.

Fortunately the candidate had the ability to print and scan documents as PDF. The public assessment forms were emailed to the candidate in PDF format. The candidate printed these and kept them for completion during the assessment. International assessments must take into account the differing time zones. A date and time for the assessment was determined and prior to that the Internet communications, using Skype with video, was tested to ensure it was adequate.

At the assessment the remote supervisor was instructed on how to complete the assessment documents with the candidate. The practical assessment was completed by simulation of the use a radio communications on Skype. The Written assessments done by sharing via cloud link the multiple choice exams. The candidate did not have a hard copy of the exams and could not download or print the exam papers to maintain the security of these documents. The candidate recorded his answers on a sheet of paper to be read back to the assessor when the assessment was complete.

At the end of the assessment the candidate was given their results. The candidate then was required to scan the completed assessment documents and return them to the assessor via email.

This is an example of one of many remote international assessments. Remote Assessments have been conducted in many countries. For example, China, India, Italy, Indonesia, and Norfolk Island. It is the objective of the exam service that an assessment can be conducted anywhere and at anytime. Provided communications is available this has been achieved.

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**Case Study 2 - Special Assessment.**

A special assessment is an assessment where that candidate has circumstances such as a disability that prevent them from participating in a normal assessment. For such an assessment the candidate must provide acceptable evidence of their disability. Special assessments are only conducted by Nominated Assessors.

A person who was visually impaired contacted the exam service for Assessment in Advanced Theory and Regulations. The exam service was able to provide to the candidate, in advance of the assessment, a talking power and SWR meter. On the day of assessment the candidate was assisted by the Assessor in completion of the assessment documents.

The best method of assessment was discussed with the candidate prior to the assessment. There are times when a multiple choice question can be read verbatim to a fully blind candidate, providing the question lends itself to this method. Some multiple choice questions can be confusing due to the length or their structure. As this is considered to be disadvantage to the candidate, in such cases, the assessor questions the candidate in an interview style to determine if the candidate knows the element of competency being tested by the written question.

**Case Study 3 - Special and Remote assessment.**

A candidate contacted the exam service and provided medical evidence of a mental health disability and requested a special assessment. A nominated assessor was appointed to conduct the assessment.

Contact was made with the candidate and the different methods of assessment were discussed with a view to help find a suitable method. The candidate while in Australia was in a remote location. When asked about a suitable remote supervisor the candidate asked if a mental health professional (a nurse) who visits once a week would be suitable. This was considered suitable and the candidate was asked permission for the assessor to contact the Nurse and approval was given.

Communication ensued between the Nurse and the Assessor and was confined to discussing the best way to assess the candidate. It was decided to do a few of practice exams, using Skype with video and with the Nurse present. These were done over a period of three weeks and the candidate gained the confidence to request the actual assessment.

The assessment was conducted with the Nurse acting as Remote Supervisor and the candidate was found competent. This is one other example where assessment is not straightforward. This candidate was willingly given a lot of assistance due to their particular disability.

The fees charged by the WIA Exam service for remote, special and remote and special assessments are the same as for normal assessments.

## **Specified Personnel**

It is the view of the WIA that the naming of individuals as part of a contractual outcome serves to create key person risks that are unacceptable to the WIA and to the amateur community.

Rather than seek to rely on key individuals for the performance of tasks under any agreement that may be reached as a consequence of this proposal the WIA has sought to enlist the assistance of a significant group of individuals from within the community to ensure that the execution team has both the skills and experience to deliver the outcome whilst eliminating key person risks.

The capabilities of this team cover:

- Education (Vocational, Academic and Prevocational)
- Learning and Assessment
- Law and Contract Management
- Commerce
- Corporate Governance, both “for profit” and “nonprofit”
- Capital Raising
- Leadership
- Training and Assessment

With industry backgrounds including:

- Corporate
- Government
- Startup/Private Enterprise
- University
- Secondary Education Sector

We have included biographies for the current the WIA Education Group in Appendix 1 to this response should you wish more information.

## **Contractors and Scope of works to be contracted**

As described in our proposal the WIA intends to engage ATEAL to perform the examination function and to issue Certificates of Proficiency.

In the event that an agreement is reached between the WIA and the Customer to provide examination and certificate issuance functions the WIA would enter into a back to back contract with ATEAL to provide these functions on a basis not materially dissimilar to those of the agreement between the Customer and the WIA.

We observe that there may be benefit in the Customer seeking to have direct agreements with ATEAL and the WIA. The WIA is not adverse to this should it be of benefit to the Customer.

ATEAL intends to leverage the services of a third party examination platform, for example, [REDACTED] to provide remote invigilation and assessment, question bank management and statistical analysis capabilities.

The WIA and ATEAL may use third party consultants to provide advice on the most appropriate use of technology.

ATEAL will be engaging a consultant to assist in the RTO establishment.

## **Conflict of Interest**

The WIA is not aware of any circumstances that would cause a conflict of interest, either real or perceived as a consequence of entering into an agreement with the Customer to undertake the activities outlined in the ATM.

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**Referees**

<b>Referee Name</b>	<b>Position / Company</b>	<b>Phone No</b>	<b>Email Address</b>
Tim Ellum VE6SH (Canada)	President International Amateur Radio Union	+14032603533	tellam@iaru.org
Wisnu Widjaja YBØAZ (Indonesia)	President - Region 3 International Amateur Radio Union	+628111267895	wisnu@iaru-r3.org
ACMA (Australia)	Spectrum Management Policy Branch		

## Confidentiality of Potential Supplier's Information

Information in the Deed considered necessary to be confidential	Reasons for requesting confidentiality
Part 2, Part 3, Part 4, All Appendices	<p>Our response contains material that is of a commercially sensitive strategic nature that is not publically available, nor has it been published to our membership.</p> <p>We have chosen to expose these strategies in this response for the purpose of illustrating the WIA's commitment to the revitalisation of Amateur Radio and the deliver of greater broad-base community benefit to the hobby.</p> <p>The release of this information in a public forum has the scope to cause irreparable harm to the WIA, its management and membership and as such we request that this is embargoed.</p> <p>The above notwithstanding, the WIA recognises the general community benefit in ensuring that the procurement process used when selecting the providers of public services, to the extent commercially reasonable, be entirely transparent.</p> <p>The WIA requests that confidential sections be embargoed for 5 years from the date the new deed is executed, or until the confidential information contained in this submission becomes generally available, whichever is earlier.</p>

## Part 5 – Proposed cost recovery fee schedule

### Examination Fee Schedule

<i>Description of service - Statutory</i>	<i>Price Ex GST</i>	<i>Price GST component</i>	<i>Total Price Inc GST</i>
Examination - Foundation (Regulations/Practical/Theory and next callsign available) Under 25 years of age	\$24.55	\$2.45	\$27.00
Examination - Foundation (Regulations/Practical/Theory and next callsign available) 25 years of age or over	\$44.55	\$4.45	\$49.00
Examination - Standard (Practical/ Theory and next callsign available)	\$80.00	\$8.00	\$88.00
Examination - Advanced (Practical/ Theory and next callsign available)	\$90.00	\$9.00	\$99.00
Examination - Practical only	\$30.00	\$3.00	\$33.00
Examination - Standard theory only	\$60.00	\$6.00	\$66.00
Examination - Advanced theory only	\$70.00	\$7.00	\$77.00
Examination - Standard/Advanced Regulations only	\$50.00	\$5.00	\$55.00
Examination - Remote Online Invigilated	\$44.55	\$4.45	\$49.00
Examination - Paper Based surcharge	\$17.27	\$1.73	\$19.00
Examination - Resit - Foundation (Under 25 years of age) within 6 months	\$17.27	\$1.73	\$19.00
Examination - Resit - Foundation (25 years of age or over) within 6 months	\$26.36	\$2.64	\$29.00
Examination - Resit - All others within 6 months	\$35.45	\$3.55	\$39.00

**Note:** All exams include callsign recommendation for a random callsign. Resit exams must be taken within 6 months of the original exam in order to qualify for the discounted rate.

## Miscellaneous Fee Schedule

<i>Description of service – Non-statutory</i>	<i>Price Ex GST</i>	<i>Price GST component</i>	<i>Total Price Inc GST</i>
Callsign Recommendation - Specific callsign requested with exam - Foundation	\$13.64	\$1.36	\$15.00
Callsign Recommendation - Specific callsign requested with exam - Non-Foundation	\$35.45	\$3.55	\$39.00
Callsign Recommendation - Specific callsign requested outside exam - Foundation	\$24.55	\$2.45	\$27.00
Callsign Recommendation - Specific callsign requested outside exam - All Others	\$71.82	\$7.18	\$79.00
Callsign Recommendation - Specific callsign requested outside exam - International Visitor	\$50.00	\$5.00	\$55.00
Callsign Recommendation - Specific callsign requested outside exam - Resident with International Qualifications	\$90.00	\$9.00	\$99.00
Callsign Recommendation - Vanity Callsign - Tier 1 - VK2/3/4			By Auction with \$200 reserve
Callsign Recommendation - Vanity Callsign - Tier 2 - Lottery Entry Fee (covers entry to 3 lotteries)	\$26.36	\$2.64	\$29.00
Callsign Recommendation - Vanity Callsign - Tier 2 - Assignment fee if successful with lottery	\$150.00	\$15.00	\$165.00
Callsign Recommendation - Vanity Callsign - Tier 3 - On Demand	\$100.00	\$10.00	\$110.00
Recognition of Prior Learning (RPL) - Tier 1 - Assessment of Syllabus	\$180.00	\$18.00	\$198.00
Recognition of Prior Learning (RPL) - Tier 2 - Administrative	\$90.00	\$9.00	\$99.00
Recognition of Prior Learning (RPL) - Tier 3 - AQF Admission (discounted offered on Practical and Regulations)	\$45.00	\$4.50	\$49.50
Certificate Replacement	\$63.64	\$6.36	\$70.00

**Note:** The WIA and ATEAL reserve the right to subsidise services for members.

Appendix 6 contains the financial modelling from which the above tables were derived.

## Appendices

### Appendix 1: Biographies of WIA Education Group Members



**Ron. Bertrand Dip T&A, ADip E&C.**

Ron has been involved in the creation and delivery of technical training courses for more than 40 years. He is the founder and Manager of the Radio & Electronics School established in 1997, continuously in operation to the present. Ron holds the qualifications for and has produced and delivered courses for all major Radiocommunication Certificates of Proficiency (AOCP, BOCP, TVOCP, ROGCP). He has a Diploma of Training and Assessment Systems and an Advanced Diploma of Electronics and Communications.



**Dr Steve Beveridge BSc, Dip Ed, MSc, PhD**

Steve has a Bachelor degree in Chemistry; a Diploma in Education (Science Education) from the University of Newcastle; MSc in Organic Chemistry from Sydney University and a PhD in Bio-Inorganic Chemistry from the University of Newcastle. In his early career, Steve was extensively involved in preparing Science Teachers (having been a High school Science Teacher) and Nurse Educators.

Steve was appointed to the NSW Board of Higher Education Assessment Panel as a Science Expert to assess new degree programs being proposed in various institutions across NSW at the time, such as the Bachelor in Nursing program at Avondale College. He has lectured in all facets of undergraduate Chemistry and has supervised honours, Masters and PhD students during this period.

Although Steve retired from full-time employment from the University of Newcastle in 2004 as an Associate Professor in Chemistry, over the ensuing 12 years he has been extensively involved with the Enabling Programs at the University of Newcastle, where the program has been recognized as a national leader in supporting adults with diverse socio-economic and cultural backgrounds prepare for First year undergraduate programs. It encompasses preparation in study techniques, as well as moving into the academic material presented in the First Year Chemistry courses.

Steve, VK2LW, has over 25 years experience in Amateur radio and has been an Assessor for Amateur Radio qualifications since 2013.

**Elizabeth Billiau (Dodd) M.B.,B.S, MEd, FRACGP, FACRRM.**

Elizabeth is a medical practitioner with 40 years experience. She has a Master of Education completed in 2016. She has about 10 years experience on not for profit company boards, as an ordinary director and as Treasurer. She is a Clinical Senior Lecturer for the University of Wollongong and an examiner for the Australian College of Rural and Remote Medicine and is currently a member of the College's Quality and Safety Council. She has over 30 years experience in Amateur Radio and is also an Assessor for Amateur Radio examinations.

**Dr Harry Edgar BSc, Grad Dip(Law), PhD, C.Eng, CP.Eng, FIEAust, FIET.**

Dr Harry Edgar has a Bachelor degree in electronics and a PhD in Telecommunications from what is now Northumbria University UK. He spent four years as Senior Lecturer, then Head of Department and Acting Dean of Faculty of Engineering and Communications at what is now Leeds Beckett University UK teaching to final year degree telecommunications students, research and PhD student supervision. He then spent eleven years at Curtin University Perth teaching to final year telecommunications students and PhD student supervision. Harry has spent many years in engineering, technical development, management and troubleshooting in power control and process control systems. He has a post grad Certificate in Law specialising in Contract Law from Notre Dame University and has spent 13 years in state government Main Roads in Contract Management, Contract Superintendent and Contract Development and Writing.

**Sue Evans**

Sue is experienced in RTO management and accreditation. A qualified primary school teacher, she moved into the Vocational Education Training and adult education sector 20 years ago. During this time she has been accountable for course accreditation, RTO registration, development and validation of training materials and assessments, and auditing and compliance. As a lifetime educator, Sue holds of a Diploma of Teaching and a current Certificate IV of Training and Assessment.

She brings to the WIA Education Group a wealth of operational experience in both public and private vocational educational. Her knowledge is underpinned by qualifications in Quality Auditing, Management, Business and Project Management.

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**Phillip Hutchings B Eng Hons (1st class), Dip Business Admin**

While retired from full time employment, Phil is a non-executive director of Northpower Limited in New Zealand. Northpower has 1,200 staff and revenue of NZ\$350 million/yr. It is a mix of three businesses - an electricity distributor in its own right, the leading contractor to other electricity distributors, and the fibre to the home network installer and operator in its franchise area (a mini-NBN).

After training as an engineer in his native New Zealand, Phil emigrated to Australia in 1980. He moved into commercial management with the export oriented mining sector with BHP Billiton (new mine feasibility studies) and Queensland Nickel (debt restructuring, expansion financing) for ten years. This was followed by nine years in corporate finance as a partner of Wilson HTM (stockbrokers) where he headed up the the research team and was instrumental in many corporate fund raisings.

Since 2000, Phil has consulted to a small group of technology and energy companies including periods as CEO or General Manager. As a result, Phil has experience in renewable energy in both Australia and Germany.

Phil, VK4PG has held an AOCPP since 1981. He is active in the Australian amateur radio community being Secretary of Bayside District Amateur Radio Society and Chairman of the WIA's Strategy Advisory Committee.

**Joseph Mullins**

Joseph is an avid technology enthusiast striving to develop and extend the capabilities of technology in a scalable, robust and secure way. After being a Technical Manager in a software development firm, Joseph now leverages this passion in his own company; offering new and innovative solutions to extend customers technology capabilities.

Joseph has direct experience in migrating in-house systems to cloud providers, predominately Amazon Web Services (AWS) but also a vast array of other providers. Keeping up to date with cloud offerings enables Joseph to advise of best-fit technologies for clients looking to realise the benefits cloud providers offer.

Joseph brings fresh eyes to existing systems providing a flexibility that is not easily accessible in operators that have done things a certain way for a lengthy period. This enables new benefits to be realised and alternate cost effective solutions to be provided.

**Aidan Mountford FIML, GAICD, GIA(Cert)**

Aidan has over 20 years experience delivering strategic commercial outcomes through technology based product development, operational efficiency, governance and risk management in executive roles (Chief Technology Officer, Chief Operations Officer and Technical Director) and non-executive directorship and advisory roles.

Aidan's expertise has contributed to the success of start-up organisations; the turn-around of mature organisations; and the successful integration of mergers and acquisitions. Aidan's career has involved senior roles across a broad cross-section of IT & T disciplines in both listed and private organisations.

Through the customer/end user engagement that is obtained by operating at the "coal face" of both software engineering and telecommunications service providers, Aidan has gained valuable insight into the unique mechanics and challenges of many industries, including those of state and local government, non-profit, mining, medical, finance, education, retail, wholesale and service providers.

Aidan presently involved in building a new enterprise in the renewable energy sector.

Aidan, VK4APM has had a lifelong interest in radio and electronic and has been an assessor since 2014.

**David Uzzell**

David has spent 20 years in Rural and Remote NSW and Qld and has developed a deep understanding of the hardships and limitations for training locally. He holds qualifications in property and security and certificates in a variety of technical competencies.

His 20+ year involvement in Scouting has delivered enormous insight into many aspects of youth development and program delivery. His involvement in Amateur Radio started in 1990 as a youth member running Jamboree of the Air (JOTA) alongside Licensed Amateur Radio operators. He has been actively involved in JOTA alongside both Scouts and Guides every year thereafter.

David (AK2DM) was originally licenced in 2008 and immediately became a Learning Facilitator working almost exclusively in Remote and Rural NSW & Qld. He also holds an FCC Amateur Extra qualification and is certified by the American Radio Relay League as a Volunteer Examiner in Australia. He has conducted exams throughout South Eastern Qld and NSW East coast and brings detailed and direct knowledge and experience of the largest Amateur Radio examination system in the world.

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## **Appendix 2: Introducing the Australian Technical Experimenters Academy Limited**

### **Background**

The modern WIA has a proud 100+ year history as the oldest representative body for Amateur Radio in the world.

During this time through many trials and tribulations, the WIA has supported the Australian Amateur Radio community ensuring that the plight of our community of experimenters is heard by both Australian and International regulatory bodies alike.

In Australia, as it is in many places around the world, Amateur Radio is once again under attack but this time not from external forces, but from within. Many operators have forgotten why it is they became an Amateur Radio operator and how their hobby assisted them and their community throughout their life.

The existential threat now faced by Amateur Radio is that of community relevance. This problem is perpetuated by narrow minded short-term thinking and tactics that involve recycling aged solutions to modern problems.

The community has changed and for Amateur Radio to remain relevant, it too must change.

The Wireless Institute of Australia's mandate of promotion, and representation has served the community well in the past, however, a new approach is required to ensure that Amateur Radio and the WIA continues to deliver value to:

- the operators who partake in the hobby;
- clubs and associations of which operators are members; and
- the communities that surround these local clubs and associations;

In delivering value it must be recognised that the "Value" of Amateur Radio is no longer merely about scientific research. The 150 affiliated clubs of the WIA provide:

- A forum for improving the overall health of men and women. (Amateur operators are in the main, male, although this is changing);
- Communications support for local and regional community and sporting events;
- Forum for self education and development;
- Building social capital for operators both "face to face" and "on the air"

The WIAs approach to ensuring these objectives are met involves separating the more general learning and qualification activities from the “Amateur Radio” specific functions of callsign issuance, spectrum management, representation and promotion. A separate education vehicle will ensure that over the long term, a broadening base of social objectives can be met whilst leveraging the existing cohort of well educated and committed technical experimenters that comprise the Amateur Radio community.

### **Our Vision**

The Australia Technical Experimenters Academy Limited (ATEAL) is a charity that will be founded by the Wireless Institute of Australia with a clear vision of ensuring that:

*“All Australians have access to learning systems that allow them to safely develop their capabilities in technical and technology related disciplines in both a vocational and recreational capacity.”*

The opportunity to deliver both vocational and non-vocational learning outcomes to a broad cross-section of the Australian community will provide:

- school age children with opportunities to explore and experiment in technical fields that they may not otherwise have.
- young adults with vocationally relevant training to deepen their practical understanding of radio, electronics and allied pursuits
- an avenue for middle-aged adults to experiment with and contemplate alternate career paths or hobbies.
- Retired adults with non-vocational learning outcomes to provide fulfillment and mental exercise in later life.

ATEAL will leverage build a network of accredited and like-minded clubs and associations to deliver these outcomes. These clubs and associations will include, but are not limited to:

- Makerspaces/Hackerspaces
- Community Houses
- Mens Sheds
- Scouts and Guides
- Secondary School STEM clubs
- Amateur Radio clubs

## Our Mission

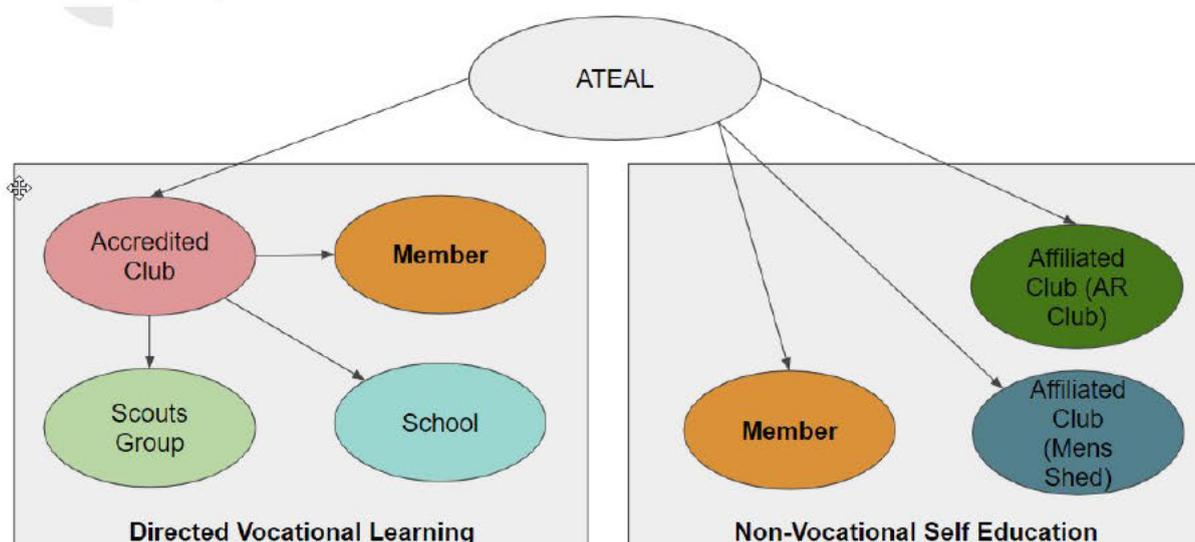
Our mission is to develop and deliver technical learning and assessment outcomes to Australians of all ages by building a network of passionate community groups that can deliver life-long learning to member of the community whilst being sensitive to their personal stages of development and growth.

- *Pre-vocational*  
Giving participants an early advantage in technical and technology studies
- *Vocational*  
Providing an outlet for self expression, continued study and career advancement
- *Post-vocational*  
Providing an avenue for ongoing lifelong learning in areas of interest

## Delivery Model

ATEAL will provide access to its learning programs through both direct and indirect membership.

- Accredited organisations will provide directed vocational learning programs that are fully compliant with the requirements of vocational training organisations.
- Affiliated organisations and direct members can access ATEAL's library of training programs for the delivery of non-vocational community training programs that can be customised to suit their specific cohort and teaching capability.



## Membership Classes

ATEAL will support a number of membership classes in order to differentiate between :

- **Accredited Body**  
An incorporated entity that has been accredited to deliver ATEAL learning outcomes in a vocational capacity.
- **Associated Body**  
An organisation that is affiliated with ATEAL and whose members have access to the learning resources, platforms and systems for their own personal development. The WIA will be an associated organisation.
- **Member**  
A member, who is not a member of an associated club/group, who wishes access to the learning resources, platforms and systems for their own personal development.
- **Associate Member**  
A member who is a member as a consequence of membership of another associated body (eg: All members of the WIA will be Associate Members)

## Funding Sources

One of the important outcomes of ATEAL is to ensure that affiliated and accredited bodies are able to deliver demonstrable community value and be able to leverage this value to attract funding from ATEAL or other government and non-government bodies. For example:

- **Federal - Education, Technology, Aged Care, Business,**  
Is leveraged by ATEAL to support its ongoing programme development, expand its reach.
- **State - Education and Community**  
Associated and accredited bodies leverage state education and community funding to develop their facilities obtain learning tools and resources
- **Local - Community**  
Associated and accredited bodies leverage community funding to expand their reach into different community groups
- **Institutional and Enterprise**  
ATEAL will attract funding to deliver specific outcomes through its network As part of that organisations corporate social responsibility (CSR) program

**Organisational Structure**

In developing the organisation structure for ATEAL it was critical to allow the organisation be autonomous while still requiring a tight coupling to Amateur Radio.

To achieve this the following organisational structure was selected:

- Australian public company limited by guarantee.
- Charity Registered with the Australian Charities and Non-Profits Commission (ACNC).
- Initial minimum of 7 directors
  - 2 directors nominated by the WIA board.
  - 2 external directors nominated by ATEAL board
  - Minimum of 3 directors elected by members
- Associate membership automatically granted to voting WIA members.
- The Wireless Institute of Australia is ATEAL's founding life member.

## Appendix 3: Topics of Conversation

### Topics of Conversation Amateur Radio Operators on a Linked Repeater Network

Elizabeth Dodd  
April 2016

Amateur Radio operators are often viewed by the public as living in a parallel universe, with a separate language<sup>1</sup> marking them apart from other humans.

**BI7NV**  
ADDRESS: QIAO SHENG ELECTRONICS,  
25 BAI LE ROAD, XI QIAO,  
NAN HAI, FOSHAN,  
GUANGDONG 528213, CHINA

PERSONAL AMATEUR RADIO OF CHINA  
中华人民共和国个人业余电台

TO RADIO  
**PW<sup>2</sup>MZY**

CFM  OUR QSO  YOUR REPORT

DATE			UTC	FREQUENCY MHz	MODE	SIGNAL REPORT		
D	M	Y			<input type="checkbox"/> FM <input checked="" type="checkbox"/> SSB <input type="checkbox"/> CW	R	S	T
02	10	2010	0950	28.487MHz		5	5	

TRX	WATTS	ANT
IC-725	50W	Dipole

PSE  TNX QSL  
VY 73! OP: 叶旺 (Wang Ye)  
0709

TX NICE QSO! 73! de BI7NV  
地址: 广东佛山南海西樵民乐二厂樵盛电子 (邮编528213)

CO ZONE 24 ITU ZONE 44

Example of a "QSL card" which confirms a radio contact between two operators, callsigns BI7NV and PW2MZY. The callsigns substitute for the operators names, and the use of "QSO", "QTH" and "QSL" are examples of the language of amateur radio.

#### What do amateur operators really talk about on air?

The Amateur Radio Relay League (ARRL) says

"Ham radio operators give their name, their location and a report indicating how well they're hearing the other station's radio signal. Hams' conversations often focus on their equipment or other interests."

As a licensed operator, I usually listen to my local Club's<sup>ii</sup> communication network of repeaters, which permit long distance VHF<sup>iii</sup> communication over an area about 300km west to east and 200km north to south. The conversations I hear or participate in rarely involve name-location-signal reports, nor is equipment a common topic. This led to two questions.

What do the operators on the Wagga Amateur Radio Club repeater system discuss on air?  
What is the function of the repeater network for the users?

**Amateur Radio – a social network**

Amateur radio is regarded as one of the oldest electronic social networks, with evidence of growth in the network in the 21st century. There is much opinion, and little investigation of the importance of this network to its users.

Important radio reference books, like The ARRL Handbook for Radio Communications<sup>iv</sup>, describe this social aspect in a few sentences of a large format book of about a thousand pages.

“What do hams say to each other?” you might wonder. When they meet for the first time on the air, hams exchange the same sorts of pleasantries that anyone might when meeting for the first time. Ham radio operators give their name, their location (abbreviated “QTH” by hams) and - specific to hamming - a report indicating how well they’re hearing (or “copying”) the other station’s radio signal. This name-location-signal report pattern typically applies regardless of ham radio mode. With the preliminaries out of the way, hams’ conversations often focus on their equipment or other interests.

Another writer mentions the topics discussed, and not discussed, by an earlier generation. Thomas<sup>v</sup> describes from the 1950s:

The conversations included station equipment, occupations, the weather, and other non-controversial topics. In that era, hams did not talk about religion, politics, or anything that might be the least bit offensive. Nevertheless, the conversations were enjoyable.

Haring<sup>vi</sup> discusses the social aspects of the hobby from that era.

There began the social side of this technical hobby.

During the rush of a contest or when conditions were poor, an “on-air” conversation might be limited to a dry exchange of data about station location and reception strength. Under other circumstances, two hams meeting for the first time might communicate at length about their lives and hobby experiences. Random meetings over the airwaves occasionally grew into friendships that continued by written correspondence and further discussions via radio. Hobbyists who lived near each other gathered in clubs and met informally for “eyeball contacts” with people they knew through radio only as disembodied voices. Drawn together by their technical interests and skills, hams thought of themselves as a fraternity. The number of amateur license holders in the United States - around a hundred thousand in the early 1950s, twice that many by 1960 - was sufficient to support an elaborate social network and a profitable niche industry.

**Actual topics of radio conversations**

While Amateur Radio operators will tell the public about their public safety and emergency roles in wider society, there are personal benefits to the operator from the social network. I have not discovered any systematic study of what amateur radio operators discuss on air.

There are comments on internet forums<sup>vii</sup> trying to answer the question, and a number of the replies are tongue-in-cheek, with one participant claiming he always discussed his grid square, or Maidenhead locator, a reference to his position on Earth’s surface.

My conversations usually consist of:

My callsign

My grid square DM12

That's about it!

Another writer claimed to always discuss equipment, and how his was better.

It all depends on what starts up.

If he or she says, I got a 50 foot tower  
and a 3 element beam, I say I got a 6 element  
beam and a 100 foot tower.

Don't take me seriously about any of this though. lol

Other writers claimed to discuss their medical conditions, and one seriously wrote that he did not discuss personal matters on air, believing it to be poor behaviour.

You will never hear me asking about your family, occupation, and other things that I hear from time to time but I can't remember them at this moment.

For one thing, on the family part, you just never know about the stranger on the other end. It may be a touchy subject. Its one thing if you know the person, but a stranger???

#### **Other social networks**

Several researchers had investigated more recent digital social networks hosted on the internet or on mailing groups, but little of this was relevant to an older wireless network. See references <sup>viii</sup>, <sup>ix</sup> & <sup>x</sup>

#### **Topics of conversation in English speaking society**

Other research has looked at topics of conversation related to personal networks (Bearman & Parigi, 2004), finding that people talk about "just about everything" whether important or trivial, although in the USA there are clear gender differences in the choice of person with whom specific topics are discussed <sup>xi</sup>.

Balandin & Iacono (1998) surveyed four Australian workplaces and reported on the topics discussed in meal breaks. Their information covers both male and female participants, and again found a wide range of topics discussed by adult workers <sup>xii</sup>. They noted 73 distinct topics, noting 19 as being more common topics of conversation.

Gender differences in conversation were studied in 1993 by Bischooping, who categorised conversations of university students, also finding a wide variety of topics discussed by both sexes.

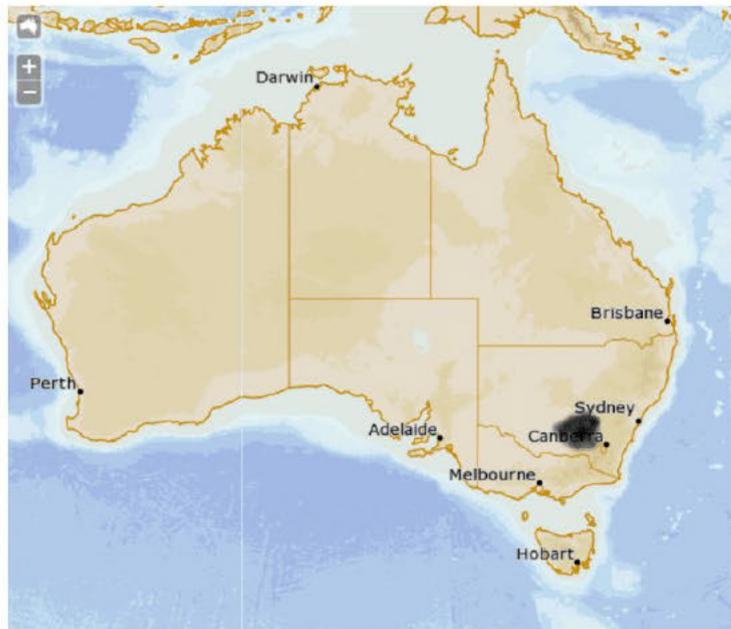
A 1982 study reviewed topics of conversation among same-sex adults in the United States. Haas and Sherman<sup>xiii</sup> found that men and women reported different patterns of conversation, including that males spoke more about sports than women in that era. Health matters were more likely to be discussed by women. More recently (2006) Clayton and Humberstone<sup>xiv</sup> listened to the bar and locker room conversations of soccer players at a University.

The men's talk was predominantly concerned with collective pursuits and interests, stemming from the shared experience of male university football, and academic demands were a large part of this.

**This study and methods**

Twenty-first century Amateur Radio has a vast variety of forms, or modes as they are described. Each has a different purpose and format.

I studied the use of a linked VHF<sup>xv</sup> voice repeater system. VHF transmissions are normally suited to short distance communications, allowing one to communicate to approximately the visual horizon. By repeating the radio signals from strategically chosen hills it is possible to extend the range of communication. WARC<sup>xvi</sup> operates 5 repeaters as one linked system for voice communications, allowing communication across most of the Riverina District of New South Wales, Australia, both from people's homes and motor vehicles.



Black shading indicates the approximate coverage of the networked repeaters.

The system is also internet linked through the Internet Linking Repeater Project (IRLP) and Echolink. These systems permit operators outside the normal coverage area to use the repeater system, either through another repeater also joined to the internet (IRLP) or simply through an internet connection (Echolink). Callers from across the world can be heard using these systems.

For a four week period in February and March 2016 I listened to the repeater system when I was able, usually on Sunday, Monday or Tuesday of each week. I recorded by handwriting each conversation I heard, subsequently recording these as text files.

I used RQDA<sup>xvii</sup> to code the topics of conversation, turning a collection of words into order.

## Results



WordCloud of data collected, call signs removed. The minimum word size used is 5 letters.

### Samples of actual conversations

“well yea  
I don't have the book handy  
I keep it in the car  
I can't remember  
umm err

[trying another mic]  
sounds a lot better  
do you not agree

not as much bass in as the other one did  
umm err  
I gotta cheat sheet here”

“old man turned into grumpy old men and they can't do anything they used to and they turn on us you noticed this?”

I see him disagreeing with a lot more than he would 10 or 20 years ago we went down to Salvos on Saturday night and watched a movie [named] lots of people turned away 50 to 60 people down at the church I thought a good rollup he said '50 to 60, nothing. What about the other 59 thousand Christians in Wagga?' “



Topics of conversation, categorised into six main themes.

As well as the topics discussed on the air, some conversations had specific purposes. The first conversation that I recorded was to introduce a new member to the social group. Another was to share stories of storm damage to their outdoor equipment. In the second phase of the study I enquired about the benefits of the social group.

In April 2016 I invited members of WARC to answer a short survey about repeater use. This survey was hosted on Google Docs and no identifying data was collected.

The questions asked were

- Do you use VK2RWG and its linked repeaters?
- What do you talk about on VK2RWG?
- What do other operators talk about on VK2RWG?
- What benefits do you get from the repeater system?

Seven responses were received. All respondents stated that they used the Wagga linked repeater system.

Respondents saw no main differences between what they and other operators discussed on the repeater system.

They said that they discussed Club matters, had day-to-day chit chat and discussed technical issues as well as current events.

“Talking about weather, what they are doing, repeater maintenance and local club matter”

One respondent said that he welcomed visitors to Wagga, but did not mention others doing the same. “Catching up and general chit chat and to welcome visitors to Wagga Wagga”

The benefits of using the repeater system concentrated on a theme of contact with Club members and other Amateur operators.

“To be able to talk to fellow club members, even though I'm in remote location”

“The ability to talk to other amateurs across almost a third of the state in which the linked repeaters operate and also Echolink activity with hams outside the immediate repeater coverage area”

### Discussion

The topics discussed by the radio operators were varied, and this variety is similar to the variety of topics found by the small group of researchers who have investigated other groups and their topics of conversation. None of the topics of conversation violated the social norms of Australian polite conversation – that is, no mention of politics, religion or sex.

This is a tabular listing of the coded topics of conversation.

Doing Things	Education	Social Issues	Travelling	Personal	Weather
DIY	Exams	Club	Driving	Banter	
Electronics	Licences	Communications	Reasons for Travel	Borrowed Items	
Other hobbies	References	Disabled Operator	Directions	Disabled Operator	
Radios	Teaching	Local Government	Plans	Exercise	
Repeaters		Society		Family	
Work				Greetings	
Working Bee				Health	
				Refreshments	
				Location	

As found by Jungnickel<sup>xviii</sup> (2014), the do it yourself culture is a strong builder of social cohesion. The multiple topics collected under “Doing Things” suggest that this particular social network is enhanced by this part of the operators’ shared lives in person and on air.

The radio network was seen as important by the respondents to the online survey. Users liked the ability to talk to Club members both close and distant, as well as the opportunity to talk with travellers, and distant operators using internet linkages to join the conversations.

### Summary

Amateur Radio is recognised as a social network. Conversations within this social network cover a wide spread of topics, in common with other social groups whose conversations have been recorded. The members of the social network appreciate the ability they have to maintain contact with other members of the social group using the repeater system of WARC.

- <sup>i</sup> Gibbon, D (1981). *Idiomatycity and Functional Variation: A Case Study of International Amateur Radio Talk*. *Language in Society*. 10(1) 21-42
- <sup>ii</sup> Wagga Amateur Radio Club <http://www.wagga-arc.org/>
- <sup>iii</sup> Very High Frequency
- <sup>iv</sup> Silver, H.W. (ed) (2012). *The ARRL Handbook For Radio Communications*, 90th ed. p1.8. ARRL, Newington, CT.
- <sup>v</sup> Thomas, R.R. (date unknown). *Amateur Radio in the 1950s: Romance and Reality*. *Antique Wireless Association Journal*. [http://www.antiquewireless.org/uploads/1/6/1/2/16129770/28-amateur\\_radio\\_in\\_the\\_1950s.pdf](http://www.antiquewireless.org/uploads/1/6/1/2/16129770/28-amateur_radio_in_the_1950s.pdf) Retrieved 2nd Feb 2016
- <sup>vi</sup> Haring, K. (2003). *The "Freer Men" of Ham Radio: How a Technical Hobby Provided Social and Spatial Distance*. *Technology and Culture*. 44(4). 734-761. <http://muse.jhu.edu/journals/tech/summary/v044/44.4haring.html> Retrieved 3rd Feb 2016.
- <sup>vii</sup> QRZ Forums (2010). *What do you talk about most on Ham Radio?* <http://forums.qrz.com/index.php?threads/what-do-you-talk-about-most-on-ham-radio.251931/>
- <sup>viii</sup> Capobianco, A. (2015). *The application of ethnographic method in the study of digital media*. *Encyclopaedia*. DOI: 10.6092/issn.1825-8670/5046
- <sup>ix</sup> Treese, W. (2006). *Social Network? Which One?* *netWorker*. doi:10.1145/1346942.134694
- <sup>x</sup> Quinn, D. Chen, L. & Mulvenna, M. (2012) *Social Network Analysis: A Survey*. *International Journal of Ambient Computing and Intelligence* doi:10.4018/jaci.2012070104
- <sup>xi</sup> Bearman, P. & Parigi, P. (2004). *Cloning Headless Frogs and Other Important Matters: Conversation Topics and Network Structure*. *Social Forces*. 83(2) 535-557 <http://www.jstor.org/stable/3598339>
- <sup>xii</sup> Balandin, S. & Iacono, T. (1998). *Topics of meal-break conversations*, *Augmentative and Alternative Communication*, 14(3), 131-146, DOI: 10.1080/07434619812331278316
- <sup>xiii</sup> Haas, A & Sherman, M. (1982). *Reported Topics of Conversation Among Same-Sex Adults*. *Communication Quarterly*, 30(4) 332-342
- <sup>xiv</sup> Clayton, B. & Humberstone, B. (2006). *Men's Talk: A (Pro)feminist Analysis of Male University Football Players' Discourse*. *International Review for the Sociology of Sport*. 41(3) 295-316
- <sup>xv</sup> Very High Frequency
- <sup>xvi</sup> Wagga Amateur Radio Club
- <sup>xvii</sup> <http://rqda.r-forge.r-project.org/>
- <sup>xviii</sup> Jungnickel, K. (2014). *Getting there ... and back: how ethnographic commuting (by bicycle) shaped a study of Australian backyard technologists*. *Qualitative Research*. 14(6) 640-655

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## Appendix 4: Complaint Management Policy & Procedure

# Wireless Institute of Australia Complaints Management Policy & Procedure

Document Version: 2.0

**VERSION HISTORY**

23 August 2018	2.0	Original draft	Aidan Mountford

**APPROVED FOR RELEASE**

September 2018	2.0	WIA Board	

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## Introduction

The Wireless Institute of Australia Complaints Management Policy establishes procedures that deliver a process through which all Customers, Members, Staff and Volunteers are able to express their views.

Complaint procedures apply to all Staff and Volunteers, regardless of classification and status of employment, including contractors, in relation to complaints and feedback about the delivery of the Wireless Institute of Australia's programs and services.

### Acknowledgements

This policy is based on principles from:

- Australian and New Zealand Standard Guidelines for complaint handling in organizations AS/NZS 10002:2014
- 'Handling Privacy Complaints' Office of the Australian Information Commissioner (October 2016)
- Australian Charities and Not-For-Profit Commission "Complaint Handling by Charities and Not for Profits Model Policy"

## Scope

This policy applies to direct Customers and Members of Wireless Institute of Australia.

The scope of a complaint is limited to services or products provided (or offered to be provided) to the customer or member.

People who are not members or customer of the organisations have no right of complaint under this process.

This policy does not apply to complaints made by employees that are solely employment related.

## Audience

This policy is designed to provide guidance to Wireless Institute of Australia employees and volunteers on the procedures and practices required to ensure effective customer complaint handling.

This document, in its approved form, is to be made available for public review on the Wireless Institute of Australia website

### Alterations to this policy

It is expected that over time this policy will be updated to reflect changes in consumer behaviour, business maturity and applicable government legislation.

If the policy, procedures and processes contained in this document are altered the following must be completed within 20 working days of the change being implemented operationally:

1. This document must be updated to reflect the change to complaint handling policy.
2. Wireless Institute of Australia's terms of trade and other operational document (in whatever form they exist from time to time) must be reviewed to ensure that they are consistent with the new complaint handling policy. If alterations are required they must be released using the provisions within the relevant document for notifying customers and members of these changes.
3. All Staff and Volunteers must be informed of the complaint handling policy changes and receive a copy of this document.
4. Should they exist, internal complaint handling training courses must be updated to reflect the changes to the complaint handling policy.

## Purpose

The purpose of this policy is to:

- document the position of Wireless Institute of Australia in relation to complaints management
- provide a friendly and flexible avenue for communication, feedback and complaint handling
- ensure that complaints are dealt with in a fair, unbiased, timely and confidential manner
- enable Wireless Institute of Australia to use the data and information received to understand the needs of our Customers and Members, improve our service delivery and increase customer satisfaction.
- Clearly document the lifecycle of a customer complaint within Wireless Institute of Australia;
- Identify the different types of complaints that are received by Wireless Institute of Australia;
- Identify the parties involved in the complaint handling process;
- Ensure that Customers and Members are aware of the complaint handling process and their avenues of complaint both internal and external;
- Provide a framework for the consistent handling of customer complaints;
- Provide rapid resolution to customer complaints through the reduction of internal bureaucracy during the complaint resolution process;
- Provide a framework for determining the most appropriate course of action in resolving a dispute;
- Ensure that all complaints are recorded within an appropriately accessible complaint handling system;
- Manage customer expectations during complaint resolution by providing regular feedback on the complaint and it's anticipated resolution time;
- Reduce complaint escalation through concise, readable responses to Customers and Members that are supported by the facts and Wireless Institute of Australia's Terms and Conditions.
- Identify any fees and charges that may apply to complex complaint investigation; and
- Establish an environment of continuous improvement through the identification and rectification of the root causes of complaints.

## Definitions

A **complaint** for the purposes of this policy and procedures is defined as the:

'expression of dissatisfaction with our products, or the complaints management process itself, where a response or resolution is explicitly or implicitly expected'. (Standards Australia - AS/NZS 10002:2014 Customer satisfaction - Guidelines for complaints handling in organizations)

A **complaint** does not include expressions of dissatisfaction, concerns or complaints received from external Customers and Members in respect to:

- government policies and/or legislation outside the control of, and not the responsibility of, Wireless Institute of Australia
- matters that are the subject of current legal action in a court or tribunal
- decisions made by any Court of Law

**Complainant** means the person or organisation making the complaint.

**Client/customer/** means a person or organisation receiving a service or a product from Wireless Institute of Australia, or engaging in a business relationship with Wireless Institute of Australia.

**Code of Conduct** means any standard of behaviour that is endorsed from time to time by the board, whether written by the WIA or not. This includes but is not limited to the WIA Code of Ethics.

**Dispute** means a client's formal disagreement which leads to some type of internal or external review or determination by Wireless Institute of Australia.

## Commitment

Wireless Institute of Australia is committed to:

- recognising a customer or member's right to make complaints, comments or suggestions about the standard and quality of services and products provided
- providing an efficient, fair and accessible mechanism for resolving complaints
- ensuring that all complaints are heard and equitably resolved as soon as possible
- monitoring complaints to improve the quality of services
- providing clients with information about the complaint management process
- promoting a positive attitude towards resolving complaints
- providing assistance to complainants who may be disadvantaged in any way and require additional assistance i.e. regional or remote location, language or other impairment, children and young persons.

## Principles

Wireless Institute of Australia will demonstrate its commitment to providing an effective complaint management system by adopting the following principles for good practice:

**Customer focus** – Wireless Institute of Australia is committed to effective complaint management and values feedback through complaints.

**Visibility** – information about how and where to complain is well publicised to Customers, Members, Staff and Volunteers and other interested parties. We will do this by providing a direct link to ‘complaints’ on the home page of our website [www.wia.org.au](http://www.wia.org.au).

**Accessibility** – the process for making a complaint is easy to access and use and assistance is provided when needed.

**Responsiveness** – receipt of complaints is acknowledged to the complainant within three working days and the complainant is kept informed throughout the process.

**Objectivity and fairness** – complaints are dealt with in an equitable, objective and unbiased manner applying the principles of natural justice.

**Confidentiality** – personal information collected in relation to a complaint is confidential and only used for the purposes of addressing the complaint and any follow up actions.

**Remedy** – if a complaint is upheld, Wireless Institute of Australia will provide a remedy.

**Review** - there are opportunities for an internal or external review of Wireless Institute of Australia’s response to the complaint, and complainants are informed about these avenues.

**Accountability** – complaint management processes are clearly established and complaints and responses to them are recorded, monitored and reported to management.

**Continuous Improvement** – complaint data will be analysed to identify and address recurring or systemic issues and used to improve service and product satisfaction and performance.

**Procedural Fairness** – In all complaints relating to people or their performance the burden of proof rests with the complainant. In a complaint relating to the performance of a person each party has the right to know who the other party is

## Resources

Wireless Institute of Australia will ensure:

- all Staff and Volunteers comply with any Code of Conduct.
- all Staff and Volunteers are instructed in Wireless Institute of Australia's Complaint Management Policy and Procedures through the induction process and information sessions
- Staff and Volunteers handling complaints will be supported by management and should receive effective supervision, guidance and feedback on their work
- continuous training and development of skills in the areas of customer service, telephone skills, writing skills and dealing with difficult Customers and Members will be made available to Staff and Volunteers dealing with complaints.

## Complaint Recording

Wireless Institute of Australia's Office Workflow System will maintain a facility for recording details of all customer contacts.

All records of customer complaint and dispute must be recorded as "Complaints" using the customer contact management system.

When a complaint or dispute has been resolved the complaint or dispute must be flagged as such in the office workflow system.

This process will regular reporting to clearly identify those complaints that require addressing and allow the Board to address them in a proactive manner and will ensure that statutory complaint reporting obligations can be readily fulfilled.

## Complaint Types and Lodgement Requirements

The process of complaint and dispute resolution is greatly assisted if there is sufficient information available about the complaint or dispute.

Even before a complaint is formally lodged it is necessary to know the type of complaint that a customer is proposing to make since lodgement procedures and information requirements varies on this basis and must be advised to them.

Complaints received by Wireless Institute of Australia fall broadly into one of four 'complaint types'. These are:

1. Financial disputes;
2. Operational complaints (including privacy complaints);
3. Complaints regarding performance of ACMA statutory functions; and
4. Complaints about complaint handling.

When Customers and Members contact us about making a complaint they will be instructed, based upon the 'complaint type':

- how to lodge the complaint
- what information they need to supply when they lodge their complaint

as described in the following sections.

## Financial Disputes

Financial disputes are to be lodged in writing to [accounts@wia.org.au](mailto:accounts@wia.org.au). Customers and Members who wish to lodge a financial dispute must provide the following information:

- A description of the dispute (including their customer/member number);
- The period(s) over which the dispute arises;
- The basis on which the customer believes Wireless Institute of Australia should resolve this dispute in favour of the customer;
- Copies of any supporting evidence that will facilitate a rapid resolution in favour of the customer; and
- The outcome that the customer believes is a fair and reasonable resolution to the dispute.

## Operational/Statutory Function Complaints

Operational performance complaints may be lodged in writing to [complaints@wia.org.au](mailto:complaints@wia.org.au). Operational complaints must be submitted on the current version of the complaints form and the acknowledgment signed

The customer or member must provide the following information in support of their complaint:

- **Nature of complaint**  
explain what went wrong, what policy, rule, code of conduct, provision of the deed etc has been breached
- **The timing of complaint**  
When, precisely did the event that gave rise to the complaint take place - if required please include a chronology
- **Details of respondent**  
Who is the individual who should respond to this complaint (If a group of individuals, please advise the group and the person who should respond by role)
- **Proposed remedy/resolution**  
what in your view is an appropriate remedy/resolution that would satisfy the complaint.
- **Evidence**  
Provide documentary evidence to support the complaint. Evidence must demonstrate that the events that gave rise to the complaint occurred when they occurred and that the named respondent has, therefore, a case to answer. This could include emails, URLs, web links, statutory declarations etc.

For complaints regarding the delivery of services, customers and members must be made aware that unless Wireless Institute of Australia has accepted the order, in writing, the complaint will be found in favour of Wireless Institute of Australia.

## Complaints about Complaint Handling

See the Avenues of Last Resort section.

## Complaint Reporting Process and Responsibilities

Many complaints are mishandled because they were incorrectly reported in the first place. This results in unnecessary customer frustration. To prevent this, an accurate and consistent reporting framework has been put in place which is detailed below.

### Advising a Customer/Member about Making a Complaint

Any Wireless Institute of Australia Staff or Volunteers who becomes aware that a customer or member wishes to lodge a complaint will:

1. Identify the 'complaint type' that is the focus of the customer's dissatisfaction;
2. Advise the customer, in writing of:
  - a. the complaint reporting process that applies in their case, given the complaint type identified in Step 1;
  - b. if requested by the customer, their 'Avenues of Last Resort' in the event that their complaint remains unresolved or unheard. For further information see the sections "Avenues of Last Resort" and "Complaint Types and Lodgement Requirements".
3. Forward a copy of this written advice to the Secretary.

### Initial Communication with a Complainant

The WIA will allocate a "Case Manager" to deal with a complaint within 5 working days of the complaint being received.

The Case Manager may be any member of Staff and Volunteers that the WIA believes is well positioned to resolve the matter in an amicable manner with the haste that such matters deserve.

The WIA must provide an email introduction for the nominated case manager and the complainant. This introduction must contain:

1. The name of the Complainant, their normal business hours contact details
2. The name of the case manager and their normal business hours contact details.
3. A history of the complaint including the facts as they have been presented by the complainant and as gathered by Wireless Institute of Australia Staff and Volunteers (this may include copies of emails, internal notes, etc).

### Ongoing Communication with a Complainant

The Case Manager must communicate with the complainant, in writing, no less than once every 5 working days until the complaint has been resolved.

The complaints officer must ensure that this level of customer contact is maintained by proactively pursuing all case managers for updates no less than once every 3 working days.

In the event that a Case Manager leaves Wireless Institute of Australia or is absent for any reason the responsibility to resolve the complaint falls to the complaints officer.

## Privacy

The WIA will protect the identity of people making complaints where this is practical and appropriate.

Personal information that identifies individuals will only be disclosed or used as permitted under the relevant privacy laws, secrecy provisions and any relevant confidentiality obligations.

In the event that a complaint is related to the conduct of a member, staff or volunteer the principles of procedural fairness dictate that the individual concerned has a right of reply. In these instances, complainants must assume that their identity will become known to the individual against whom the complaint is directed.

## Whistleblower Protection

The recognises that from time to time volunteers or staff may be in possession of information that demonstrates conduct that should be the subject of a complaint but for fear of retribution or self-incrimination feels unable to report the matter.

In this instance complaint may be made directly to the board ([board@wia.org.au](mailto:board@wia.org.au)) or to any board member, or to the WIA auditor. The complainant must state in the body of the complaint that they are a whistleblower and are requesting protection under the WIA whistleblower protection policy.

These protections are in addition to those provided under the Corporations Act.

## Am I A Whistleblower ?

In order to be deemed a whistleblower and be afforded protection under this policy you must:

- Be a current member of a committee or group within the WIA that performs a function on behalf of the WIA; or
- Be a contractor to the WIA with a current contract; or
- Be a current member of staff; and
- Have reasonable grounds to suspect that the information you are disclosing in your complaint indicates that the WIA Staff or volunteers may have breached any Code of Conduct or other law in carrying out their duties as a WIA representative; and
- Have made your disclosure to the Board of Directors, Secretary or WIA auditor; and
- Have made your disclosure in good faith. (For avoidance of doubt, any disclosure that is incomplete or is made for a reason other than protecting the WIA is not made in good faith and these protections will not apply)

## Whistleblower Protections

To the extent legally possible, protections available to whistleblowers under the Corporations Act will apply.

## Complaint Resolution Timeframes

Wireless Institute of Australia is committed to resolving complaints and disputes in the following time frames from the date a case manager is appointed:

- Financial disputes – 10 working days
- Operational/Statutory Function complaints – 40 working days
- Complaints regarding Complaint Management – 80 working days

If, for any reason, Wireless Institute of Australia is not in a position to offer a complainant a decision within the above time frame, the case manager must provide the complainant with a date by which a decision will be made.

This decision date must be no more than 90 working days after the complaint was originally reported, unless:

1. The complainant is not contactable using the mechanisms provided on 3 or more separate occasions during the original dispute resolution time above; or
2. The complaint or dispute requires additional analysis that is outside the normal complaint handling policy (see "Additional Analysis" below); and
  1. The complainant has not approved this analysis to be undertaken; or
  2. The analysis, by its nature, requires an extended amount of time to derive data that is of value.

If Wireless Institute of Australia fails to meet its obligations with respect to complaint resolution time frames the dispute must be escalated to the Board of Directors.

## Complaint Resolution Process

Wireless Institute of Australia is committed to resolving complaints and disputes rapidly and in an amicable manner.

The following resolution framework is to be used as a guide to allow a complaint to be rapidly qualified and resolved.

### Stage 1 – Analysis

The facts must be gathered from Wireless Institute of Australia's systems and from the customer and compared.

If data is for some reason unavailable from Wireless Institute of Australia's systems then the customer or members account must be held as fact.

If data is for some reason unavailable from the customer or member then Wireless Institute of Australia's account must be held as fact.

The facts will initially be compared with Wireless Institute of Australia's service delivery and financial responsibilities contained in:

1. Any relevant terms of trade documents.
2. The Constitution;
3. Statutory Declarations from customers or members.
4. Evidence provided by the parties to the complaint.

From time to time resolution of a complaint or dispute will require data, or analysis of data that is beyond the capability of Staff and Volunteers to provide. For the policy in this area refer to the section Additional Analysis.

## Stage 2 – Communication of Outcomes

### Dismissed Complaints

A complaint will be dismissed if the complaint

1. Relates to a matter where it is determined that Wireless Institute of Australia has clearly honoured its obligations with regards to operational delivery and billing; or
2. relates to a criminal matter (the complainant must be directed to report the matter to the relevant authorities); or
3. is bought by an entity that is not a member or customer of the WIA; or
4. relates to a product or service that has not been obtained from the WIA; or
5. Is not supplied with substantiating evidence that is relevant to the complaint (for avoidance of doubt, the WIA complaints process does not require a case manager to find evidence on behalf of the complainant to support the complaints case); or
6. relates to an interpersonal dispute between members unless one of the members is also a volunteer and the complaint relates to the conduct of the volunteer in carrying out their function; or
7. the complaint relates to an affiliated club or other entity for which the WIA is not responsible; or
8. the complainant is deemed vexatious.

If a complaint is dismissed the complainant must receive written communication of the reasons why the complaint was dismissed including:

1. Wireless Institute of Australia's operational delivery and billing responsibilities (with reference to the documents identified above);
2. Wireless Institute of Australia's actual operational and billing delivery (with reference to the facts);
3. Wireless Institute of Australia's analysis and conclusions; and
4. Any documents, emails or internal comments that are referenced in the analysis or conclusions.

### Accepted Complaints

If it is determined that Wireless Institute of Australia has not honoured its obligations with regards to service delivery and billing the complaint must be accepted.

If Wireless Institute of Australia cannot clearly prove that it has honoured its obligations with regards to service delivery and billing the complaint must be accepted.

If Wireless Institute of Australia determines that the cost to dispute a complaint exceeds the cost of the complainants preferred resolution Wireless Institute of Australia may, at its option, accept the complaint.

If a complaint is accepted the complainant must receive written communication of the fact that the complaint has been accepted. This communication must include:

1. The fact that the complaint has been accepted; and
2. The date by which the customer should expect an offer of settlement.

### Stage 3 – Determination of Settlement

In determining settlement, a minimum of two possible outcomes must be considered:

1. The complainants preferred settlement option;
2. An alternative settlement option;

Wireless Institute of Australia's alternative settlement offer may include one of more of the following mechanisms of resolving the complaint:

- variations to product or services to be delivered (including changes to fees that are charged); or
- notice of intent to withdraw a product or service from the complainant; or
- action plan for resolving the root cause of the complaint (that is no more than 60 working days in duration); or
- credit to the complainants account; or
- refund of monies paid by the complainant; or
- any other reasonable measure that may be used to secure an amicable resolution.

In costing the settlement option the following must be considered:

- Lost revenue;
- Legal fees;
- Any additional charges should the complaint be escalated;
- Cost of analysis to date;
- Personnel costs.

If the costs of the complainant's settlement option and Wireless Institute of Australia's alternative option are within 10% it is Wireless Institute of Australia's preference to settle a dispute in the manner preferred by the complainant. When considering "costs" care must be taken to consider cost to reputation (both positive and negative) as well as monetary costs.

Once a settlement offer has been determined it must be approved internally by the Complaints Officer or Board

The settlement offer must be communicated, in writing, to the complainant.

The settlement offer must contain a statement that if a settlement cannot be reached the complainant may escalate the complaint or dispute to the Board (see Avenues of Last Resort above)

The complainant must accept or reject the offer in writing within 5 working days of receiving the offer of settlement.

If no response is received within 5 working days Wireless Institute of Australia will assume the complainant's tacit acceptance of the offer and will execute the offer forthwith.

## Remedies and Avenues of Last Resort

Last resort complaints occur when the customer or member is of the belief that they have exhausted all avenues for complaint resolution within the standard framework for handling customer complaints.

If staff or volunteers becomes aware of a customer who believes they have exhausted all options for complaint resolution they should be advised that complaints may be escalated to the Board

This avenue is fully explained in the sections that follow.

The Constitution of the WIA supports a last resort remedy of expulsion of a member from the organisation at the boards discretion. If a case manager determines that this course of action is reasonable a brief must be prepared for the board containing the precise reasons for requesting this remedy.

For this course of action to be considered by the board in response to a complaint the member who is subject to the request for expulsion must have been:

- convicted by a competent court of a crime against the organisation; or
- convicted by a competent court of a violent crime; or
- disqualified from holding a radio operators licence of any type in any jurisdiction; or
- identified as being vexatious towards the organisation (see vexatious complaints).

The process and remedies relating to this course of action are described in the Constitution, however, in the absence of any information in the constitution to the contrary the following will apply:

- A full brief of evidence must be supplied to the member who is subject to expulsion proceedings when notified of the intent to begin expulsion proceedings
- The member will have 20 working days to respond to the brief of evidence.

The process described above is not intended to dilute the ability of the board to begin expulsion proceedings for any reason permitted by the Constitution.

## Vexatious Complaints

A complainant will be deemed to be vexatious if they have had 3 or more complaints dismissed within a 24 month period.

### Board Escalation

A complaint may be lodged with the executive management team by addressing the said complaint to [board@wia.org.au](mailto:board@wia.org.au).

The email should contain:

- full contact details of the complainant (including email address and phone number)
- customer/member numbers if appropriate
- description of the complaint
- avenues that have been explored in an effort to resolve the complaint

Having lodged a written complaint with the board, the customer will be contacted by a member of the board within 10 working days.

The assigned board member must inform the customer, in writing, of the complaint resolution process outlined below.

The assigned board member will determine if the correct complaint resolution process has been followed.

If it has not, the board member will direct the complaint to the case manager to be dealt with in accordance with this policy.

If the complaint has followed the processes outlined in this policy the assigned board member will consider the complaint on its merits with a view to directly negotiating a resolution with the customer.

In making a decision the assigned executive manager must consider:

- the substance of the complaint;
- impact on the complainant;
- terms of trade and in particular any applicable service level agreements;
- potential damage to reputation and brand should the complaint remain unresolved.

A decision must be made by the assigned board member and communicated to the complainant within 5 working days of making their first contact with the complainant.

If a decision is made in the complainants favour the assigned board member will present a settlement offer to the customer or member.

If the complaint relates to the statutory functions that the board performs the settlement offer must contain a statement informing the customer or member that should a settlement not be reached they may contact the ACMA as a last resort.

For further details regarding settlement offer and acceptance requirements see the section Stage 3 – Determination of Settlement.

## Additional Analysis

From time to time resolution of a complaint or dispute will require data, or analysis of data that is beyond the capability of Staff and Volunteers to provide.

Specific examples include, but are not limited to:

- Analysis of historical information
- Recovery of information from third parties
- Engagement of counsel
- Travel

Once the desirability of undertaking such work has been established, the complainant must be informed of the fee required to complete the work. They must agree to pay this fee before the work can be carried out.

If the complainant chooses not to pay the fee then the dispute will be found in Wireless Institute of Australia's favour. If the complainant chooses to pay the fee and the resulting data capture and analysis determines that the basis of the complainant's complaint has been upheld then the amount of the fee will be refunded to the complainant in full.

The raw data, analysis and conclusions reached that result from any data collection and analysis work undertaken on a fee for service basis for the complainant will be made available to the complainant at the completion of the work.

## Accountability and learning

### Analysis and evaluation of complaints

We will ensure that complaints are recorded in a systematic way so that information can be easily retrieved for reporting and analysis by management and the governing body of Directors. We will run regular reports on:

- the number of complaints received
- the outcome of complaints, including matters resolved at the frontline
- issues arising from complaints
- systemic issues identified, and
- the number of requests we receive for internal and/or external review of our complaint handling.

Regular analysis of these reports will be undertaken to monitor trends, measure the quality of our customer service and make improvements. Reports and their analysis will be provided to our members and to our governing body for review, at least annually.

### Monitoring of the complaint management system

We will continually monitor our complaint management system to:

- ensure its effectiveness in responding to and resolving complaints
- identify and correct deficiencies in the operation of the system, and
- monitoring may include the use of audits, complaint satisfaction surveys and online listening tools and alerts.

### Continuous improvement

We are committed to improving the way our organisation operates, including our management of the effectiveness and efficiency of our complaint management system. To this end, we will:

- support the making and appropriate resolution of complaints
- implement best practices in complaint handling
- recognise and reward exemplary complaint handling by staff and volunteers
- regularly review the complaint management system and complaint data, and
- implement appropriate system changes arising out of our analysis of complaints data and continual monitoring of the system.

This policy (and associated internal procedures) will be reviewed continuously, and at least annually, to ensure it meets the needs of the Wireless Institute of Australia and our Customers and Members.

### Accountability

Accountability for this policy is the responsibility of the Wireless Institute of Australia governing Board.

## Appendix 5: ISM Letter of Compliance



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Mr. Chad Woolf  
Director, AWS Risk & Compliance  
Amazon Web Services  
440 Terry Ave N, Seattle, WA 98109

20 October 2014

### Amazon IRAP Assessment – Letter of Compliance

Dear Mr. Woolf,

This document is to act as a letter of compliance for Amazon Web Services.

From January through October 2014 NJOY SECURITY was engaged to conduct an IRAP assessment of Amazon Web Services, in accordance with the process prescribed in the Australian Government Information Security Manual (ISM) and Protective Security Policy Framework.

The IRAP assessment was undertaken by Nathan Joy, who is an Australian Signals Directorate endorsed assessor under the Information Security Registered Assessors Program (IRAP). Amazon Web Services was assessed with regard to the Australian Government requirements for unclassified but sensitive information referred to as UNCLASSIFIED (DLM). Unclassified (DLM) requirements are identified in the ISM as Government system (G) controls.

The scope of the IRAP assessment included the following Amazon services and facilities:

- The Amazon EC2, VPC, S3 & EBS services hosted in the Asia Pacific (Sydney) Region;
- Amazon's Australian Data Centre Facilities.

NJOY SECURITY conducted the IRAP assessment in two audit stages:

- The first stage audit determined whether the system architecture (including information security documentation) was based on sound security principles and had addressed all applicable controls from the ISM.
- The second stage audit determined whether the controls had been implemented and were operating effectively. The process included inspections of premises, personnel interviews, process demonstrations, configuration reviews and the review of certification reports which included evidence of control validation.

NJOY SECURITY have reviewed the Amazon Web Service System Security Plan and have prepared a Report of Compliance which records the applicability and compliance with specific ISM controls. A summary of the IRAP assessment findings is provided in the attached table.

**The IRAP assessor's finding is that the applicable ISM controls relating to the processing, storage and transmission of UNCLASSIFIED (DLM) Australian Government data within Amazon's Asia Pacific (Sydney) Region have been implemented and are operating effectively.**

Amazon should advise an IRAP assessor of any significant future changes to the services, which might influence the effectiveness of the implemented ISM controls. Amazon should remain informed of future releases of the Australian Government Information Security Manual, which may include control changes which may affect Amazon's compliance.

Regards,

A handwritten signature in black ink, appearing to read "Nathan Joy", is written over a faint, illegible background.

**Nathan Joy**, BLS (Criminology), DipGov (Fraud Control), DipGov (Investig.), DipGov (Intel.), ISO27001 Lead Auditor, CISSP, IRAP Assessor  
Principle Security Consultant, NJOY SECURITY  
[Recipient of the SANS 2012 National Cybersecurity Innovation Award](#)

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ISM Chapter	Control Effectiveness			Statement of Control Effectiveness
	Effective	Partially Effective	Not Effective	
<b>Information Security Risk Management</b>				
Risk Assessment	✓			NJOY SECURITY has assessed Amazons risk management controls to be effective for the management of Amazon information security risks.
Security Risk Management Plan	✓			
<b>Role &amp; Responsibilities</b>				
Chief Information Security Officer	✓			NJOY SECURITY has assessed that the roles defined by Amazon meet the intent of the roles described within the ISM.
IT Security Advisor	✓			
IT Security Manager	✓			
IT Security Officer	✓			
System Owner	✓			
System Users	✓			
<b>Information Security Documentation</b>				
Documentation Framework	✓			Amazons has established Information Security Policies which provide clear policy guidance and are assessed to be effective.
Information Security Policy	✓			
System Security Plan	✓			The Amazon SSP properly documents security controls for AWS systems and is assessed to be effective.
Standard Operating Procedures	✓			The Amazon Standard Operating Procedures address all applicable security controls and are considered to meet the intent of the applicable controls within the ISM.
Incident Response Plan	✓			Amazons Incident Response Plan & Procedures meet the ISM requirements and are assessed to be effective.



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ISM Chapter	Control Effectiveness			Statement of Control Effectiveness
	Effective	Partially Effective	Not Effective	
Business Continuity and Disaster Recovery Plan	✓			Business continuity and disaster recovery controls have been appropriately addressed by Amazon in manner which meets the requirements of the ISM.
<b>Information Security Monitoring</b>				
Vulnerability Management	✓			Amazons vulnerability management practices are assessed as effective and meet the requirements of the ISM.
Change Management	✓			Amazons change management policy and processes are assessed as being effective and meet the requirements of the ISM.
<b>Cyber Security Incidents</b>				
Detecting, Reporting and Managing Cyber Security Incidents	✓			Amazons cyber security incident detection, reporting, management and policies & processes are effective and meet the requirements of the ISM.
<b>Physical &amp; Environmental Security</b>				
Physical Security for Systems	✓			Amazons physical security controls are fully effective and are assessed to exceed the ISM requirements for storage of UNCLASSIFIED (DLM) data.
<b>Personnel Security for Information Systems</b>				
Information Security Awareness & Training	✓			The IRAP Assessor audited Amazons personnel security measures and interviewed security personnel.  Amazons personnel security controls are assessed to be fully effective and meet the requirements of the ISM.
Authorisations, Security Clearances & Briefings	✓			
<b>Communications Security</b>				
Communications Security	✓			Communications security within Amazons data centres is assessed to be effective in meeting the



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ISM Chapter	Control Effectiveness			Statement of Control Effectiveness
	Effective	Partially Effective	Not Effective	
				intent of the applicable ISM controls relating to communication security.
<b>Product Security</b>				
Product Security	✓			The IRAP assessor concluded that Amazon securely select, acquire, install, configure, label, maintain, repair, sanitise and dispose of ICT products in manner which meets the requirements of the ISM.
<b>Media Security</b>				
Media Security	✓			Amazons physical security controls are fully effective and are assessed to exceed the ISM requirements for secure management of UNCLASSIFIED (DLM) media.
Asset Management	✓			Amazons asset management policies and procedures are assessed to be fully effective and meet the requirements of the ISM.
<b>Software Security</b>				
SOE	✓			Amazons operating system security controls are assessed to be fully effective and meet the requirements of the ISM.
Application Whitelisting	✓			Amazons application whitelisting controls meet the intent of the ISM for the control of permitted binaries.
Software Application Development	✓			Amazons management of software development activities are fully effective and are assessed to meet the ISM requirements.
<b>Access Control</b>				
Privileged Access	✓			Amazons privileged access security controls are assessed to be fully effective and meet the requirements of the ISM.
Event Logging and Auditing	✓			Amazons event logging and auditing controls are fully effective and are assessed to meet the ISM requirements.

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ISM Chapter	Control Effectiveness			Statement of Control Effectiveness
	Effective	Partially Effective	Not Effective	
<b>Secure Administration</b>				
Secure Administration	✓			Amazons secure administration controls are fully effective and are assessed to meet the ISM requirements.
<b>Network Security</b>				
Network Management, Design and Configuration	✓			Amazons network management and configuration controls are fully effective and are assessed as meeting the ISM requirements for the transmission and handling of UNCLASSIFIED (DLM) data.
Ensuring Service Continuity	✓			Amazon has implemented effective DDoS controls which are assessed to meet the ISM requirements for ensuring service continuity.
Intrusion Detection and Prevention	✓			Amazon has implemented DDoS controls that are effective and are assessed to meet the intent of the ISM requirements for ensuring intrusion prevention, detection and response.
<b>Cryptography</b>				
Cryptographic Security	✓			The cryptographic security implemented by Amazon is considered to be an effective security control.
<b>Cross Domain Security</b>				
Cross Domain Security	✓			The firewalling capability implemented within Amazon is assessed to be effective for the protection of UNCLASSIFIED (DLM) information.
<b>Data Transfers</b>				
Data Transfers	✓			Amazon has established security mechanisms for data transfer which meet the intent of the ISM and are assessed to be effective for the transfer of UNCLASSIFIED (DLM) information.

## **Appendix 6: Financial Modelling**

