

The changing nature of Amateur Radio

An analysis of past, present and future, by Ian Jackson, VK3BUF

Any brief examination of Amateur Radio today will show that it has changed. The change has been gradual, but steady. It is difficult to highlight any single reason for widespread decline, but candidly, Amateur Radio seems more obscure, a little quieter and a little less relevant to mainstream Australia than ever before.

In this article I shall attempt to define the aspects that have changed and map the worst and the best of what we are dealing with. It is not intended to be pessimistic, but collectively the observations made here show that not only is the trend bad, but if participation rates are not treated, spectrum access would be cut and Amateur Radio as we know it is likely to disappear. By identifying the pressures on where the hobby is now, it is not difficult to extrapolate what it shall become if no action is taken. It is hoped that from this assessment, we can build strategies that will do something about it.

NEGATIVE EFFECTS UPON AMATEUR RADIO

Here is a list of topics that have negatively affected Amateur Radio in recent decades. There is some overlap between these topics. There is no single aspect or responsible group for this regression, but collectively the decline of the hobby is slowly taking place.

1. Loss of magic in communications

Historically, there was a certain wow factor at hearing a voice coming out of a speaker from the far side of the planet. This had been a common allure to the hobby. We are now a full generation into cheap, global communications networks to the point where nobody thinks or cares much about where the other person is. This is a recognisable shift in mainstream culture. Of course Amateur Radio has always been capable of doing this without complex networks, but this is a subtlety that is mostly lost on the populus who don't understand or don't want to understand how anything works.

2. The total penetration of Mobile Phone technology

This overlaps with the previous point somewhat, but millions of people have spent hard cash on phone technology that seems to be carried in one hand at all times. It is not just a global comms centre. Phones link friends and family together like never before. Essentially, vast amounts of money have been spent on personal communications equipment that is very, very clever. This single item of hardware satisfies the innate desire to communicate for the majority of people – without having to first study for exams or make payment for an annual operator fee. Amateurs can argue that it is the pursuit of the knowledge which underpins the technology that quantifies the difference, but this is an increasingly hard sell.

3. Staff reductions in telecommunications companies.

This effect is a reasonably significant contributor to the fall in the number of licensed operators. For example, in 1975 Telecom Australia had a staff of 112,000 people. Huge portions of this staff were provided technical training and nurtured an environment that encouraged social interaction. This was a common platform for people who would develop a curiosity for the technology behind communications. This culture no longer exists.

Today 'Telstra' the principal communications carrier in Australia only has 32,000 staff and fewer than 5000 of these are technical. The linesman and technician culture has been reduced to a basic contractual obligation by self-employed field operatives, focused on paying off vehicle and equipment loans they are required to take. This is not a fertile environment for delivering new operators to the hobby.

4. Amateur Radio is increasingly irrelevant as a backup emergency service provider

A long term positive for Amateur Radio was that operators can provide communications fast in times of civil emergency. This is essentially still true, but the rest of the world caught up.

Millions have been spent on emergency communications networks and the development of accreditations for skills in message handling. Emergency Amateur Radio networks are not a good fit here. Best case, during emergencies our operators may be used, but not our equipment or our frequencies. Emergency service leaders see any form of reliance upon individuals as unacceptable risk, to be frowned upon and made redundant as a matter of policy. Where public infrastructure does collapse, Amateur Radio will still work, but to acknowledge this publicly is a declaration of weakness not often conceded.

Providing communications for rallies races and public events were great training grounds for Amateurs wanting to maintain a level of preparedness for disaster. Increasingly, the organisers of these events have dismissed the services of Amateur Radio groups and just use their phones.

5. Availability of cheap and highly sophisticated radio equipment.

This doesn't directly affect operator numbers, but it does alter how they get on the air. From the 70's onwards radios designed for the Amateur Bands have got better and better, while their prices have fallen. Operators no longer have to source some old commercial equipment and modify it to reach a new band. There is a lot of quality second hand gear out there ready to go.

While there are always exceptions, Amateurs are no longer hailed as technicians who build all their stuff from scratch. It's just not worth it. The creation of 'home brew' radio has reduced in scale and now focuses more upon its accessories and where room permits, antennas.

This effect is being formally reinforced. Within Australia there has been a questionable policy by the ACMA to force Amateurs into using equipment that is intrinsically limited to our bands, rather than relying upon operator integrity to enforce this behaviour. Most operators regard this as an unnecessary interpretation of law which has demeaned the intent of the hobby. (it is akin to forcing upmarket restaurants to place 'No Spitting' signs in their foyers.) With the DIY transmitter/receiver construction culture now in decline, an important point-of-difference between Amateur Radio and CB operation has been marginalised by this ACMA enforcement of black-box operation.

6. The Internet as a communications medium

Plenty of Amateurs use the internet as an accessory to help them on air. Band conditions are checked on the internet, contest logs get uploaded, Web sites advise of DXpeditions past and present. Scheduled contacts are often setup in advance by Skype chat or email. The most unpredictable element is the radio spectrum itself and this of course has been part of the attraction. Communications has passed a tipping point for Amateur operators. If they feel that the information to be sent is important, then internet based comms is the safest option. The entertainment value of Amateur Radio is real, but the high value once placed upon it as an essential medium has fallen. This shift in perception has altered the reason why people enter the hobby and changes how long they stay with it.

7. The rise of broadband electrical interference

Interference is not something that affects everyone, but where it does, the results can be a big turn-off for Amateur Operators. Switchmode power supplies and other high-frequency devices are everywhere. They're in phone chargers, DVD players, large screen TV's and used extensively in LED lighting. Worst case it can obliterate large hunks of the electromagnetic spectrum. The actual offending source can be difficult to find. With higher density housing having become an new normal, broadband interference can originate from one or several adjacent neighbours. Complaints to power companies now result in form letter responses that defer responsibility to the ACMA to resolve. In turn the ACMA are disinterested in all but the easiest of cases, citing a lack of resources to deal with the issue. Even after having successfully obtained a radio license, a few months of solid interference devoid of useable contacts is enough to end with many operators throwing in the towel and selling their station equipment.

8. Limitations on antenna height and size with higher density housing.

To reduce the available height and space for antenna experimentation has the effect of reducing effectiveness of operating range and incentive for antenna experimentation. This reduced ability for established operators to play with antenna hardware can result in their drifting out of the hobby earlier than they might have, should they have had more opportunity to 'spread out'.

Historically Amateur Radio operators have always stood out. Strange antennas and infrastructure do materialise on top of houses and cars owned by Amateurs. For most part people had been accepting of these oddities and simply move on. This is not the case in Australia today. There is a shift away from tolerance to eccentricity. Whole suburbs have sprung up with a belief in a domestic 'image' which must conform to some new neutral template. The placement of large antennas on top of any persons home is often perceived as a threat to this image of conformity.

High housing prices have meant higher proportions of rental properties in our cities. Landlords and agents of these properties also resist any forms of tenant behaviour that vary from the norm. Amateur Radio operators are very much in the firing line of property owners. This behaviour adds another obstacle to people contemplating involvement in the hobby.

9. The availability of disposable 'hobby time' for the average worker.

At any moment in history there is a perception by people that they had more time to do things when they were younger, including time for involvement in a Club culture. Still, there does appear to be a trend that disposable spare time of working class people has fallen in real terms. There is financial pressure from the high cost of housing requiring people to work longer hours. There is also increased travel time for commuters as the trend of living further from the workplace continues. This eats into disposable personal time. It is a general trend which has affected many sporting clubs now struggling to maintain their members. Time loss is an unfortunate casualty of a culture that focuses on the generation of wealth, or upon reducing the pressure of debt. The conclusion here is that there are a lot of prospective radio amateurs out there, but they are forced to prioritise their time and decide that as much as they would like it, they can not find the time to indulge in the hobby of Amateur Radio.

10. The passing of the older generation of operators.

The wave of post CB amateurs of the 70's and the 80' are now the old-timers of today, as indeed the old timers of that era have mostly passed away. Over the next decade, the passage of Amateurs that stemmed from the bubble of CB boom days will leave a void behind them which will significantly reduce the total number of licensed operators. Like a mirror image of a baby boom, this decline will affect many countries, including Australia.

11. The lack of native curiosity in how things work.

There is a paradox at work whereby much of the nations population is immersed in more technology today than at any point in time in human history, yet the desire or ability to comprehend this technology is very low. Few people pause to wonder how a image reaches their phone or TV screen. There is a general acceptance that pressing 8 x 8 into a calculator will yield a meaningful answer, without a matching curiosity as to how the correct answer came to appear on the display. Dishwashers make humming, sloshing sounds, then dishes are clean somehow. If one day the dishes are not clean, then the conclusion is drawn that the machine needs to be discarded and a new one purchased, rather than identifying the source of the problem. This is the extent of analysis that the average person makes. In our technological climate, few people have the native curiosity to find out how their products work and this effectively diminishes the pool of people from which Amateur Radio enthusiasts would emerge. Historically we have relied upon Secondary School teachers to nurture this curiosity and provide a path to learn more, but all too often, the teachers themselves have little knowledge or aptitude in this area.

12. Potential Amateur Operators are being steered away from the hobby.

A fair percentage of today's licensed operators got into the hobby because they were in high school and liked to know how things worked. Once, Amateur Radio was a definite avenue to pursue about the time kids were leaving school and entering the workforce. Today there are different pressures at work. The same kids with any smattering of curiosity are steered directly towards tertiary education. This is not a bad thing in itself, but an 'Asian style' ethic has permeated the system whereby you only study topics that have the potential to make you money. Any foray into not-for-profit knowledge should be dropped, lest it distract the student from the main prize. This pressure is real. By the time a student has passed through university to become a graduate in search of work, the term 'hobby' is reduced to being a word in the dictionary. University knowledge is largely about conformity and not about curiosity in unprofitable directions. Through this effect, Australian innovation is suffering and the hobby of Amateur Radio is losing a generation of smart candidates.

13. The lack of incentive to migrate from Entry Level licensing to more advanced levels.

This section is here because it does affect how long new operators stay in the hobby. The concept of the 'Foundation License' followed the belief that the transition from no license to Standard or Advanced license was too great and the introduction of an Entry Level license would provide an essential stepping stone for candidates. While true, we are seeing many operators who gain their Foundation license and are content to remain at that level rather than follow through to higher levels. There are a few reasons for this. For some, their modest needs of occasional operation on just a few frequencies are quite sufficient. For others, the transition to higher levels of licensing is still too tough and there are insufficient training and mentoring opportunities in their region to allow this to happen. A third reason is poor marketing, whereby the advantages of a license upgrade are not evident and have not been explained well. By not accessing the higher license standards, these operators do to a degree, isolate themselves from the more interesting parts of the spectrum along with additional modes of operation. There is a reasonable link between how long people stay with the hobby and how far up the Amateur Radio license qualification chain they choose (or are able) to pursue.

14. Poor marketing and availability of examiners to stage exam events.

The fundamental point of entry into Amateur Radio is the ability to sit and pass the various entry exams. Regardless of candidate knowledge and enthusiasm, this can only take place where there are sufficient exam events being held and where people can find out about them. The complex requirements placed upon volunteer assessors has meant that in many areas exam events are rare and in some regions, they don't happen at all. Getting access to the few events being conducted is a big obstacle for school-age candidates and for persons with disabilities. An additional issue is exam marketing. The volunteers who conduct exams are not effectively reaching people who could engage the process. Not unreasonably, the assessors don't see exam marketing as being part of their job, after all - they are already spending their time conducting the exams. However, this marketing is not presently being done sufficiently well and the volunteer assessors are under-utilised. The net result is that fewer individuals access the exam process, which is a path critical to sustain the hobby.

15. The failure of representation by Amateurs to government instrumentalities

Until recently, there was only one body representing the wider interests of Amateur Radio in Australia to the government department, the ACMA. Very little work was being done in this area and the ACMA had been openly critical of the quality of this representation. The few submissions being made on behalf of all Amateurs were found not to have actually consulted with operators, or with the hundred or so Radio Clubs around the country, but merely reflected the opinions of a small number of individuals. On this basis less weight is given to arguments for essential reforms of licensing and spectrum usage. Poor performance in this area has indirectly contributed to the decline of the hobby, as without continuous representation there is a significant reduction in understanding by the ACMA about the nature of Amateur Radio. Hence federal regulators and politicians assign a very low priority and few resources to the hobby.

16. Increasing lack of understanding by government instrumentalities.

This item is an extension of the previous item. Historically the various 'Departments of Communications' (the titles have changed frequently) had a much greater involvement with Amateur licensing, exams and general administration. Many of these services have since been outsourced. So today, fewer government staff than ever before know what the hobby of Amateur Radio is about and are able to defend its existence. In the past, it was quite common for staff members within the regulatory authority to be Amateurs themselves, but this situation is now quite rare and staff tends to be more administrative than technical. When political choices about spectrum space and interference issues are being made, then little weight is given to the continued resourcing of Amateur Radio.

17. A lot of Amateur Radio Clubs are in trouble.

A flow-on effect from some of the previously identified issues is taking its toll upon the Amateur Radio Club culture. Approximately one hundred radio clubs throughout Australia form the backbone of the hobby. Many of these have been in existence for 40, 50, 60+ years, have quality clubrooms, good funds and a reasonable number of members on the books. The chief difficulty arises where very few members actually want to run their club.

This is a generalisation and a lot of clubs don't have this problem, but many do. Long term members are content to come along to meetings, but only rarely participate in events and certainly don't want to volunteer for a committee role. When the election time comes around it can be incredibly difficult to fill all the positions of responsibility. Often positions simply remain unfilled. This creates a spiral where fewer people want to be a member of a club that doesn't do much and membership falls even further. When a club begins to fail, there are fewer local candidates for exams and the hobby as a whole is badly affected.

18. A lack of knowledge about 'what Amateur Radio is' by most of the population.

This effect is a little bit 'Chicken and Egg', but the problem is compounding. The less that people know about the hobby, the less they indulge in it and a fall of participation follows. Few people below the age of 25 know that Amateur Radio exists, so the likelihood of involving school and university students is low. Occasionally the children of established Amateurs become involved in radio, but don't stay long in the hobby after finding that most other operators are middle-aged or older. The desire for people to communicate within their own age group is real.

The next generation of 25 to 35 year olds are usually aware of 'Ham' radio, but mostly from poor movie examples like *Frequency* and *Independence Day*. Some will have a vague perception that Amateur Radio is all about strangers talking to each other with large microphones. Often perceived as an irrelevant activity in a world where mobile phone and internet communications is cheap and plentiful. Contemporary western culture makes few references to the knowledge and technology that forms the basis of the hobby, The general perception is that 'Ham Radio' has mostly faded away, along with silent movies, steam powered vehicles and vinyl records.

A Summary of these topics

Unless a systematic approach is taken to address as many of these issues as possible, then this slide into obscurity for Amateur Radio will continue. Issues of changing culture, science, commercial trend and apathy are all taking their toll. Many of the topics describe irreversible trends for which there is no solution, but not all of them. There still remains scope for the reversal of some of these trends.

POSITIVE ASPECTS ABOUT CONTEMPORARY AMATEUR RADIO

ABOUT THIS SECTION

There have been many great historical achievements attributed to Amateur Radio operators, particularly where new technologies have been created or the actions of operators have saved lives in dangerous times. Past achievements do not always translate into ongoing success or of any ongoing protection by the establishment; hence this section is focused upon the future. Its aim is to list positive aspects that are effective right now and to explore some actions that could help to maintain the relevance of Amateur Radio for decades to come.

1. The irrelevant qualification that still has relevance.

When applying for a job, not a lot of positions say '*Applicants must have an Amateur Radio License*'. Yet the license does require an exam pass on a wide range of technical topics. To an employer who knows nothing about Amateur Radio, this carries little weight. If that same employer has even a basic understanding of what Amateur Radio is, then presenting a license at a job interview indicates a passion for technology. It also shows that the person in front of them went out and studied a broad range of topics because they wanted to and (usually) not because someone made them do it. An Amateur Radio license can reflect well upon the character of the applicant, or at least it can provide an edge over another applicant with no license.

This is an aspect worth pursuing. If Amateurs can educate the public about the depth of knowledge that license holders have acquired, then the qualification has greater value. In turn, the increase in value provides an added reason to people to seek a license and to become involved with the hobby. This is not just about jobs for Amateurs, it is about the need to add perceived value to the hobby by educating people that an Amateur Radio license is not like a fishing license or a software license. It is a significant body of knowledge that has been acquired by an individual.

2. Strong elements of sport

There are hundreds of different sports pursued by millions of people worldwide. Some are prominent and many have a smaller following. Amateur Radio embraces many aspects of competition that are no less relevant than any mainstream sport. DX contests, National Park and hilltop contact challenges, Direction Finding competitions. These are all credible sporting pursuits worthy of promotion in the public arena. This is not every Amateur operator's ambition, but many do pursue the competitive aspects of the hobby.

There is scope for the creation of new competition activity or to augment existing events which incorporates radio communications. Future promotion of these events may lift awareness of Amateur Radio as a rewarding sporting hobby that is not dependent upon physical prowess for success.

3. Amateur Radio is one of the few qualifications still based upon merit on the day of the exam

One excellent, but rare aspect of Amateur Radio is that a candidate from anywhere can attend an exam event. If good enough on the day, they can achieve a Certificate of Proficiency proving their depth of knowledge. Contemporary education streams follow a different model where large topics are broken into small sections and tested by a string of smaller exams and project work. When enough modules have been passed, the candidate is deemed to be qualified. This suits most educational institutions because it directs people into longer (and more expensive) training programs. The important point of difference is that candidates tend not to have all the information in their head at the same time. Instead, mainstream knowledge is acquired like a tight spotlight slowly working its way across the material. This approach is excellent for gaining qualifications, but is not as good for nurturing curiosity and innovation.

This is an important point of difference that should be reiterated to those who may show an interest in the hobby. Amateur Radio examinations have aspects of rite of passage that are rare in the commercial world. One day a person is outside the hobby and the next day (if they are good enough) they become part of the hobby for the remainder of a lifetime.

4. Amateur Operators know more about how things work

Many Amateur operators today drifted into the hobby because when they were young they had a native curiosity about how things work. Amateur Radio did provide a path for school age kids to pursue. There has been a big shift in this area. 'Goal oriented' education places a premium on high scores for better placement in tertiary training. This approach to education focuses more upon adherence to convention and less about satisfying curiosity. Secondary tiers of education are a crossroad where a thirst for the unknown can be either suppressed or nurtured. Amateur Radio should have a place here. Juniors who are presented with the scope of what Amateur Radio involves may wish to follow training based upon the pursuit of curiosity in addition to the pursuit of credentials.

Amateur Radio still has a role to play in education if educators can look past immediate commercial expedience and present Amateur Radio as a reasonable option to pursue. It is true that Amateur radio operators know more about how things work than most, as historically, it was this attitude that drew them to the hobby. It is reasonable to claim that those who stay with Amateur Radio for a long time do develop proficiencies and understanding that reaches far beyond the hobby itself.

5. Amateur Radio is very broad in its technical scope.

It is difficult for people outside the hobby to appreciate the breadth of subject matter which lies under the general title of Amateur Radio. Certainly there is some expectation that operators would know something about transmitter and receivers, but in reality, even these two topics are vast. Actual knowledge extends to topics like, modulation techniques, antennas, propagation etc. Beyond this lies electronics, logic circuits and an eventual migration into software based systems. Virtually every direction related to the hobby opens up a fresh universe of study.

A good cross-section of this material is examinable for the Amateur Radio license. When a person begins to study for a Standard or Advanced Amateur exam, they are usually surprised by its scale of the syllabus, even if they have had some prior industry experience.

The key observation here is that the hobby can take participants to a wide selection of specialisations and introduce them to an extensive network of people with similar aims. As previously stated, areas of expertise developed in Amateur Radio often have relevance in life beyond the hobby.

When Radio clubs and training groups seek to advertise for candidates to enter their training and exam programs, it is important for them to highlight the amazing diversity of knowledge that the candidate will experience.

6. Amateur Radio is still an effective method of communications that will work in the absence of conventional infrastructure.

Item 4 of the first section describes how Amateur Radio is no longer regarded as a practical method of communications during civil emergencies. This is both true and false. It is true because this is how amateur Radio is usually regarded by the general public. In recent years a great deal of faith has been placed upon the integrity of the mobile phone network, to the extent that alternative communications methods are rarely considered. The reality is that the mobile network is complex and relies heavily upon power infrastructure to keep the towers going and the fibre optic links that tie the network together. Should this infrastructure fail, particularly in remote areas, it remains highly likely that Amateur Radio would still have a role to play. It is not just about the radio equipment being used. A competent operator can quickly overcome issues under adverse conditions by erecting temporary antennas from basic materials and making do with whatever power sources are available. This is the message that needs to be promoted when the need for emergency communications is being discussed.

7. A basic knowledge of Amateur Radio helps people to make small repairs at home

The average person who has passed through secondary and tertiary education is not necessarily prepared or able to work with hand tools. Simple tasks, such as putting a new plug on an appliance can elude a lot of people. Even if a person does not know enough about Amateur Radio to become involved they can still see the advantages of learning the handyman skills which are integral to the hobby. Working with batteries, taking measurements with a meter, pulling things apart and putting them back together again, all these skills are useful and confidence building for men and women of all ages, everywhere.

Exposure to Amateur Radio provides some insight into general problem solving that will stay with a person for life.

8. Antennas are a study of construction techniques and practical problem solving

Antennas are regarded by much of the population as a dark art. Even courses in electronics and electrical trades do not touch the topic. This presents an opportunity. Whether an antenna is purchased as an assembled unit or created from basic materials, the necessity of an antenna requires every station owner to overcome the logistics of getting it in the air, getting a feedline to it and stopping it from falling down. For persons unfamiliar with physical construction projects, this is a challenge. The opportunity to gain some experience in antennas is an item of fascination for many. It requires physical skills, tool use as well as its academic considerations.

There is a good case for enticing people into the hobby simply by offering some general training in antennas. Such a course would promote common designs, feedline considerations and safe antenna installation procedures.

9. Knowledge of Amateur Radio gives people the skills to solve TV reception problems and to appreciate the limitations of domestic wireless devices.

A subset of the previous topic goes to an improved knowledge of how radio signals of all kinds get from one place to another. Whether they like it or not, this is something that everyone must confront at some point in their life. Perhaps it is the need to solve bad TV reception before an important sporting event is being aired, or finding the best place to hold up a phone in a marginal area. A radio wave coming from a mobile phone obeys the same laws as any UHF transceiver, hence a little bit of knowledge about radio communications is becoming a modern life skill. This is an important item of leverage that can be presented when introducing people to the hobby.

10. There are about 100 radio clubs in Australia

A recent survey showed that around three quarters of all licensed operators have some contact with a radio club. Unlike sporting clubs, these groups don't compete with each other and generally share common aims. Clubs are an excellent resource to reach both prospective and active Amateurs within their communities. The survey showed that clubs would like to do more, but understand that to be effective, a nationally coordinated effort is needed. There is a tremendous opportunity for a national body to reach out to these groups, listen to their needs and create that coordinated effort to boost the hobby. Such an effort has not happened in decades and it will take more than stickers and pamphlets to succeed. It will require a physical presence to visit these groups and work with committees and members at a local level around the country. Of all the initiatives discussed in this document, the need to establish a new level of coordination with the Clubs of Australia is perhaps the most pressing.

11. Amateurs have created their own network of VHF and UHF repeaters

A traveller can spend many years towing a caravan around the country and be quite unaware of the large infrastructure of Amateur VHF and UHF repeaters that surround them.

About 700 repeaters have been built and are maintained by Clubs, groups and individual Amateurs. Some of these repeaters have internet links which extend this network around the

world. The Amateur Repeater network is another example where people outside of the hobby will know nothing. Any campaign that seeks to lift the profile of the hobby in this country should make some reference to this extraordinary network as a resource that is ready to use.

12. There is still a large CW culture

Amateur Radio is not just a single pursuit and this is another public perception to break down. One such pursuit is the art of Morse Code. Morse or 'CW' is effectively a language within a language. It is the art of listening to simple audio tone impulses and converting it to plain language, either on paper or within the head of the listener. It has an attraction and unique following of its own. Even though CW is no longer a license requirement, many thousands continue to pursue this skill.

Part of the task of increasing participation within Amateur Radio is the need for exposing the different segments as standalone activities. The ability to gain proficiency in CW communications is one such skill to present.

13. Supporting a Representative Body

Presently, there are two Australian organisations that work with the **Australian Communications and Media Authority**. The **ACMA** is of course the Australian regulatory body that administers the spectrum space allocated to Radio Amateurs. The two organisations that work with them are the **Wireless institute of Australia (WIA)** which has been around in various forms for over 100 years and the **Radio Amateur Society of Australia (RASA)**, which is a much newer organisation. The WIA charges approximately \$95 for annual membership. From 2019, the annual RASA membership fee will be just \$8. RASA is an efficient operation which uses the internet extensively for its work. Amateurs may choose to endorse either organisation, both organisations, or regrettably, none at all.

Representation is important. The ACMA will give more weight to submissions and proposed changes where they can see that the Amateur organisation represents a large number of licensed operators. RASA plans to maintain a close relationship with as many Australian radio clubs as possible in order to expand their representation.

Good representation for all operators is an essential part of Amateur Radio and this should be explained to all candidates who want to get on the air. It is the only way to ensure that license conditions are not eroded over time and that new candidates continue to have a clear path into the hobby.

14. The first step into Amateur Radio is a small one

Unless a person has come from a radio and electronics industry, there is a lot of work to reach the Standard and Advanced levels of operator license. Fortunately it is not necessary to attain that level in one go. The Foundation license standard can be attained by anyone willing to spend a week in preparation. New operators must have a knowledge of the regulations that govern the hobby and appreciation of the parts that make up a practical station. Awareness of some basic safety procedures is also important. Certainly this challenge is within reach of most school age kids. Australian clubs are in a position to assist new candidates through the process and to provide a little bit of support once they are on the air. The doorway into the hobby is there, but it can be hard to see. Amateur Radio will survive for future generations if enough existing operators are willing to help point out where that doorway is.

Summary of these positive aspects.

The notes presented here are not a definitive plan to safeguard the hobby, but it is a start. There needs to be a lot of conversation about these issues first. However, talk is not enough. Listing the things that concern us has no traction until it evolves into a plan for the future. We need that plan, we need a lot of people to agree to it and we need to start carrying it out soon.