

# **Results of survey on amateur radio operators initially licensed between 2000 and 2015**

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*ABSTRACT:* This paper presents results of a survey of American amateur radio enthusiasts initially licensed at the beginning of this century (2000 to 2015). The report shares findings including those related to the age of operators, extent of interest in the CW mode, and relationship between career and ham radio. Through open-ended question results, this paper then explores reasons for taking up amateur radio and its perceived relevance in this day and age. Concerning the latter, the observations may be useful as material for campaigns to grow the hobby's numbers.

## **Objectives**

This report describes results of a 2015 online survey of amateur radio operators. As part of a research project concerning ham radio as it stands today, I developed this survey to explore several of the hobby's dimensions, including issues of particular concern to amateurs themselves. Focusing on relative newcomers licensed for the first time between January 1, 2000 and April 30, 2015, I present results from selected questions related to age when first licensed, extent of interest in CW, and the influence of career on the decision to become an amateur (and vice versa). Moreover, through two open-ended questions, I explore issues related to motivations and present-day relevance. That is, the first question examines reasons among newer hams for taking up amateur radio in the 21<sup>st</sup> century—in light of perceptions from outside the hobby that “newer” technologies, including social media, Voice over Internet Protocol, and other Internet-based means of communication, have eroded ham radio's appeal. Along similar lines, the second question explores hobby insider perceptions of amateur radio's relevance in this day and age.

I conducted this research for two audiences: (1) a non-specialist audience outside the ham radio community (in the form of an academic conference presentation, for instance), and (2) amateurs themselves. This report is specifically aimed at the latter group.

## **Methodology**

This survey was conducted through Google Forms and with the proper research clearance from the university where I serve as a faculty member. I then gained permission from QRZ.COM to post an invitation to participate via a news item posting. The survey consisted of 11 questions, with three of them being open-ended (i.e., respondents could answer freely by writing in text boxes).

Prior to beginning the survey, respondents were asked to read informed consent information explaining its aims.

The survey received nearly 700 responses during the one-month period it was open (April 1 to April 30, 2015). In going through the data, I deleted a few respondents who admitted that they were not actually licensed for the first time between 2000 and 2015. They were well-intentioned in wanting to participate but simply outside the targeted population. Furthermore, the survey was initially open to hams from any country, but after receiving only a small number of responses from non-Americans, I decided to exclude them and focus only on US amateurs. This research thus shifted to become a case study of ham radio specifically in the American context.<sup>1</sup>

At this point, it is important to explain the limitations of this particular survey methodology. On one hand, posting an open invitation to participate on a website such as QRZ.COM was an easy, convenient, and no-cost means to reach a large audience of amateur radio enthusiasts. It must be made clear at the outset, however, that this type of non-probabilistic, non-random sampling places a serious compromise on data quality, and as such results cannot be generalized to the larger population. As an example of why this is the case in this particular research, it is likely that survey respondents tended to be those currently active in amateur radio to a moderate or high extent. Such hams are far more likely to use QRZ.COM for its call sign database, news postings, forums, and other features than inactive amateurs, or those with a license solely to use radio as an occasional communications tool during other activities. A representative sample can be obtained only from a population that extends well beyond active QRZ.COM users, and through a different survey methodology.

This type of survey design can be useful, however, as long as the above-explained limitations are understood. While statistical generalizations are not possible, I am able to explore amateur radio-related issues and generate ideas for future research. Moreover, the open-ended question responses provide rich qualitative information (stemming from those who took the survey) on motivations to take up ham radio in this day and age, and on the hobby's contemporary relevance.

## **Results: close-ended questions**

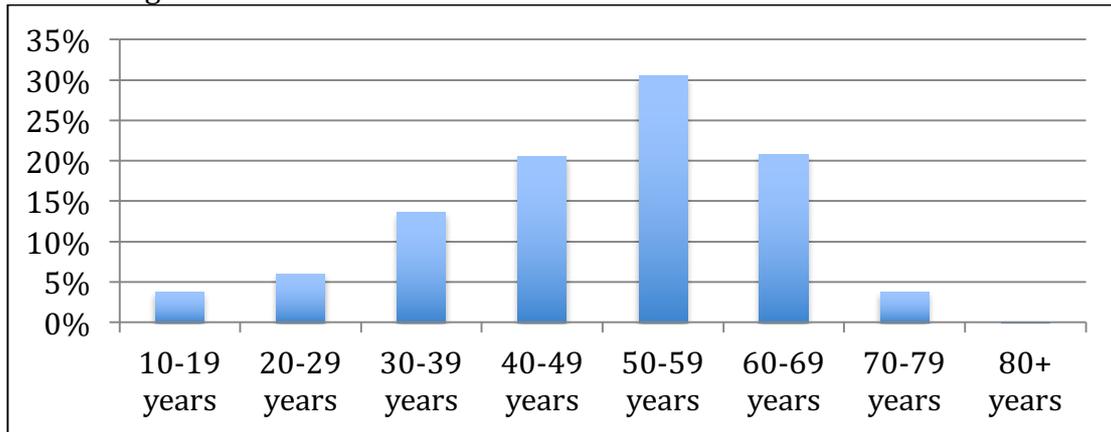
### ***Age when first licensed***

Amateur radio these days is often perceived from within and outside as having a lack of young people in its ranks, together with a concentration of hams in the older age ranges. This has caused much concern among amateurs regarding the vitality and future of the hobby. To explore the extent to which this perception is true (at least for this survey sample of those licensed 2000-15), Table 1 below shows age when first licensed by age cohort. If a young amateur can be defined as 19 years or under, the results (only 4%) indeed support the belief that it remains difficult to attract youth to ham radio. If, however, the

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<sup>1</sup> This said, I want to emphasize the value of cross-national studies to compare how the amateur radio hobby has unfolded in different countries.

Table 1: Age when first licensed



definition of “youth” is expanded to include young adulthood (taken to mean age 29 years or under), this percentage was 10%--marginally better.

Analyzing the age breakdown further, the percentage of amateurs below middle aged (defined here as 39 years or less) was 24%. If 50 years is used as a sort of dividing point, then the following is true: 45% of newer hams were 49 years or less, and 55% were 50 years or above. All in all, these results lend support to the perception that young people are underrepresented in ham radio, especially those younger than 19 years old. The age of entry for newer hams tends to weigh towards—but is not exclusive to—the higher age groups. I will offer additional remarks later in the section that analyzes the open-ended questions; the results will shine insights on the age issue.

### ***Interest in CW***

In moving on to explore issues concerning interest in Morse code in an era in which it is no longer required for licensing, Table 2 shows that the majority of new ham survey respondents (88%) did not know it (at the time of taking the survey). The results from Table 3, however, indicate that not knowing CW currently does not necessarily mean lack of interest in this mode. In fact, most respondents *might learn* (40%) or have a *strong interest in learning* (42%) Morse in the future. While the survey did not explore motivations for wanting to do so, possible reasons include CW’s fun and legacy dimensions, or utility as a weak signal mode for working DX and other purposes. In sum, these results suggest that while eliminating the Morse code requirement has led to fewer amateurs learning it to become licensed, CW has not died out: strong interest in this mode remains.

Table 2: “Do you know CW?”

Yes	12%
No	88%

Table 3: “If you do not know CW, to what extent are you interested in learning?”

I have a strong interest in learning Morse code in the future.	42%
I might learn Morse code in the future.	40%
I don't have any interest in learning Morse code.	18%

***Amateur radio and the “career connection”***

The next area I wanted to investigate concerns the connection between amateur radio and career. On one hand is the extent to which engagement with the hobby in youth can open doors to various career fields, technical or otherwise. The fact that this has been the case in the past is well-noted, for instance, in the small academic literature on amateur radio<sup>2</sup>, or obvious from Eric Guth’s (4Z1UG) podcast interviews with long time and prominent hams. Focusing only on the youngest age cohort (as others entered the hobby not from youth but after they made their career decisions), 33% of survey respondents aged 10-19 when first licensed answered *yes*: amateur radio indeed influenced occupational choice (Table 4). Career examples included cellular phone sales, civil engineering, aviation electronics, and general IT. Another 25% answered *no*. The remaining 42% answered *N/A*, and all indicated they were students (thus not yet embarked on a career path). Again, issues related to this data being non-representative must be kept in mind; moreover, the sample size for the 10-19 age group consisted of only 25 responses. However, these results are at least suggestive that amateur radio still has potential as a key segue for today’s youth into technical and other career fields.

Table 4: “Did ham radio influence your choice of career?”  
(aged 10-19 when first licensed)

Yes	33%
No	25%
N/A (non-applicable)	42%

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<sup>2</sup> See, for example, Haring’s *Ham Radio’s Technical Culture* (2006) and Douglas’s *Radio and the American Imagination* (1999).

Table 5: “Did your career have an influence on wanting to become a ham?”

Yes	34%
No	61%
N/A (non-applicable)	5%

On the other hand, based on my anecdotal experience I also wanted to explore the opposite case—that one’s career choice can have an influence on deciding to be a ham. From the survey, 34% answered yes to a question on this topic (Table 5). Examples included those working as engineers, technicians (such as broadcast or telecommunications), police officers, firefighters, pilots, and truck drivers. Some others had military backgrounds. Many of these respondents commented (in answers to a follow-up open-ended question) that becoming a ham was a natural outgrowth of their engagement in radio communications on the job, or from working in electronics in general. Others stated that they received encouragement from coworkers who happened to be hams.

### Results: open-ended questions

As explained, this survey included open-ended questions that enabled respondents to freely express themselves. In this section, I describe results from two of these questions: the first regarding reasons for taking up ham radio, and the second concerning the hobby’s present-day relevance. In addition to presenting themes that surfaced as percentages in terms of frequency mentioned (Tables 6 and 7 below), I will feature selected quotes from the responses. Including these direct quotes provides rich qualitative detail—allowing hams to share their stories.

The first question was as follows:

***Why did you become interested in amateur radio? Please give the reason or reasons.***

Table 6 shows that 31.6% of respondents mentioned (either as a sole reason or together with other reasons) that becoming licensed stemmed from a *long-term interest*—that is, along the lines of “*I have wanted to get into ham radio for a long time.*” This theme had the highest frequency of response. Many went on to describe that this desire grew from an earlier (often childhood) interest in amateur radio and/or related activities such as citizen’s band (CB) radio or shortwave listening (SWL). Concerning the latter two pursuits, a number of respondents mentioned that they once enjoyed CB—whether for local contacts

Table 6: Why did you become interested in amateur radio?

<i>Theme</i>	<i>Frequency (% of n = 620)</i>	<i>Summary of theme</i>
Long-term interest	31.6%	<ul style="list-style-type: none"> <li>• “Something I have wanted to do for a long time.”</li> <li>• Early interest in ham radio or related activities.</li> </ul>
Family or friend influence	21.9%	<ul style="list-style-type: none"> <li>• Family member such as father or grandfather was a ham.</li> <li>• Ham neighbor or friend was influence.</li> <li>• Role of Elmer.</li> </ul>
Emergency preparedness	14.0%	<ul style="list-style-type: none"> <li>• Use as a back-up communications system for natural disasters or other emergencies.</li> </ul>
Elimination of Morse Code requirement	12.4%	<ul style="list-style-type: none"> <li>• Trouble learning Morse code in the past.</li> <li>• Elimination of requirement opened the door to getting a license.</li> </ul>
Prior interest in CB radio	10.8%	<ul style="list-style-type: none"> <li>• Interested in CB at one time.</li> <li>• Felt that CB had gone downhill – wanted something more.</li> </ul>
Prior interest in SWL/AM and/or scanner listening	10.5%	<ul style="list-style-type: none"> <li>• Past or present interest in radio listening.</li> <li>• With the decline in SWL’s appeal, becoming a ham was a logical next step.</li> </ul>
Public service	10.3%	<ul style="list-style-type: none"> <li>• Wanted to participate in general emergency or public service support.</li> </ul>
“Now able to do so”	9.0%	<ul style="list-style-type: none"> <li>• While younger, lack of time or money got in the way / other life priorities took precedence.</li> <li>• Now have the time and/or money.</li> </ul>
Career influence	9.0%	<ul style="list-style-type: none"> <li>• Ham radio interest was related to one’s career field.</li> <li>• Examples: military, engineering, IT, firefighting.</li> </ul>
Educational value	8.2%	<ul style="list-style-type: none"> <li>• Fascinated by the science related to ham radio.</li> <li>• Like building, the technical challenge.</li> <li>• Can learn electronics.</li> </ul>
Social value	6.1%	<ul style="list-style-type: none"> <li>• Can meet like-minded people locally or from around the world.</li> <li>• Allows a social life.</li> </ul>
“Magic”	3.5%	<ul style="list-style-type: none"> <li>• The “magic” of wireless communication.</li> </ul>
Retirement hobby	3.5%	<ul style="list-style-type: none"> <li>• Good hobby for retirement.</li> </ul>
Other	17.7%	<ul style="list-style-type: none"> <li>• Reasons included: scouting, satellite communications, unrestricted nature (i.e., free from usual telecommunications infrastructure) of amateur radio, simply interested.</li> </ul>

or for “shooting skip”—but had found that over time it had “gotten old” or had deteriorated concerning on air behavior. Likewise, some former SWL enthusiasts spoke to the decreasing number of shortwave broadcast stations, or being able to transmit as a ham rather than only listen. As such, getting an amateur license was the logical next step.

*“I have been interested in electronics since I was old enough to hold a screwdriver. My earliest memory of radio was when I was about five years*

*old, when I made a contact with a trucker on the highway with my grandpa's CB radio. I was mesmerized by the fact that I could talk to someone using this gadget strapped under the dash of the ole pickup."*

*"From 1986 to 1992, I used 11m/CB—then the interest died off due to buffoons on the air."*

*"I was an SWL for many years who was frustrated at the number of international broadcasters going dark and decided to give ham radio a try."*

Another theme that surfaced (9.0%), often connected with *long-term interest*, was *"now able to do so"* (i.e., get a license and become active). These respondents spoke of life circumstances in youth or young adulthood that prevented them from taking up amateur radio. These included lack of money, or priorities such as dating, family, or career that took precedence. Overcoming such hurdles and/or changing priorities in middle-age or beyond then paved the way for getting licensed. Another barrier (surfacing in 12.4% of responses), perhaps not surprisingly, concerned the Morse code requirement on exams. For some, removal of this stumbling block finally made it possible to obtain a license.

*"I had a childhood interest as my grandfather had a bunch of radios in the basement that I used to twist the knobs on. I got interested in cars, girls, computers, girls...but when I settled down and had a decent paying job and time, I got interested again."*

*"Always wanted go get a ham license, from my teenage years. Code requirements were a disincentive, then school, marriage, family, work got in the way. Now I'm retired and I thought I would try it."*

*"Always interested, but never took the first step due to the code requirement. I found out code was no longer a requirement from a coworker ham, and took my exam."*

The second largest theme that emerged in terms of frequency (21.9% of all responses) was *family or friend influence*. Here, several respondents highlighted how a father, grandfather, or other relative introduced them to amateur radio. Others explained the role of an Elmer-down-the-street, teacher, co-worker, or other non-family member. These results speak to the fact that for many this century-old hobby can include a family and generational dimension, and attest to the valuable mentoring role that an Elmer can play.

*"My dad was an amateur radio operator, licensed in 1959 when I was 12 years old. I grew up playing in our basement while Dad was in the corner on his rig, and I was fascinated and told my dad I wanted to get my license then, but never did."*

*"My dad was a ham and as a kid I used to listen to him work CW. I also live where an old ham took me under his wing and helped me along."*

*“My professor runs our school club; he showed me the possibilities of DX and I was hooked.”*

Perhaps of little surprise, *emergency preparedness* (14.0%) and *public service* (10.3%) also emerged as motivations for getting licensed. These results highlight the importance many continue to place on these functions of ham radio—ones that have served as key justifications for the hobby’s continued existence in the US (and preservation of frequency segments for amateur use accordingly). Several respondents commented that their reason for obtaining a license was simply for *preparedness*.

*“I wanted to be able to get information in an emergency.”*

*“I got interested after the Nisqually earthquake here in Washington.”*

*“(I became licensed) for a means of communications during times of national emergency, first, and local emergencies secondly.”*

Furthermore, those who mentioned *public service* reasons did so because they wanted to participate in organizations including Skywarn, ARES, or RACES.

*“One day I became intrigued by the spotter activation message appended to a NWS report and looked into it. That led to becoming a Skywarn spotter, which led me back to radio—amateur radio this time.”*

*“(I became licensed) for the use in community service and emergency response and similar events as part of multiple ARES and RACES units in my region.”*

Amateur radio as a back-up system for emergencies is theme discussed also in the next section concerning the hobby’s contemporary relevance.

Moving on, themes that surfaced also included *career influence* (9.0%), and *educational value* (8.2%). Regarding the former, respondents explained how interest in getting a license had some relationship to their chosen career fields (in line with earlier discussion).

*“I worked in the space program for many years and dealt with earth-to-space communications systems. I always enjoyed the challenge of communicating over long distances with radio waves. Amateur radio gives me a way to pursue this on my own.”*

*“I was familiar with ham radio due to a previous career as a wilderness guide.”*

*“I am a geologist with a strong physics/astronomy background, and the radio/propagation/space weather, etc. effects that one experiences as a ham operator really fascinates me.”*

Concerning *educational value*, a few respondents who spoke to this theme simply said that amateur radio's science-orientation was great for stimulating the mind and keeping it active. Several others called specific attention to the hobby as an excellent way to learn about electronics and/or radio propagation—and through its do-it-yourself and hands-on orientation.

*“Radio is a new area for my brain and I want to keep mentally and physically active.”*

*“The physics of the electromagnetic spectrum fascinate me. Amateur radio allows some degree of experimentation in this area.”*

*“Amateur radio gives me an opportunity to study and learn a technology that I did not know or use before. I enjoy researching, designing and building new electronic equipment, such as kits, baluns and wire antennas.”*

Other themes, though smaller in terms of frequency of response, included amateur radio's *social value* (6.1%) that allows one to make new and like-minded friends locally or around the world, and the “*magic*” of radio communication (3.5%) (more on these later); and ham radio as an excellent hobby for retirement (3.5%). Finally, I classified nearly 18% of miscellaneous responses as *other*, with no single theme having more than a 3.0% response rate. These wide-ranging reasons for taking up ham radio included for satellite communications, and because of the hobby's unrestricted nature—i.e., free from the usual telecommunications infrastructure (discussed in the next section).

*“Talking to people around the world over satellites has been my main interest. I think it's the coolest thing in the world to build and launch satellites and talk to people around the globe and hear signals from space.”*

*“I like the idea of communicating without relying on a network or other infrastructure.”*

### ***What do you think is the relevance of amateur radio in the 21<sup>st</sup> century?***

The second open-ended question allowed respondents to provide their perspectives on the present-day relevance of the hobby—again, in a time where Internet-related means of communication are perceived to have eroded the appeal of “older technology” amateur radio. The results from data coding are as follows.

Table 7 shows how *reliable backup/emergency communications (EmComm)* was by far the largest theme in terms of response frequency (34.1%). Here, hams described how amateur radio remains a reliable back-up “when all else fails” in times of natural or human-caused disasters. That is, ham radio communications in these situations can fill gaps when the usual networks (e.g., landline and cell telephone, the Internet) are disrupted. Many spoke to this EmComm relevance from experiences living in disaster-prone areas, or from fears of terrorist attacks. Interestingly, some amateurs were of the opinion that

Table 7: What is the relevance of amateur radio in the 21<sup>st</sup> century?

<i>Theme</i>	<i>Frequency (% of n = 620)</i>	<i>Summary of theme</i>
Reliable back-up / emergency communications (EmComm)	34.1%	<ul style="list-style-type: none"> <li>• A back-up communications system during emergencies—i.e., “when all else fails.”</li> <li>• Content of responses ranged from simple emergency preparedness to survivalist intentions.</li> <li>• A few respondents spoke to ham radio’s ability to fill in gaps in cell phone coverage in rural areas.</li> </ul>
DIY / educational	16.8%	<ul style="list-style-type: none"> <li>• Key means through which to learn about electronics, science, etc.</li> <li>• Excellent DIY way to tinker and experiment.</li> <li>• Much more rewarding than plug-and-play type Internet-based technologies.</li> </ul>
HR has evolved / embraced the Internet	16.6%	<ul style="list-style-type: none"> <li>• Amateur radio has progressed along with the development of digital technologies/the Internet. The latter has enhanced the former.</li> </ul>
Radio magic / romance of radio communication	8.3%	<ul style="list-style-type: none"> <li>• Ham radio is “magic,” providing a sense of wonder, serendipity, etc.</li> <li>• The magic of worldwide reach with simple equipment.</li> </ul>
Freedom from infrastructure	7.8%	<ul style="list-style-type: none"> <li>• Amateur radio is independent from third party, commercial infrastructure.</li> <li>• Important for emergency communications.</li> </ul>
Social aspects	7.8%	<ul style="list-style-type: none"> <li>• Can meet interesting, like-minded people locally or around the world.</li> </ul>
Different and more rewarding than the Internet	7.0%	<ul style="list-style-type: none"> <li>• Amateur radio is qualitatively different and more rewarding than the Internet.</li> <li>• Provides greater sense of community—“real” social interaction, civility, etc.</li> </ul>
Multifaceted	6.2%	<ul style="list-style-type: none"> <li>• Numerous areas exist within the hobby.</li> </ul>
Simply fun	5.3%	<ul style="list-style-type: none"> <li>• Theme title says it all...</li> </ul>
Nostalgic appeal	5.0%	<ul style="list-style-type: none"> <li>• Hobby is “old” or “obsolete” yet still has appeal.</li> </ul>
Other	5.2%	<ul style="list-style-type: none"> <li>• (Various responses)</li> </ul>

this *back-up/Emcomm* function has led to a significant number of survivalists or preppers getting licensed in recent years—those who fear an impending collapse of modern society in some shape or form. A few respondents actually identified themselves as such.

All said, it is perhaps fair to say that a continuum exists concerning interest in amateur radio for EmComm use among large numbers of relative newcomers. This ranges from simply being radio-equipped for natural disasters, to prepping for the end of society as we know it—after which ham radio is intended to be used as a mainstay communications system. Finally, a few respondents called attention to amateur radio’s back-up utility not necessarily in

times of disaster, but rather to simply fill in gaps in communications coverage in rural areas.

*“Having lived in Florida for many years and seeing the havoc natural disasters like hurricanes can cause and how fragile the infrastructure most people rely on is causes one to think.”*

*“Most reliable communication in an emergency. Lots of folks think the ‘end of the world as we know it’ is near; if that happens hams will be the only communications available if at all.”*

*“You get off the major highways and quickly see how fast you lose connectivity to the world. Hard to find the Internet while out camping, let alone telephone service. Stay connected to the world via ham radio.”*

*Do-it-yourself (DIY)/educational* (16.8%) was a theme overlapping with the *educational value* one from the previous question. Again, respondents asserted amateur radio’s continued relevance in terms of being a key and hands-on means through which to learn about electronics, propagation science, and the like; and to gain new skills, tinker, and experiment. Such characteristics, some argued, are lacking from largely plug-and-play Internet-based technologies. Moreover, a few respondents were enthusiastic about the Maker Movement as having potential to attract like-minded DIY/tinkerers to amateur radio.

*“People still have an interest in technology and how it works that cannot be satisfied by just playing on the internet; and amateur radio is one of the few avenues that still allows experimentation, learning, and invention with a minimal investment.”*

*“I can dig in to the machine. I can build things that work.”*

*“The Maker Movement occurring now will spill over into amateur radio.”*

The next theme (16.6%) was as follows: *ham radio has evolved/embraced the Internet*. Contrary to those perceptions that amateur radio has been “left behind” by the Internet in terms of appeal factor, these respondents asserted that the former has in fact kept up with the times by embracing and progressing along with the latter. For instance, various online tools are now widely used by hams, with DX clusters, solar data sites, and propagation reporters (e.g., PSK Reporter, the Reverse Beacon Network) to name a few. As another example, some pointed out the virtual Elmering utility of the Internet through YouTube instructional videos by Randy Hall (K7AGE), David Casler (KE00G), and others.

Others called specific attention to the modern interface between amateur radio and digital technologies. As examples, VoIP technologies fuse the Internet to RF, digital modes such as PSK31 and JT65 enable contacts under weak-signal conditions, and modern transceivers are either software-based or dedicated software defined radio (SDR) ones. It is argued, moreover, that the hobby in this manner can be attractive to those with computer and Internet interests (including young people). One respondent likened JT65 as the Twitter of

amateur radio, and compared waterfall-based PSK conversations to the experience of using chat rooms.

*“I think the age of the internet has bolstered ham radio on many fronts.”  
“The Internet is a big reason why the hobby is resurging. DX watch sites, club web sites, and access to knowledge. The work on software defined radio is opening the hobby up to the next generation.”*

*I used KE0OG’s website and YouTube videos to learn about ham radio and the various online tests to prepare for the big exam.”*

*“Amateur radio does not remain stagnant. It embraces technology and progresses with advances in technology (D-Star, Echolink/IRLP, etc.), and there is always some cutting-edge facet to amateur radio.”*

Again overlapping with the first open-ended question, the themes of *radio magic* (8.3%) and *social aspects* (7.8%) surfaced in the relevance question as well. Several spoke to the magic of amateur radio in terms of its “you never know who you will contact” serendipity, and sense of wonder regarding the ability to communicate over long distances via simple equipment and antennas. Other amateurs emphasized the hobby’s social aspects, including the ability to make friends from different backgrounds (though with a common interest) locally and globally.

*“I can take a radio in my back yard and put a signal into Europe, South America, or even Australia using nothing more than a ratty old length of wire. To this day I still find this amazing.”*

*“I have heard the expression that ham radio is the original social network. I think this attracts most of us to the hobby. There is a very social group on the local VHF/UHF repeater as well as the various ham clubs. On the HF/DX side there is a sense of connection with hams around the world. Ham radio provides a common ground to reach out and meet and get to know people that I would otherwise not have met.”*

The theme of *freedom from infrastructure* (7.8%) concerned the importance of ham radio as a point-to-point communications system independent of third party, commercial infrastructures (i.e., cellular phone, the Internet, and utility power). Along these lines, some spoke of the simple freedom or challenge that this infrastructure-free orientation has to offer. Another respondent, in a more serious vein, asserted amateur radio’s value not only in emergency situations, but also in terms of its freedom of not being constrained by “political whims or borders.”

*“Ham radio still allows communication that works independent of utility power, internet and cell phone subscriptions, landline monthly charges, etc.”*

*“For me it was the challenge of being able to communicate without using commercial infrastructure like the cellular system or Internet.”*

*“Amateur radio is still around because the internet requires a connection to fixed infrastructure. In an emergency, that connection may be unavailable. Radio is also not susceptible to political whims or borders. It represents a level of freedom and power to communicate.”*

Next, the theme of *different from and better than the Internet* (7.0%) again speaks to amateur radio in relation to the online world. This time, however, the emphasis is not on how the two are used hand in hand, but rather on how ham radio is qualitatively different—and more meaningful and rewarding. According to respondents, amateur radio, unlike the Internet, provides a real sense of social connection. That is, the former enables “talking”: simple and traditional social interaction (at least with SSB, FM, and other voice modes). This is largely absent from social media and other Internet-based communication means. Others go on to say that the amateur bands have a sense of civility that is lacking online—perhaps due to the influence of operating rules and conventions, together with less anonymity on the airwaves than possible in cyberspace.

*“Even in an age of social isolation due to personal electronic devices and social media... sooner or later, some just feel the need for more traditional social interaction ‘talking’—and amateur radio can definitely facilitate that.”*

*“Society has gone through an age of computers but is shifting back towards physical hands-on activities and careers. Amateur radio gives you that hands-on and still the ability to communicate with anyone, anywhere, just as finding a chat room on the internet. The biggest thing with a chat room is that you cannot get that personalized contact with someone, being able to hear their voice and the tone in which they speak to you.”*

*“Look at social media. It's filled with hateful people quick to shove politics or bad mouth someone. Why? Because the Internet is an emotionless medium. People hide behind their keyboards like cowards and spew garbage.”*

Themes also included amateur radio being *multifaceted* with its wide range of particular pursuits (6.2%), and *simply fun* (5.3%).

*“There are so many aspects of the hobby. Folks with interests in emergency communications, DXing, moon-bounce, ballooning, QRP, home-brew/kit-building, etc. can all join and share in the amateur radio experience.”*

*“It's pretty much a limitless hobby, there are so many varied opportunities to apply one's existing skills to and learn new ones as well.”*

*“The medium of radio is just plain old fun in a class by itself. Nothing is guaranteed.”*

What is more, in contrast to amateur radio's perceived relevance in terms of embracing “newer” technologies and keeping up with the times, as described

above, 5% of respondents placed emphasis on the opposite: its nostalgic appeal. They described ham radio as a technology and practice that is “older” or even obsolete (while at the same time technical in nature, still evolving in some ways, etc.)—yet appealing precisely for these reasons, and in the same manner as certain other pursuits.

*“People tend to find a fascination with obsolete technology/crafts -- look at SCA (Society for Creative Anachronism) and blacksmithing for example. Ham radio has an interesting combination of being obsolete, yet highly technical.”*

*“I think that amateur radio continues to evolve... Plus, I think there’s that slight throwback factor that interests some people.”*

In concluding the analysis of this question, I categorized the remaining and various responses (5%) as *other*. Two examples:

*“It’s (i.e., ham radio) a group that has, my gosh, an admittance exam, and there are many young folks today who find the lure of being in such a group quite irresistible.”*

*“Ham radio is a hobby that fits modern day life just as well as any other. Why? For about 100 reasons other than ‘because it’s been around a long time...’ Hopefully this can be the start of people stopping acting like it’s a phenomenon that this hobby is still around. That impression only contributes to the non-ham public’s impression that we are nothing but a cranky old hobby. We are anything but.”*

## **Concluding remarks**

As stated at the outset, the purpose of this survey and report was to explore certain areas of amateur radio at the beginning of the 21<sup>st</sup> century—and from the perspective of its recent newcomers. Again, it must be kept in mind that it was impossible to make statistical generalizations from the survey due to its non-random nature. The results do, however, allow me to suggest areas for future research, and provide rich qualitative information concerning motivations to become licensed and the hobby’s present-day relevance.

Survey findings cast light on issues of concern to amateurs. Regarding age issues, for instance, the results lend support to the assertion that it is difficult to attract young people to the hobby. This said, the ranks of newer hams were not confined to people only in the upper age brackets; for instance, nearly 24% were less than 40 years of age when first licensed (and 20.5% between 40 and 49 years).

We can thus “hypothesize” that most amateurs licensed initially between 2000 and 2015 began at points other than in childhood or adolescence. This finding is accentuated by results from the first open-ended question. That is, many of these people had an early interest in ham radio—stemming in several instances from a related activity such as electronics kit building, CB radio, or

SWL—but did not go on to get a ham license at the time. This was often due to barriers such as different life priorities, lack of time, and/or the Morse requirement. It was only at a later point (usually middle age or retirement) that they were finally able to become licensed and get on the air.

Common reasons for taking up ham radio also included the motivating influence of a family member, neighbor, or other person. Emergency preparedness and public service factors surfaced as well—not surprising owing to heightened concern in recent years for natural or human caused disasters. (As a case in point, Hurricane Maria just devastated Puerto Rico around the time of writing.) Other reasons, though lesser in terms of frequency, included amateur radio as providing a wealth of opportunity for learning and experimentation, a means of meeting a variety of like-minded people on or off the air, and a sense of magic and wonder surrounding wireless communication.

The survey went on to explore career and amateur radio; just over one third of respondents indicated that the decision to take up the hobby was influenced by their occupational field (often technical in nature). Regarding CW in an era in which it is no longer required for licensing, survey results suggested that while the majority of new hams did not learn Morse at time of licensure, interest remains. These findings can perhaps help to alleviate concerns that CW as a mode is “dying out” now that Morse is no longer a license requirement.

The second open-ended question allowed newer hams to express a variety of insights concerning the present-day relevance of their avocation. Contrary to perceptions that amateur radio and its related technologies are somehow irrelevant or obsolete these days, respondents argued—often passionately—on the contrary. Ham radio’s back-up and EnComm role surfaced, perhaps not surprisingly, as the most frequently cited form of contemporary relevance—as a valuable back-up communications system (independent of the usual and fragile infrastructure) that works “when all else fails.” Another theme concerned amateur radio keeping up with the times through its progressing along with the development of digital technologies/the Internet. Specific examples included the sophistication of today’s microprocessor based transceivers and the popularity of digital modes, not to mention the numerous ways in which the hobby has embraced the Internet. Other relevance themes, on somewhat different notes, included amateur radio as being qualitatively superior as compared to the plug-and-play and superficially social nature of the Internet. The former was viewed as providing, unlike the latter, various avenues for learning and DIY experimentation, and a real sense of social connection.

In conclusion, perhaps some of the findings of this survey (confirmed through additional research, evidence, etc.) can inform efforts to sustain amateur radio into the future. For example, the suggestion that most enter the hobby in middle age or beyond lends support to the proposal that recruitment efforts should focus not only on attracting youth: equal emphasis should be on adults. As was pointed out in the June 2017 issue of CQ Magazine, adults, after all, tend to have more disposable income and time for amateur radio. Furthermore, such recruits can very well live long enough to offer decades of their lives to the hobby—and mentor youth in the process (i.e., more adult hams around to Elmer more kids) (Moseson, 2017; Sickles, 2017). Recruitment strategies might include targeting those in technical occupations, such as in fields with some connection to radio communications—or advertising more widely so as to

identify those “always wanted to be a ham” types, as well as to attract people from other walks of life.

While I believe to a certain degree of optimism concerning amateur radio’s future, it is quite possible that current awareness and recruitment efforts are not enough to increase numbers relative to those exiting the hobby due to waning interest or becoming silent keys. As such, it is imperative that amateurs and their associated clubs and organizations greatly step up efforts to attract newcomers. Perhaps the relevance question results from this survey can provide material for marketing purposes in portraying the hobby as it really is—fascinating, rewarding, educational, useful, and current.<sup>3</sup> We as amateur radio insiders know this for a fact; the challenge is to spread awareness and overcome negative perceptions.

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<sup>3</sup> One example of an effective recruitment message is the Radio Society of Great Britain’s “Amateur radio: a hobby for the 21<sup>st</sup> century” video ([https://www.youtube.com/watch?v=8x6x\\_6mDVIQ](https://www.youtube.com/watch?v=8x6x_6mDVIQ)). This presentation (focused on youth) portrays the hobby in the fascinating, relevant, and fun light it deserves.

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