NOVEMBER / DECEMBER 2018

RAC TCA

The Canadian Amateur

NOVEMBRE / DÉCEMBRE 2018

Al Thurber, VE1RG, receives Emergency Management Exemplary Service Award from Minister Ralph Goodale

"Crisis at High River": Five Years Later – Dann St-Pierre, VE6TD, Vince d'Eon, VE6LK and Ian Willumsen, VA6IAB

Art Horovitch, VE3AIH, Frank Fullum, VE2KOI, and Dave Scott, VE3ZZU, at Net Control for the 2018 MS Bike Tour

Publications Mail Agreement # 40028682 Registration # 09866

Canada's Amateur Radio Magazine

La Revue des Radioamateurs Canadiens

Working towards a Canadian Consortium of Emergency Management NGOs

Emergency Communications: A Special Issue of TCA

A debriefing session during the City of Nanaimo's "Rescue on the Rock"

Kitchener-Waterloo ARES participates in Operation "Better Together"

RAC Canada Winter Contest 2018: December 29
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TCA
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The deadlines for the next issues of TCA are November 15 and January 15

NATIONAL & INTERNATIONAL

DEPARTMENTS

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Would you like to be notified when an issue of *The Canadian Amateur* (eTCA) has been posted online?

If so please subscribe to our mailing list by completing the form on the RAC website at:

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AMATEUR RADIO AND EMERGENCY COMMUNICATIONS

We are pleased to present the following articles in this special issue on behalf of RAC's 25th Anniversary:

OTHER FEATURES AND COLUMNS

We would like to thank many of our columnists for taking a break from this issue to allow us to include the above articles:

AROUND THE CORNER...

People, Places, News and Events on the Canadian Amateur Radio Scene

The following news items have been compiled from Industry Canada, RAC bulletins and the RAC website at http://wp.rac.ca.

RAC Welcomes Directors for 2019

Each year, the terms of office of roughly half of our Directors end – four in even numbered years and three in odd numbered years.

We have now completed the nominations and election process for Directors in the Atlantic, Ontario North/East, Midwest, and British Columbia and Yukon Regions.

I am happy to announce that Dave Goodwin, VE9CB (Atlantic), Allan Boyd, VE3AJB (Ontario North/East) and Bj Madsen, VE5FX (Midwest) have been reelected as Directors for their Regions.

Keith Witney, VE7KW, has been elected Director for the British Columbia and Yukon Region and will take office on January 1, 2019.

Allan Munnik, VA7MP, the current Director will become Deputy Director BC and Yukon when Keith becomes the Director.

Many of you will be very familiar with Keith as he is a very active BC Amateur and is the co-recipient of the RAC Amateur of the Year Award for 2017 (see page 16).

Keith is based in the Vancouver area and Allan is now in the Okanagan so we will have a strong team in British Columbia and the Yukon.

Glenn MacDonell, VE3XRA
RAC President and Chair

Radio amateurs du Canada accueille les Directeurs pour 2019

Chaque année, les mandats d'environ la moitié de nos administrateurs prennent fin – quatre aux années paires et trois aux années impaires. Nous avons maintenant terminé le processus de nomination et d'élection des administrateurs dans les régions de l'Atlantique, du Nord-est, du Midwest, de la Colombie-Britannique et du Yukon.

Je suis heureux d'annoncer que Dave Goodwin, VE9CB (Atlantique), Allan Boyd, VE3AJB (Ontario Nord / Est) et Bj Madsen, VE5FX (Midwest) ont été réélus au poste de directeur de leur région.

Keith Witney, VE7KW, a été élu directeur pour la région de la Colombie-Britannique et du Yukon et entrera en fonction le 1er janvier 2019.

Allan Munnik, VA7MP, l'actuel directeur deviendra le directeur adjoint de la Colombie-Britannique et du Yukon lorsque Keith en deviendra le directeur.

Beaucoup d'entre vous connaissent très bien Keith. Il est un amateur de la Colombie-Britannique très actif et co-récipiendaire du prix RAC Amateur en 2017 (voir page 16). Keith demeure dans la région de Vancouver et Allan, maintenant, dans l'Okanagan. À n'en pas douter, nous aurons une équipe solide en Colombie-Britannique et au Yukon.

Glenn MacDonell, VE3XRA
Président et directeur général de RAC

Thank You Geoff!

An informal gathering was held at the home of Geoff Bawden, VE4BAW, former Radio Amateurs of Canada President.

Geoff was presented with a plaque for his contributions as RAC President for two terms.

Making the presentation was former RAC Midwest Director, Derek Hay, VE4HAY, and former Ontario North/East Director Bill Unger, VE3XT.

RAC Amateur of the Year Award 2017 Presented to Don Studney, VE7DS and Keith Witney, VE7KW

On September 11, 2018, RAC Director Allan Munnik, VA7MP/VE7RMP (British Columbia & Yukon Region) presented the RAC Amateur of the Year Award for 2017 to Don Studney, VE7DS and Keith Witney, VE7KW, on behalf of Radio Amateurs of Canada.

The intention of the RAC Amateur of the Year Award is to recognize an individual who has made an outstanding contribution to Amateur Radio in the past year or has contributed consistently to the welfare of Amateur Radio over a period of several years.

Don and Keith richly deserve the award for their outstanding work on the VE100VIMY project in which Canadian special event stations were operated across Canada during 2017 and a special event station using call sign TM100VIMY was operated at Vimy Ridge in France during commemorative ceremonies. In total, this project required planning and work over six years. Don and Keith deserve our gratitude for their perseverance and dedication.

The presentation was held during the regular monthly meeting of the Orca DX and Contest Club (ORCA DXCC) in Delta, British Columbia. The Orca DXCC was established in 2010 and is open to all Amateur Radio operators with an interest in HF DXing and contesting; Don and Keith are both members.

Before presenting the plaques, Director Munnik outlined the history of the Award and the Canadian Amateurs who previously received this honour.

The Award was created in 1976 by the Canadian Radio Relay League, one of the two societies that formed Radio Amateurs of Canada 25 years ago.

Ed Frazer, VE7EF, former RAC Director for the British Columbia / Yukon Region and former Chair of Trustees for the Canadian Amateur Radio Hall of Fame, assisted with the presentation and his article about the significant event can be found on page 16.

For the complete story on the VE100VIMY campaign and on the RAC Amateur of the Year Award for 2017 please visit https://wp.rac.ca/canadian-radio-amateurs-of-the-year-for-2017/.

Glenn MacDonell, VE3XRA
RAC President and Chair

TCA

THE RAC QSL BUREAU SYSTEM

The **RAC Outgoing QSL Bureau** service is available to RAC members, RAC affiliated clubs (club call only) and QSL Managers who are members of RAC. Your RAC membership number must accompany each shipment of QSL cards.

RAC Outgoing QSL Bureau
PO Box 11156, Station H
Nepean, ON K2H 7T9
Telephone: 613-670-3230
Email: ve3exy@rac.ca

There are limits and restrictions for use of the Outgoing QSL Bureau. For more information, surcharges, card sorting details and some handy tips, please visit http://wp.rac.ca/ or http://www.magma.ca/~ve3exy/bureau.html.

Member societies of the International Radio Union (IARU) operate a worldwide system of QSL Bureaus. Radio Amateurs of Canada, as the Canadian member-society, operates a **National Incoming QSL Bureau**, and sponsors the Incoming Bureaus for the 12 Canadian call areas. Cards received by the National Incoming Bureau from IARU member societies are sorted and forwarded to the Incoming Bureau in each call area.

All domestic cards (VA-VE-VY) to Canadian Amateurs are to be sent directly to the RAC National Incoming Bureau and not to the Outgoing Bureau.

Domestic cards sent to the Outgoing Bureau will experience a delay. Only cards for destinations outside Canada are to be sent to the Outgoing QSL Bureau.

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Sponsored by: Loyalist City ARC
Len Morgan, VE9MY, Manager
Box 51, Saint John, NB E2L 3X1

The **Incoming QSL Bureau** service is a user-pay system, using one of four methods – (**A**) envelopes; (**B**) credits; (**C**) labels; or (**D**) combination credit with labels – to get cards to you. Visit http://wp.rac.ca/the-rac-national-incoming-qsl-bureau/.
(*Note: Method B is preferred).

VE1 – VE0 Bureau (B)
Brit Fader Memorial QSL Bureau
Sponsored by the Halifax ARC
Tom Caithness, VE1GTC
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VE4 Bureau (B)
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208 Canterbury Place SW
Calgary, AB T2W 1P4
http://www3.telus.net/telwest/QSLBuro.html

Silent Keys – In Memoriam

With regret, we record the passing of these Amateur Radio operators.
Nous avons le regret de vous annoncer le décès des radioamateurs suivants.

VA1BAB – Brian Bonaparte, of McKinnon's Harbour, NS, at age 51, on April 12, 2018
VE1AFJ – Bob Foote, of Truro, NS, at age 88, on April 12, 2018
VE1AHN – Neil Everett, of Middleton, NS, at age 72, on July 18, 2018
VE1GWW – Glenn Wright, of East Kingston, NS, at age 78, on March 17, 2018
VE1JGM – John Milburn, of Lincoln, NB, at age 82, on July 25, 2018
VE1MS – Bob MacDonald, of Chelton, PE, at age 87, on April 5, 2018
VE1RBK – Betty Ross, of Riley Brook, NB, at age 80, on August 5, 2018
VE1VAV – Bill Ackkerman, of Stellarton, NS, at age 88, on July 5, 2018
VE3ACD – Mel Brown, of Peterborough, ON, at age 86, on November 26, 2017
VE3BER – Bruce Roney, of Mississauga, ON, at age 79, on October 25, 2017
VE3BYS – Steven Serheniuk, of North York, ON, at age 62, on September 14, 2017
VE3CVL – Tom May, of Owen Sound, ON, at age 90, on September 23, 2017
VE3DDN – John Neumann, of Almonte, ON, at age 80, on August 22, 2018
VE3DOT – William McCowan, of Oakville, ON, at age 78, on July 30, 2017
VE3DRA – Don Reid, of Burlington, ON, at age 75, on February 1, 2018
VE3DUO – Brian Summers, of Burlington, ON, at age 74, on November 8, 2017
VE3FFY – Art Brubacher, of Milverton, ON, at age 84, on August 8, 2018
VE3FYG – Bernie Golchuk, of St Catharines, ON, on February 2, 2018
VE3GA – Glen Worsnop, of Waterloo, ON, at age 90, on February 22, 2018
VE3HNH – Bob Miller, of St. Catharines, ON, at age 76, on August 12, 2018
VE3JCP – Jeff Paice, of Cameron, ON, at age 78, on August 29, 2017
VE3MFV – John Brannigan, of Hamilton, ON, at age 89, on February 1, 2018
VE3OPR – Ray Gaudet, of Sturgeon Falls, ON, at age 90, on March 4, 2018
VE3SZV – Fred Clarke, of Brampton, ON, at age 89, on August 22, 2018
VE3TJ – Martin Shaw, of Richmond Hill, ON, at age 87, on August 2, 2018
VE3WCW – Binder Contin, of Thunder Bay, ON, at age 78, on August 4, 2018
VE3YN – Angelo Karabetsos, of Toronto, ON, at age 44, on October 24, 2017
VE4AGE – Ken Gregresh, of Winnipeg, MB, at age 82, on August 6, 2018
VE4NEG – Dave Negrych, of Roblin, MB, at age 66, on July 22, 2018
VE4XU – Fred Heiland, of Winnipeg, MB, at age 88, on July 28, 2018
VE5EGX – Ray Bethune, of Melfort, SK, at age 77, on November 19, 2017
VE5MIM – Marian McGillivray, of Saskatoon, SK, at age 93, on November 13, 2017
VE6CFX – Garnet McKenzie, of Medicine Hat, AB, at age 73, on May 30, 2018
VE6NNN – Bob Key, of Edmonton, AB, at age 86, on July 22, 2018
VE6ZF – Jack Geldart, of Edmonton, AB, at age 92, on August 4, 2018
VE7AST – Don Thorne, of Gold River, BC, at age 61, on August 3, 2018
VE7CK – Arthur Craig, of Kelowna, BC, at age 98, on August 18, 2018
VE7OKA Alan Paeth, of Lake Country, BC, at age 62, on June 3, 2018
VE7TAU – Barrie Clark, of Kelowna, BC, at age 85, on March 6, 2018
VE9VAR – Bob Kirkpatrick, of Riverview, NB, at age 88, on April 26, 2018

Note: *The list of Silent Keys is prepared by volunteers at RAC Headquarters. Please send obituary notices by email directly to rachq@rac.ca with a copy to the following address: ic.spectrumamateur-spectreamateur.ic@ic.gc.ca.*

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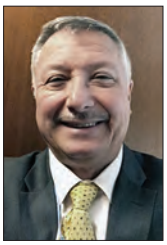

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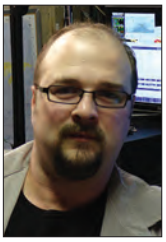

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A MESSAGE FROM THE PRESIDENT / UN MESSAGE DU PRÉSIDENT

Glenn MacDonell, VE3XRA
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This is the last issue of *The Canadian Amateur* magazine for 2018 and it is a good opportunity for us to reflect on RAC's 25th anniversary.

It has been an exciting year with a great Annual General Meeting in Red Deer, Alberta and many activities and events throughout the year to celebrate RAC's first quarter century. In keeping with that theme this issue of TCA is a special issue which highlights Emergency Communications in Canada with articles describing various events throughout our first 25 years.

Several of our other initiatives in 2018 were aimed at strengthening RAC financially to help us to cope with cost increases and allow us to undertake more work in the future. Membership is key as the overwhelming majority of RAC's funds comes from membership dues. I am happy to report that there has been a steady increase in the number of RAC Maple Leaf Operators thanks to Amateurs who provide additional support to RAC beyond our basic membership fee. In 2018, we created two new levels of Maple Leaf Operators for those able to make more significant annual contributions to RAC. We have welcomed our second Gold Maple Leaf Operator. We understand that making a $500 (Silver) or $1000 (Gold) payment all at once can be a challenge and are working on a way to allow monthly payments for these larger amounts.

Recently, RAC received a very generous donation for our scholarship program that will allow us to provide significantly more scholarships to Canadian Radio Amateurs who are in science, technology, engineering and mathematics (STEM) programs in colleges and universities.

There has been a good response to the RAC Challenge Coin Program in which a limited number of collectible coins were created in honour of RAC's first 25 years. These are available to anyone donating $100 or more to RAC. Each has a unique serial number (#001 went to the person contributing the most in the first two weeks and the next to go was #073). Many contributors picked the year they became an Amateur or other personally significant numbers. We still have some Challenge Coins available and they can be ordered by completing the online form on our website at https://wp.rac.ca/25th-anniversary-coin/ or by calling the RAC office. They could be a good way for clubs to honour a member for an important contribution. They would also be a great birthday or Christmas present.

We are making ends meet each year, despite cost increases for printing and postage, but we need to be prudent when exploring new initiatives in light of our available finances. The above programs and donations help us to do so.

On September 25, 2018, a special Broadcasting and Telecommunications Panel established by the Government of Canada to review Canadian laws governing communications launched public consultations. This Panel will review the *Broadcasting Act*, the *Telecommunications Act* and the *Radiocommunications Act* – the set of laws governing all aspects of broadcasting and communications in Canada. Six of the seven Panel members are lawyers, as you might expect from a body reviewing Canadian laws.

Le dernier numéro du magazine *The Canadian Amateur* pour 2018 nous propose une bonne occasion de réfléchir sur la signification du 25e anniversaire de RAC.

L'année a été passionnante avec une assemblée générale annuelle extraordinaire à Red Deer, en Alberta, et de nombreuses activités et événements tout au long de l'année célébrant le premier quart de siècle de RAC. Fidèle à ce thème, le présent numéro de TCA est un numéro spécial qui met en lumière les communications d'urgence au Canada avec des articles décrivant divers événements de nos 25 premières années.

Plusieurs de nos activités en 2018 visaient à renforcer RAC financièrement et, ainsi, nous aider à faire face aux augmentations des coûts d'opération et nous permettre de mieux poursuivre nos activités à venir. L'adhésion des membres est essentielle car la très grande majorité des fonds de RAC provient de leurs cotisations. Je suis heureux d'annoncer que le nombre d'opérateurs Maple Leaf de RAC a régulièrement augmenté. Ces opérateurs apportent à RAC un soutien financier supplémentaire au-delà des frais d'adhésion de base. En 2018, nous avons créé deux nouveaux niveaux d'opérateurs Maple Leaf pour ceux qui sont en mesure de faire des contributions annuelles plus importantes à RAC. Nous avons mis en place notre deuxième opérateur Gold Maple Leaf. Nous sommes conscients qu'un seul paiement unique de 500 $ (Argent) ou de 1 000 $ (Or) pourrait être un défi pour certains. En conséquence, nous travaillons sur un moyen qui permettra des paiements mensuels pour ces montants importants.

Récemment, RAC a reçu un don très généreux pour son programme de bourses d'études, ce qui nous permettra de financer beaucoup plus de bourses aux radioamateurs canadiens inscrits aux programmes de sciences, de technologie, d'ingénierie et de mathématiques (STEM) dans les collèges et universités.

Le programme « RAC Challenge Coin », dans lequel un nombre limité de pièces de collection ont été créées en l'honneur des 25 premières années de RAC, a suscité de bonnes réactions, Celles-ci sont disponibles pour quiconque fait un don de 100 $ ou plus à RAC. Chacun a un numéro de série unique (le numéro 001 a été attribué au premier contributeur le plus important au cours des deux premières semaines. Le prochain numéro disponible était le 073. De nombreux contributeurs ont choisi l'année où ils sont devenus amateurs ou un événement important sur le plan personnel. Nous avons encore des pièces (coin) Challenge disponibles et elles peuvent être commandées en remplissant le formulaire en ligne sur notre site web à l'adresse https://wp.rac.ca/25th-anniversary-coin/ ou en téléphonant au bureau de RAC. Elles pourraient être un bon moyen pour les clubs de récompenser un membre pour une contribution importante. Elles seraient également un bon cadeau d'anniversaire ou de Noël.

Nous arrivons à joindre les deux bouts chaque année, malgré l'augmentation des coûts d'impression et d'affranchissement, mais nous devons faire preuve de prudence lorsque nous songeons à de nouvelles initiatives compte tenu de la fragilité de nos ressources financières disponibles. Les programmes et les dons nommés ci-dessus nous aident à y arriver.

The stated focus is on ensuring Canadians benefit from an open and innovative Internet and the Panel expects to deal with issues such as: telecommunications and content generation in the digital age; net neutrality and cultural diversity; and how to strengthen the future of Canadian media and content creation.

At first Radio Amateurs may think, that's fine but it doesn't really affect us. The Panel seems to be focusing on the economic and cultural value of communications – areas we don't play in. However, the Panel also aims to "provide relevant, practical and implementable recommendations to the government". As far as I can see, many problems for Radio Amateurs – such as Amateur Radio towers in municipalities or threats to our spectrum – arise not because we are targets but because we are "incidental damage", sideswiped by the actions of someone with "good intentions" who has no understanding of who we are or what we do.

The Panel's Chair has said the Panel's work will rely in part "on attracting a wide cross-section of input, perspectives and opinions... a large and varied number of voices from all corners of the country." I'd bet that few if any of the members of the Panel know that significant chunks of the radio spectrum are set aside for Radio Amateurs or understand the value to the country of non-commercial use of spectrum by Radio Amateurs. We are planning on developing a submission to the Panel so that they receive that information. Submissions must be received by November 30. If you are interested in participating in the development of our brief or producing one for yourself or your club, please let me know. The September 25 News Release contains links to other government documents on this activity and can be found at https://www.ic.gc.ca/eic/site/110.nsf/eng/00004.html

Around the time the Panel announced that it was beginning consultations, the International Amateur Radio Union (IARU) announced the Theme for the 2019 World Amateur Radio Day: "Celebrating Amateur Radio's Contribution to Society". This is also something that could be used as our theme in a presentation to the Panel.

World Amateur Radio Day is celebrated annually on April 18. On that day in 1925, Radio Amateurs from 25 countries, including Canada, met in Paris to form the International Amateur Radio Union (IARU). Amateur Radio had been relegated to short waves once countries began to separate amateur from commercial radio because everyone thought that long distance communications could only be accomplished using very long waves. By the mid-1920s Radio Amateurs had demonstrated that long-distance communications were possible at these "high frequencies". Commercial interests then wanted to move into these frequencies. The meeting in Paris formed an organization to fight to keep viable chunks of spectrum. In 1927, the Washington International Radiotelegraph Conference set the main elements of the allocations we have today (most of the spectrum at 160, 80, 40, 20 and 10 metres).

When "Celebrating Amateur Radio's Contribution to Society", I would expect the first thing most people would think of is the contribution Radio Amateurs can make in emergencies where communications are disrupted. Radio Amateurs have the skills and the equipment to be the first to let the outside world know what is happening in cut-off areas. In catastrophic events such as the Nepal earthquake and the Japanese Tsunami, Radio Amateurs were the first source of information. This is certainly dramatic but it is only a relatively small part of what Radio Amateurs can do to help in emergencies. Several articles in this issue of TCA are excellent examples of the wide range of support that Amateurs provide.

Le 25 septembre 2018, un comité spécial de la radiodiffusion et des télécommunications créé par le gouvernement du Canada pour examiner les lois canadiennes régissant les communications, a lancé des consultations publiques.

Ce groupe examinera les lois sur la radiodiffusion, les télécommunications, les radiocommunications et l'ensemble des lois régissant tous les aspects de la radiodiffusion et des communications au Canada. Six des sept membres du comité sont des avocats, comme on peut s'y attendre d'un organisme qui examine les lois canadiennes.

L'objectif déclaré est de faire en sorte que les Canadiens bénéficient d'un internet ouvert et novateur. Le groupe d'experts espère traiter de questions telles que : les télécommunications et la création de contenu propre au numérique, la neutralité et la diversité du réseau culturel et les moyens de favoriser la création de contenus et de médias canadiens.

Au départ, les radioamateurs peuvent penser que le travail du groupe d'experts est bien, même si cela parait ne pas les affecter vraiment. Le groupe semble se concentrer sur la valeur économique et culturelle des communications dans des domaines hors de nos préoccupations. Toutefois, le groupe vise aussi à fournir des recommandations pertinentes, pratiques et utilisables par le gouvernement. Autant que je sache, de nombreux problèmes pour les radioamateurs – tels que les tours radioamateures situées dans les municipalités ou les menaces qui pèsent sur notre spectre – ne résultent pas du fait que nous sommes ciblés comme nuisance, mais plutôt parce que nous sommes perçus comme quelque chose d'inutile par ceux qui ne comprennent pas qui nous sommes ni ce que nous faisons.

Le président du comité, dans le but d'attirer un de nombreuses contributions, a déclaré que le succès du travail du comité dépendra en partie du nombre et de la variété d'opinions et points de vue venant de tous les coins du pays. Je parierais que peu de membres du groupe, sinon aucun, connaissent l'importance du spectre radioélectrique réservé aux radioamateurs et/ou comprennent l'importance pour le pays de l'utilisation non commerciale du spectre radioamateur. Nous prévoyons élaborer et acheminer une demande à l'intention du comité afin qu'il prenne connaissance de ces informations. Les candidatures doivent être reçues au plus tard le 30 novembre. Si vous souhaitez participer à l'élaboration de notre mémoire ou en produire un pour vous-même ou votre club, veuillez me le faire savoir. Le communiqué de presse du 25 septembre contient des liens vers d'autres documents du gouvernement sur cette activité et peut être consulté à l'adresse https://www.ic.gc.ca/eic/site/110.nsf/fra/00004.html.

À peu près au moment où le groupe a lancé ses consultations, l'Union internationale radioamateure (UIRA-IARU) a annoncé le thème de la Journée mondiale de la radio amateur (radioamateurisme) 2019: « Célébrer la contribution de la radio amateur à la société ». C'est également quelque chose qui pourrait être utilisé comme thème dans une présentation au groupe.

La Journée mondiale de la radio amateur est célébrée chaque année le 18 avril.

Ce jour-là, en 1925, des radioamateurs de 25 pays, dont le Canada, se sont réunis à Paris pour former l'Union internationale des radioamateurs (UIRA-IARU). La radio amateur a été reléguée aux ondes courtes lorsque les pays ont commencé à séparer la radio amateur de la radio commerciale, car tous pensaient que les communications longue distance ne pouvaient être réalisées qu'en utilisant de très longues ondes.

Radio Amateurs also regularly provide valuable service to their communities in local charitable and community events that require communications for safety and effective operations. Many clubs, ARES organizations and other Amateur emergency communications (EmComm) groups provide communications for local events such as 5K and 10K Walks, ski marathons, sailing and bicycle events and so on. These events contribute to their communities and at the same time provide Radio Amateurs interested in emergency communications with valuable experience that can make them more effective in participating in emergencies when needed.

Not all Amateurs participate in emergency communications or community events, but those who do help all Amateurs as well as their communities. Their contribution during emergencies is often a key factor in decisions by governments and other organizations which can then enhance opportunities for all Radio Amateurs. Provincial government decisions on distracted driving have generally been favourable to Amateur Radio operations while mobile because of the value of Amateur Radio in emergency communications.

Similar results have occurred in spectrum decisions. A key argument for an Amateur Radio allocation at 60 metres (near 5 MHz) has been its value in regional emergency communications. This led to decisions by many countries, including Canada, the United States and several European countries and, ultimately, the organization which represents all countries interested in radio communications, the World Radio Conference, to make spectrum available to Radio Amateurs at 60 metres. In the Canadian public consultation over the proposed allocation of 5 spot frequencies near 5 MHz in 2012, it was not only Radio Amateurs arguing for the value of this spectrum in emergency communications. The submission from Emergency Management BC noted that “Amateur Radio is a recognized and valued component in British Columbia’s emergency preparedness / response strategy” in their submission supporting the allocation of these frequencies to the Amateur Radio Service.

The understanding that Amateur Radio has proven its value to the community has also helped us receive better treatment from local governments. When Ottawa (where I live) was deciding on the consultation system to be used when putting up towers, City Councillors remembered that Radio Amateurs helped in the 1998 Ice Storm that had led to extensive loss of electrical power a decade and a half earlier. They were also aware of the continuing support of Amateurs to many local charitable and community events and were prepared to avoid decisions that could have made Amateur Radio more difficult in the city. They recognized that making it more difficult to participate in Amateur Radio would lead to fewer Amateurs and the community would be the worse for that.

Amateur Radio provides other benefits to society as well. Like other technical hobbies it can spur an interest in science, technology, engineering and mathematics that can lead young people to study and work in these areas, something generally accepted as a benefit. RAC’s Youth Education Program helps young people get involved in using Amateur Radio through activities such as balloon launches where the balloon is tracked using APRS or through the installation of Amateur Radio equipment in schools. These projects usually come together when a Teacher who is an Amateur – or who recognizes how Amateur Radio can be used in the classroom – is supported by other Radio Amateurs in their community.

Au milieu des années 1920, les radioamateurs font la démonstration que les communications à longue distance étaient possibles aux hautes fréquences. Les intérêts commerciaux ont ensuite voulu utiliser ces fréquences. La réunion à Paris a formé une organisation pour lutter et sauvegarder des portions du spectre utilisables. En 1927, la Conférence radiotélégraphique internationale de Washington (Washington International Radiotelegraph Conference) fixa les principaux éléments des attributions dont nous disposons aujourd’hui (la plus grande partie du spectre étant de 160, 80, 40, 20 et 10 mètres).

Dans « Célébrer la contribution du radioamateurisme à la société », je suppose que la première chose à laquelle la plupart des gens penseraient, serait la contribution que les radioamateurs peuvent apporter en cas d’urgence où les communications sont interrompues. Les radioamateurs possèdent les compétences et l’équipement nécessaires pour être les premiers à informer le monde extérieur de ce qui se passe dans les zones isolées. Lors de catastrophes telles que le tremblement de terre au Népal et le tsunami au Japon, les radioamateurs ont été la première source d’information. Ces circonstances sont particulières, mais elles ne sont qu’une petite partie de ce que les radioamateurs peuvent accomplir pour aider en cas d’urgence. Plusieurs articles de ce numéro de TCA présentent d’excellents exemples et un large éventail de services d’aide fournis par des radioamateurs.

Les radioamateurs fournissent régulièrement des services précieux à leurs communautés dans le cadre d’événements caritatifs et communautaires locaux, qui nécessitent des communications efficaces et sécuritaires pour les opérations. De nombreux clubs, organisations, ARES et autres groupes amateurs de communication d’urgence (EmComm) assurent la communication pour des événements locaux tels que les promenades 5K et 10K, les marathons de ski, les événements de voile et de vélo, etc. Ces événements aident leur communauté et apportent en même temps une expérience précieuse aux radioamateurs intéressés par les communications d’urgence; ce qui peut les aider à participer plus efficacement aux urgences en cas de besoin.

Ce n’est pas tous les amateurs qui participent aux communications d’urgence ou aux événements communautaires, mais ceux qui le font aident leur communauté et indirectement tous les amateurs. Leur participation pendant les situations d’urgence est souvent un facteur clé dans les décisions des gouvernements et autres organisations de nature à améliorer les possibilités offertes à tous les radioamateurs. Les décisions des gouvernements provinciaux en matière de distraction au volant ont généralement été favorables aux radioamateurs même en communication mobile en raison de la valeur de la radio amateur dans les communications d’urgence.

Des résultats semblables ont été obtenus à l’égard des décisions relatives au spectre. Un argument de premier ordre pour l’attribution du 60 mètres (près de 5 MHz) à la radio amateur est sa valeur dans les communications d’urgence régionales. Lorsque est venu le moment d’accorder le 60 mètres, ces considérations ont influé positivement sur la décision de nombreux pays, dont le Canada, les États-Unis et plusieurs pays européens, et finalement de l’organisation qui représente tous les pays intéressés par les communications radio, la Conférence mondiale de la radio. Lors de la consultation publique canadienne sur la proposition de l’attribution de cinq fréquences spots au voisinage de 5 MHz en 2012, Radio Amateurs du Canada n’a pas été le seul à revendiquer la valeur de ces fréquences dans les communications d’urgence.

Students participating in the Canada-Wide Science Fair or who are visiting to see the projects in competition have been very interested in the Amateur Radio exhibits staffed by members of local clubs and supported by RAC. Many students are intrigued by the fact that they can "do science" using Amateur Radio as shown by the 2017 Weak Signal Propagation Reporting (WSPR) Project that provided valuable data on propagation of high frequency signals in Arctic regions. The growing interest in CubeSats built in universities and colleges and utilizing Amateur Radio communications has led to many students becoming Radio Amateurs and further strengthened the awareness of the value of Amateur Radio in learning and education.

Similar activities such as the Scouts Jamboree on the Air also depend on the contribution of Radio Amateurs eager to help young people have fun and learn. The Amateur Radio on the International Space Station (ARISS) program – a cooperative venture of the Radio Amateur Satellite Corporation (AMSAT), the American Radio Relay League (ARRL), the National Aeronautics and Space Administration (NASA) in the United States, the Canadian Space Agency and other international space agencies, and international Amateur Radio organizations around the world – provides a way for students to talk with astronauts in the space station and for teachers to use these events as part of their educational activities.

Each year, the terms of office of roughly half of our Directors end – four in even numbered years and three in odd numbered years. We have now completed the nominations and election process for Directors in the Atlantic, Ontario North/East, Midwest, and British Columbia and Yukon Regions. I am happy to announce that Dave Goodwin, VE9CB (Atlantic), Allan Boyd, VE3AJB (Ontario North/East) and Bj Madsen, VE5FX (Midwest) have been reelected as Directors for their Regions. Keith Witney, VE7KW, has been elected Director for the British Columbia and Yukon Region and will take office on January 1, 2019. Allan Munnik, VA7MP, the current Director will become Deputy Director BC and Yukon when Keith becomes the Director.

Many of you will be very familiar with Keith as he is a very active BC Amateur and is the co-recipient of the RAC Amateur of the Year Award for 2017. Keith is based in the Vancouver area and Allan is now in the Okanagan so we will have a strong team in British Columbia and the Yukon.

Glenn MacDonell, VE3XRA
RAC President and Chair

Dans son mémoire appuyant l'attribution de ces fréquences au service radioamateur, Emergency Management BC a indiqué que« la radio amateur est un élément reconnu et apprécié de la stratégie de préparation et d'intervention en cas d'urgence en Colombie-Britannique ».

La preuve de la valeur du radioamateurisme pour la communauté nous a également aidés à obtenir plus de considération de la part des gouvernements locaux. Quand Ottawa (là où je vis) a eu a prendre des décisions à propos de l'érection des tours, les conseillers municipaux se sont souvenus que la radio amateur avait apporté son aide lors de la tempête de verglas de 1998, une décennie et demie plus tôt. La tempête avait entraîné des coupures importantes de courant électrique. Ils étaient également conscients du soutien continu des amateurs à de nombreuses activités caritatives et communautaires locales. Les conseillers municipaux étaient alors disposés à infléchir des décisions qui autrement auraient pu rendre les opérations radioamateures plus difficiles pour la ville. Ils ont reconnu que rendre plus difficile l'activité radioamateure conduirait à moins d'amateurs et que la communauté en serait pénalisée.

Le radioamateurisme procure également d'autres avantages à la société. Comme pour d'autres loisirs techniques, il peut susciter un intérêt pour la science, la technologie, l'ingénierie et les mathématiques. Il peut amener des jeunes à étudier et travailler dans ces domaines, ce qui est généralement considéré comme un avantage. Le programme d'éducation pour les jeunes de RAC aide les jeunes à utiliser la radio amateur pour des d'activités telles que les lancements de ballons, où le ballon est suivi à l'aide du système APRS, ou par l'installation d'équipement radio dans les écoles. Ces projets se concrétisent généralement lorsqu'un enseignant amateur – ou qui sait comment une radio d'amateur peut être utilisée en classe – est soutenu par d'autres radioamateurs de leur communauté.

Les étudiants participant à l'Expo-sciences pancanadienne ou visitant les projets en compétition ont été très intéressés par les expositions sur la radio amateur animées par des membres de clubs locaux et soutenues par RAC. Beaucoup d'étudiants sont intrigués par le fait qu'ils peuvent « faire de la science » en utilisant une radio d'amateur, comme le montre le projet 2017 WSPR (rapport de propagation de signaux faibles) qui a fourni des données précieuses sur la propagation de signaux hautes fréquences dans les régions arctiques. L'intérêt croissant que suscitent CubeSats dans les universités et les collèges et qui utilise les communications radioamateures a amené de nombreux étudiants à devenir radioamateurs et à renforcer la prise de conscience de la valeur du radioamateurisme dans l'apprentissage et l'éducation.

Des activités similaires, telles que le Jamboree des scouts en direct, dépendent également de la contribution de la radio amateur désireuse d'aider les jeunes à s'amuser et à apprendre. Le programme radioamateur sur la station spatiale internationale (ARISS) est une initiative commune de la Radio Amateur Satellite Corporation (AMSAT), de la Ligue américaine de relais radio (ARRL), de la National Aeronautics and Space Administration (NASA) aux Etats-Unis et de l'Agence spatiale canadienne. Aussi d'autres agences spatiales internationales et des organisations internationales de radioamateurs dans le monde entier, offrent aux étudiants des moyens de dialoguer avec les astronautes de la station spatiale, et aux enseignants d'utiliser ces événements dans le cadre de leurs activités éducatives

Chaque année, les mandats d'environ la moitié de nos administrateurs prennent fin – quatre aux années paires et trois aux années impaires. Nous avons maintenant terminé le processus de nomination et d'élection des administrateurs dans les régions de l'Atlantique, du Nord-est, du Midwest, de la Colombie-Britannique et du Yukon. Je suis heureux d'annoncer que Dave Goodwin, VE9CB (Atlantique), Allan Boyd, VE3AJB (Ontario Nord / Est) et Bj Madsen, VE5FX (Midwest) ont été réélus au poste de directeur de leur région. Keith Witney, VE7KW, a été élu directeur pour la région de la Colombie-Britannique et du Yukon et entrera en fonction le 1er janvier 2019. Allan Munnik, VA7MP, l'actuel directeur deviendra le directeur adjoint de la Colombie-Britannique et du Yukon lorsque Keith en deviendra le directeur.

Beaucoup d'entre vous connaissent très bien Keith. Il est un amateur de la Colombie-Britannique très actif et co-récipiendaire du prix RAC Amateur en 2017. Keith demeure dans la région de Vancouver et Allan, maintenant, dans l'Okanagan. À n'en pas douter, nous aurons une équipe solide en Colombie-Britannique et au Yukon.

Glenn MacDonell, VE3XRA – Président et directeur général de RAC

– Traduction par Claude Lalande, VE2LCF

SIX METRES AND DOWN

Activity Breeds More Activity...

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Activity breeds more activity in Amateur Radio, and this is so true on VHF, UHF and Microwaves.

There are groups of ops across Canada getting new operators on the bands, and that activity increases everyone's enjoyment of the bands above 50 MHz.

Local groups in VE2 are active and growing, in Montreal and Quebec City, as are groups in VE3 in the GTA, Ottawa, Sudbury, Windsor and Sarnia. Growth is also taking place in Winnipeg, Calgary and Vancouver.

This activity also helps us to protect our spectrum, particularly on our microwave bands where we need beacons and regular activity to demonstrate our usage. This applies not only for SSB and CW activity, but Television, High Speed Data and Digital voice systems including repeaters.

Not to be forgotten is Satellite activity, with the ultimate focus on communications not only between points on Earth, but the International Space Station (ISS) and the Moon and ultimately Mars as well.

It is therefore vital for us to hold onto our higher microwave bands for such activities.

Perhaps high power Laser communications will provide the ultimate link out to Mars and beyond!

50 MHz

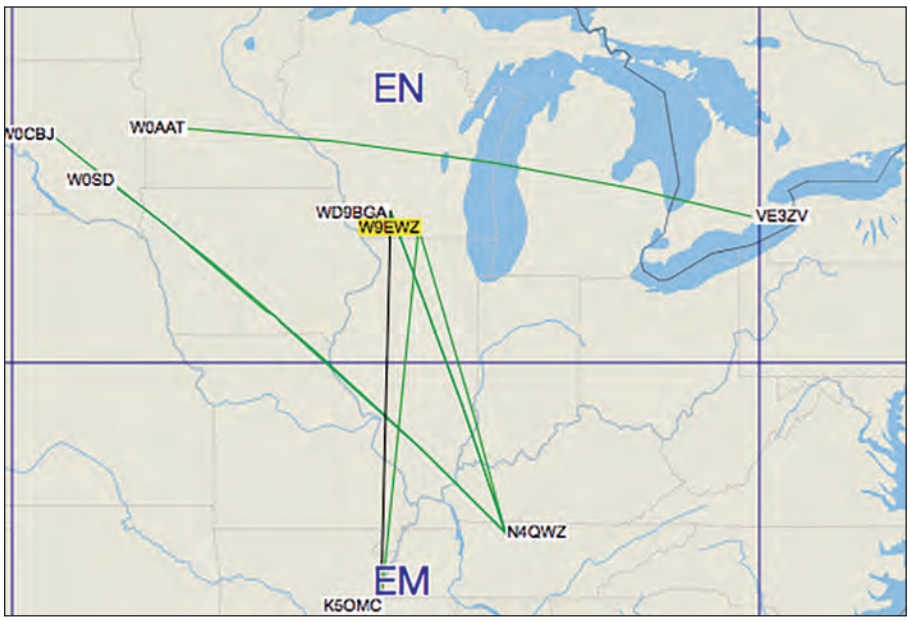
The 50 MHz band had a record run of DX this summer, thanks mostly to the advent of FT8 and the massive adoption by the HF and VHF community.

As mentioned in my last column, we had major openings to Japan where there were so many stations copied that it was tough to pick and complete contacts within the short time frames of the software and propagation QSB! Not to be left out, the path to Europe from Canada held up well this summer, particularly in the East Coast areas, extending into September. The west had propagation into Europe over the pole as well as down into the Caribbean.

In addition, the East Coast's Doug, VE1PZ, in Pictou, Nova Scotia FN85 had a surprising early morning opening to TR8CA in Gabon, Africa for a new one on August 8 at 1206Z using FT8! Doug also says he picked up a total of four new countries this summer including ZA/OG2M, 4X4DK, SV5DKL and TR8CA bringing his totals to 151 DXCC!

I also managed to work another new country on 50 MHz this summer with an August 9 QSO to Andorra C37NL on FT8 for DXCC #129. The guys in Andorra were QRV in Europe working meteor scatter mainly, but switched to FT8 to catch the Es opening, and somehow we managed to catch them at the right time. This was one country that had eluded me for 30 years and it was a great surprise to work and confirm it on Es.

During the September ARRL VHF QSO Party, FT8 and MSK144 played a big part in adding to those 50 MHz and 144 MHz grid square counts, with a lot of meteor activity as well as tropo and some sporadic E as well.



Tropo Opening on 144 MHz on September 12, 2018.

By the time you read this, it might be worthwhile to point south and look for Trans-Equatorial Propagation (TEP) openings into South America and perhaps Australia and New Zealand – particularly when the winter Es return in December.

144 MHz

We finally got some Tropo, thanks in part to the influence of Hurricane Florence. The high pressure system moving west to east was stalled by the approaching low pressure system. This allowed a pool of calm Gulf air to move up over us.

On September 10, at about 0500 UTC, I went into the shack to check on the conditions and heard Peter, VA3ELE, pounding away on CW. Listening in, I heard him calling Todd, N4QWZ, in EM66, Tennessee. I chimed in after that contact and made the grade as well.

We moved to 222 MHz and worked there. We then went to 432 where signals were lousy at my QTH, but at Peter's 20 kilometres west they were fine so he made the grade. Then after things nosedived at Peter's QTH they improved at mine so we made the contact as well. Meanwhile Peter also completed with Craig, N8DJB, on 432 in Kentuky EM77, and then I worked N8DJB as well.

The band continued to improve and opened to K5OMC in Alabama EM44 on 144 MHz from VE3ZV in EN92 on September 12 at 0200 UTC. From there Stephen was in the hot seat working into Tennessee and Kentucky, as well as out into Illinois, Wisconsin and Missouri.

September 13 was a good propagation day for Sean, VA3HD in FN14, with KF4WE in EM56 worked at 1528 UTC , AC3L in FN00, KF2T in FM18, WA1AJS in FN55, K0TPP in EM48, N4ASF in FM27 and KY4MRG in EM77 and a dozen more worked between 1100 and 1500 UTC. Paul, VE3EU, in EN93 also worked KF4WE in EM56 that morning.

In addition, Daniel, VE9WGD, in FN57 worked VE2PN in FN46 as the tropo moved east.

It was great while it lasted here; we all hope for more later in the fall.

Microwaves

I had some time this summer and was able to build the Down East Microwave 2304 MHz transverter, with an apolLO I synthesized and GPS-locked Local Oscillator (LO). I am happy to report that it is working fine, after a few hiccups with the LO programming. It's great to finally know what your frequency is and to have a very stable signal on 2304. My first contact was with VE3ZV in EN92 with 20 over 9 signals and I plan to add a 100 watt class amplifier to the mix.

In addition, I built up my DEMI 3456 MHz transverter kit hoping to have it on for the contest, but ran into more issues with the newer apolLO-32 LO, which had to go back to the factory for diagnosis and repair. Meanwhile with a 3456 loop yagi on the tower, we were able to work VA3ELE over a 20 kilometre path using the HackRF on SSB! This took a bit of fiddling as we had to run one program to transmit and another to receive, and the microphone I had would not work in my MacBook so I had to use the internal mic! Holy feedback! Thankfully, it all worked and the contact was completed.

Finally, after the successful 3456 MHz contact, it hit me that the 5.7 GHz transverter should be useable despite not having an antenna so I wired it up and promptly worked Peter, VA3ELE, using the 3456 loop yagi! Peter's signal was 30 over S9 and he copied me well at his end once we got the antennas aligned. Of course a proper antenna would be more effective.

Hopefully, by the time you read this I'll have the 3456 Transverter working at the 20 watt level, and the antenna sorted out for 5.7 GHz. I'm thinking also of trying some "G line" as a feedline for 5.7 GHz as most coax is too lossy up there, unless anyone has or knows of any elliptical waveguide!

Peter, VA3ELE, working VE3KH on 10 Ghz, without the tripod!

10 GHz and Up

Activity on the upper microwave bands continues to increase nationally and the number of stations active in the ARRL 10 GHz & Up Contest shows this. Among the group were Peter, VA3ELE and Hugh, VA3TO, who got together to run contacts during the second half of the contest in September. Peter, VA3ELE, noted that this was his best score to date on microwaves, with three bands functional: 10, 24 and 47 GHz!

In addition Kevin, VE3KH, fired up his new 10 GHz home station, with 10 watts to a two-foot dish on a 30-foot tower. Kevin made a number of long-haul contacts east over Lake Ontario, as well as some scatter contact into the Lake Erie area, despite being blocked by the Niagara Escarpment.

Ray, VE3FN, sent the following report:

"Luc, VE3JGL and Dean, VA3CDD, both joined me on the four days of the contest. Most of the contacts I made on 10 GHz were also made by Luc and Dean. Of course, we were generally dealing with weak signals so each contact took some time.

On the first three days, we made only a few contacts on each day. This past weekend, heat and humidity pretty well killed contacts on bands above 10 GHz.

But yesterday (Sunday September 16, 2018) we actually made a few contacts on 10 GHz from Mont Tremblant FN26rf. For example, it was a thill to work Dave, K2DH and Ken, KA2LIM, on Mount Equinox with good signals. And we were glad to work N1JEZ and W1AIM on Mount Mansfield using diffraction at their end.

And I was also pleased we worked Kevin, VE3KH, from FN25bl on the first Saturday. I was also thrilled to work VE2UG on the first Sunday on both 24 and 47 GHz with very good signals over the 111 kilometre path."

Finally, Steve, VE3SMA, sends this note about some great DX from Ontario out into W9-land:

"Keith, VE3EG, and I went to Mersea Beach (EN82ra) to try to work Michigan stations – especially WW8M and K8JA. It turned out we didn't have a clear shot to K8JA and ship-bounce didn't work. But as I was working Don, WW8M, on CW I heard K9PW calling me, also on CW.

When Keith and I had both worked WW8M, I called K9PW and he came right back. He was in EN62CT in Wisconsin, at a distance of about 440 kilometres. Not the furthest I have worked on this band but well beyond the normal maximum for me.

There were five stations at that location and both Keith (with just 200 mW) and I (with 2 watts) were able to work all of them: K9PW, W9SZ, KA9VDU, W9SNR and K9JK. Mostly we used CW but there were a few exchanges on SSB, as well, as all the signals were moderately strong.

– continued on page 15

"Alberta Floods: Crisis at High River" – Five Years Later

Vince d'Eon, VE6LK/AI7LK

The following article was written by Vince d'Eon, VE6LK/AI7LK, of the Foothills Amateur Radio Society/ARES in Okotoks, Alberta along with contributions from Dann St-Pierre, VE6TD/KU7R and others.

Five years ago Radio Amateurs in Alberta helped out emergency responders during one of Canada's largest natural disasters – the Southern Alberta Floods of 2013. The articles I wrote about the Amateur response to that event were originally published in the September-October 2013 and November-December 2013 issues of *The Canadian Amateur* magazine (see notes 1 and 2).

This article describes where we are five years later. It is my hope that you learn from our successes and mistakes, and incorporate these into your group or personal plans. Feel free to reach out to me on email at ve6lk@rac.ca or via Twitter @vincedeon to discuss it further.

Prelude

Progress takes a few different forms: Forward, Stagnant and Backward. Plans, finances and relationships ebb and flow over time, and change that is introduced to any situation requires rethinking and building of revised plans for all parties. Patience for oneself and others is key in any longer-term view of an event or plans for an event.

Background

The end of June each year presents an activity for Radio Amateurs: the annual ARRL Field Day. It usually involves much (or little) planning, hot dogs, cold drinks and creative ways to put up antennas. Sometimes it involves setting up at a public venue, operating in poor weather and some gnashing of teeth when things aren't going well. Oh, and there's a contest in there too! Despite this mixed bag, Field Day remains a popular event.

In 2013, the activity I really wanted to do was Field Day but I had a prior Amateur Radio commitment elsewhere. June is a busy month for me as I enjoy volunteering at many different events and I need to ensure that I'm not double-booking myself. Such was the case on that fateful weekend in June 2013 when, a few days earlier, I was coaching a new Field Day Captain on the basics as I had to be elsewhere. In my wildest dreams at that time, I could never have imagined that "elsewhere" would be the Emergency Operations Centre in High River, Alberta dealing with one of Canada's largest natural disasters to date.

Fast-moving floodwaters three-feet deep at 3 pm on June 20, 2013 taken from the second floor of the High River Hospital. (Photo: Marian Bryan, AHS)

Since then I find myself at fewer Amateur Radio events per year and serving in Net Control at those I do attend, whereas in the past I was frequently deployed in a field position. I enjoy the demands and cadence of Net Control in Rallysport, and appreciate being involved on the organizing committees if only to see how an event works from behind the scenes.

Another favourite of mine is the MS Bike Tour where we have almost 40 operators handling a two-day cycle tour with over 600 cyclists and over 100 volunteers. Net Control is the heart of event logistics and in 2018 we were put to the test when inclement weather hit minutes before the event started. At that very moment I was grateful to be able to draw on my past experiences. The Tour happens on the same weekend as Field Day so we treat it the same way and if something doesn't work out we improvise. We take this approach and we always run redundant systems at these events.

We integrate a large amount of APRS (see note 3) and other telemetry, like RallySafe (see note 4), at these events to help minimize radio chatter and deal with the onslaught of information at our fingertips in logistics.

As for Field Day each year, I help the Foothills Amateur Radio Society (FARS) with planning and other tasks in the background. As the years go on, it seems I like planning more than the laid-back execution of tasks. I look forward to returning to a more active role in Field Day at some point.

The Current State of FARS

In 2013, FARS had a network of 11 linked and one standalone repeaters covering some 50,000 square kilometres in Southern Alberta. Since then we've added one more linked and one more standalone repeater which serves up IRLP. The new linked repeater was funded by a grant and went in the penthouse of the High River Hospital with antennas on a rooftop tower. It provides excellent coverage to the local area, has battery backup power, and is on the hospital's generator power. We also added an APRS and a high-speed UHF packet digipeater at this site. We are in the process of designing and deploying a 5 GHz microwave TCP/IP network between several of our repeater sites. This network will operate entirely independent of the public Internet and will provide enhanced connectivity and capabilities to many of our sites including Voice over IP (VoIP), telemetry and remote management.

Technical Interests Change Over Time

A personal direction I didn't foresee in 2013 was an interest in maintaining and building repeaters. Since the Flood I have taken an active role in the FARS Technical Committee in planning and maintaining the FARS network, along with building up two of my own repeaters. One of my repeaters is highly portable and frequency coordinated to cover the area where I work at events, and the other hosts the FARS IRLP node. A third repeater is planned as finances permit.

Dann St-Pierre, VE6TD, Vince d'Eon, VE6LK and Ian Willumsen, VA6IAB, after a routine visit to FARS' newest site.

One thing I wanted to build up for myself is an Amateur Radio Go-Kit, which I completed a year ago. My Go-Kit addresses several deficiencies learned from the High River Flood and one particularly difficult Rallysport event (see note 5) where I had to evacuate the course of spectators, volunteers and competitors when unexpected weather hit.

Among other features, the external speaker I modified has a built-in switch to quickly switch between the speaker and a couple of pairs of headphone jacks. I added magnets on the bottom so it sticks to the top of a radio nicely. My kit has three VFOs available for VHF/UHF and one for HF. The main kit fits into one case and overall it wraps up nicely into three hard shell cases for easy transport. Larger items like my 30-foot mast, antennas and guy ropes come along as required. My RV is kitted out with 700W of solar panels, inverter and generator, and a few LMR feedlines to the outside for antennas in addition to Broadband-Hamnet (see note 6) nodes and other Wi-Fi gear.

Personal Preparation

I was once asked what I would do better during an event like this in the future. The only answer I have is to *breathe* – that is, take time to think before responding to anything that comes your way. That couple of seconds provides you clarity to make good decisions, based on whatever information is at hand at that instant. In 2015, my new passion for Scuba Diving came along

Vince's Go-Kit in use at the Rocky Mountain Rally.

Five Years Later: PERCS Callout

PERCS overview written by Curtis Bidulock, VE6AEW, Kerry Atkinson, VE6GG and Mike Muranetz, VE6MM

After the 2013 floods the Alberta Emergency Management Agency (AEMA) began to restructure the way it handled operations in the event of a major provincial disaster. During this time ARES continued to work to support the AEMA until 2015 when it became apparent to both the AEMA and a group of Amateurs that the current way that ARES supported the AEMA would not mesh with their vision. With that in mind the Provincial Emergency Radio Communications Service (PERCS) was born.

PERCS was started by three Amateur Radio operators who were former ARES members. With the assistance and direction of the AEMA, we struggled to get the group off the ground, but we had to deal with the political climate within the Amateur Radio community of Edmonton and also the fact that AEMA was still trying to figure out how Amateur Radio fit in the new order.

When the Fort McMurray wildfire happened in May 2016, there was no clear way to request Amateur Radio response and there was also a major disconnect between groups requesting support. After the fire and several different meetings, a framework was born that for the Amateur community works the same as the AEMA. The Province is broken into seven regions where the AEMA has a Field Officer assigned to each of the regions. PERCS needs to have one PERCS Field Officer in each of these regions as well and they would serve as the connection between the existing emergency communication groups in the region and with PERCS in Edmonton. In conjunction with the regional AEMA Field Officer, they would also assist other emergency management agencies to establish a relationship with Amateur Radio. The long-term goal is to have Amateur Radio supporting all municipalities in Alberta.

PERCS currently has the capability to alert our members via VHF/UHF radio using two-tone paging (using Amateur Radio repeater linking provided by the Southern Alberta Repeater Association), email and text messaging, all driving from a single point of activation. Having said all of that we still need volunteers from the regions to step forward. Unfortunately, there seems to be a belief amongst the Amateur community that "somebody else will do it" when it comes to doing the legwork. The sad fact is nobody else will do it. PERCS needs to recruit seven regional Field Officers to work with us, the AEMA, and the local Amateur and EMO communities.

If the Amateur community cannot demonstrate that we are ready, willing and able to work with and beside the agencies, including the AEMA, we may lose the support of the province. This may very well manifest itself in the distracted driving legislation that most provinces are now reviewing. Our strength in keeping the radios in our vehicles was our disaster response. If we are not seen to be ready to respond, willing to respond and able to respond, we may lose the exemptions we now enjoy.

For more information on PERCS please send an email to info@percsalberta.ca

and I was forced to breathe and think carefully as a matter of course. I've since learned to bring that simple act into my day-to-day actions and during public service events.

Leadership 101 says to make the best decision you can on the information you have on hand at that moment, as perfection is the enemy of "good enough". This is especially true in fast-changing situations.

From time to time I am asked what one should do to personally prepare for the skills required to handle a lot of radio traffic. My answer remains the same four points as it has always been:

1) Get involved in events, any event, and help out.

2) Do some sideband voice contesting as this will train your ear and brain to pull messages out of the noise in difficult conditions.

3) Participate in traffic nets as they will train you, through repetition, to respond (or handle traffic) in a controlled manner.

4) Lastly, as my friend Gary Notto, VE3TTO, says during every net, make sure your handheld (HT) batteries are charged up and your gear is ready to go. I handled a lot of traffic during the floods from my HT while running around the Emergency Operations Centre (EOC) sites and could not have done this without having charged and reliable batteries.

Along with my close friend Dann, VE6TD, we have taught two Basic Amateur Radio courses and released 30 new Amateurs into the world. A few have continued their studies and have received their Advanced qualification.

Despite being Advanced qualified in Canada and Extra in the USA, this past spring I decided to sit in on an Advanced class taught in Calgary to fill in gaps in my knowledge and I re-learned so many things my high school instructors attempted to inject in my memory some 40 years ago.

I highly suggest the Advanced Amateur course to anyone who does not have that qualification even if you choose to not pursue the exam itself. If you don't wish to sit the course you can order the Study Guide from one of the suppliers mentioned on the RAC website at: https://wp.rac.ca/study-guides-2/

What's in a Name?

It doesn't matter which banner your emergency radio service flies under if your abilities match the requirements of the agencies served.

As a group, any emergency radio service organization can only be successful if they have agreements in place with their served agencies, and work with other similar units on a regular basis so they get to know each other's capabilities. To state it directly, any relationship requires maintenance on both sides in order to continue their success. I have observed relationships come and go on both sides of this equation: between units; and between unit and served agency. When the relationship breaks down, previous mistakes with the other party are remembered for years to come and they take a great deal of time and effort to heal. It is imperative that relationships be maintained so that errors are learned from, then corrected, but not remembered negatively.

Relationships are in a further state of flux as local governments become more self-sufficient with expanded training of staff and revised communications

infrastructure. The Alberta provincial health service, which we helped in 2013, understands our abilities but is unable to set up simple infrastructure for us, such as antennas on buildings, due to cost constraints. Such are the realities of dealing with governmental agencies.

Emergency radio services – such as the Amateur Radio Emergency Service (ARES), the Radio Amateur Civil Emergency Service (RACES), the Provincial Emergency Radio Communications Service (PERCS), Radio Emergency Associated Communication Teams (REACT) – are all providing a *service* to someone. In the words of conventional business, this is their value proposition: "I will provide you *xyz service* in exchange for *abc*." Of course for us the exchange *abc* is non-monetary but could be items like facilities in which to train, meet or hold a Field Day.

In preparing to write this article I spoke with a few different governmental agencies in the province to see where Amateur Radio fits in today and how they view the current relationship. In Alberta the reality is that there is currently room to improve as there is an inconsistent service delivery when compared to other non-governmental groups such as Search and Rescue.

To improve this situation we need to have our team members brought to a consistent skill level by teaching them the basics of the Incident Command System (ICS-100 and ICS-200), Basic First Aid, and how to communicate with and use their equipment. I've often thought that in addition to knowing how to communicate the message, Amateurs should know how to get a message out no matter the mode. And this minimum level of skill set needs to be consistent across all parts of the agency served, in this case a provincial government.

The group also needs to have a current skills inventory of its members including, but not limited to, such things as who may be an Engineer, GIS specialist or a heavy machine operator, and also have a clear understanding of who is available and when. Skill sets outside of Amateur Radio increase the level of knowledge of those inside an Emergency Operations Centre or in the field and can help by giving context to a situation. Lastly, training and regular group exercises go a long way towards driving this consistency into any team.

In Alberta the provincial government has been building the Alberta First Responders Radio Communications System (AFRRCS; see note 7) to tackle the challenges of a lack of inter-agency communications as seen in the 2013 events. While it wasn't in full production at the time, it was used in the Fort McMurray fires of 2016 and it continues to be rolled out across Alberta. In the view of our provincial government, the AFRRCS has the following backup communication system: first, the Internet; then cellular; then landline; and then Amateur Radio.

Without the improvements outlined earlier, Amateur Radio will become the backup of last resort – and a very niche play at that. We may find ourselves called upon less and less unless we, as a group, change our course.

Personal Reflections

During the floods in 2013, I had many Radio Amateurs on the team who I had never worked with in a leadership capacity prior to the event. They stood beside me in the EOC and at that time I knew little of their capabilities. I asked them a few questions to reflect on the past five years and how the event may have changed them.

Ray Bourne, VE6LG

Q – *You lived through it.*

A – Yes, I have done others to including a hurricane in Regina, where I assisted with security patrols around damaged commercial buildings and escorted families back into a secured restricted residential area that was very damaged.

Q – *I'm interested to hear about what you would do differently in Amateur Radio as a result of your experience.*

A – I try to keep a Go-Kit available, vehicle fuel topped, vehicle chargers, etc.

Q – *How did your involvement change you, your approach towards your involvement in the hobby?*

A – I became more involved with ARES. I took ICS-100 and ICS-200.

Q – *Have you furthered your studies?*

A – It is on my to do list to take more courses.

Q – *Have you gotten involved more, less?*

A – Yes, I am more involved. As part of the FARS Technical team, we are improving our facilities to be disaster-proof and have redundant equipment for quick replacement if a repeater fails.

Vince adds: "Since the floods, Ray has been mentoring me in many of the technical aspects of radio. I'm grateful for his ongoing humour, troubleshooting skills and ability to get to the heart of any matter quickly.

Ian Willumsen, VA6IAB

The floods brought into focus the idea that there is both personal proficiency and group proficiency that bears upon the situation. In a personal sense, are there things I could learn formally (for example ICS training), or informally (Advanced classes, CW, better radio operations) that might allow me to be more effective.

There are always products (radio and otherwise) that might be better than I had during the floods that are worth checking out – like a "radio vest" to stop from carrying a handhelds around all the time, or different antennas. Furthermore, as a community of Radio Operators, I think its important to endeavour enabling both others to improve their proficiency and the systems we construct as a community, to offer even better service the next time disaster calls.

Vince adds: "I didn't really know Ian all that well at the time of the floods as I'd only recently moved back to Alberta. Like today, he was quiet then but strong and confident in his abilities. Since the flood he has worked alongside of me at several Rallysport events."

Tammy Johnson, VA6TSJ/VA6TSS

The floods of 2013 devastated many. The high waters washed away homes and businesses, and even more tragically took lives. Being a part of the emergency efforts at this critical time impacted me heavily. I saw the great need for Ham Radio operators in a hobby where the median age is climbing. The bottom line is when all modern communications fail, Amateur Radio has its greatest potential for assisting emergency efforts.

Because I saw this first-hand in action I decided to move forward with my hobby. I gained two more levels with my ICS training and also expanded my abilities as an operator. I now have crossband experience that allows a new level of expanded capacity when I combine both my mobile unit and my handhelds. I am a member of ERCSouthAB (an Emergency Response Communications Net hosted by the Mercury Amateur Radio Club), which is now moving forward to expand our scope to include a mobile repeater to assist in greater flexibility to respond to the many natural disasters like the recent fires that devastated the Southwestern corner of the province in the Waterton/Cardston area.

I am profoundly grateful for all the close associations I have made with many different hams over the years, including my two sisters, Melanie Still, VA6MKS, and Nancy Orr, VA6BDJ.

We attend meetings, various exercises, and participate, giving service with our Amateur Radio skills to various non-profit and emergency groups. Special thanks to Jerry Clement, VE6AB, who nurtured a love of ham radio in me in 2010 and continues to mentor me today.

Vince adds: "As with Ian, I didn't know Tammy all that well at that time. Leading by example, she taught me how to arrive at a site self-sufficient and complete with a 72-hour personal Go-Kit. She opened my eyes up to what self-sufficiency really means in that situation. I have a ways to go to before I am as fully self-sufficient as she was, and I remain inspired by her knowledge, confidence and willingness to do whatever needed to be done during that event.

Epilogue

Change in any situation is natural. Many factors are at play when providing a service no matter what organization you are delivering for. Ensuring that others understand your organization's value proposition and ability is key. Motivation of volunteers is essential, as they need to feel that their contributions are important to that value proposition or they go elsewhere. Among other things, leadership is about building and maintaining relationships and knowing your team's capabilities and drawing upon those as required to solve the problem at hand.

Lastly, follow your interests. Not only may you be led someplace new and challenging, but you may learn something and enjoy it at the same time. And isn't enjoyment what this hobby is all about?

Notes

1 http://vincedeon.com/amateur-radio/how-field-day-became-a-reality-the-story-of-the-high-river-flood-of-2013/

2 http://vincedeon.com/amateur-radio/how-field-day-became-a-reality-the-story-of-how-we-helped-southern-alberta/

3 https://en.wikipedia.org/wiki/Automatic_Packet_Reporting_System

4 https://rallysafe.com.au/

5 https://www.youtube.com/watch?feature=youtu.be&t=20m31s&v=wFGjldVWZ7k

6 http://www.broadband-hamnet.org/

7 https://www.alberta.ca/alberta-first-responder-radio-communications-system.aspx

Vince's love of Amateur Radio was instilled by Al D'Eon, VE3AND (SK) in 1969.

Vince "finally" completed his Basic and Advanced exams in 2002 once he learned about Amateur Radio and Community Service volunteer work. Less than a year later he did his CW endorsement having been bitten by the contesting bug and wanting to get on HF. He held VE3LKV from 2008 to 2012. In 2014 he gained his USA Extra class call AI7LK.

Vince is a member of a few clubs and enjoys working with all of them. He regularly volunteers at several events annually and follows his heart about what to learn next; lately it's repeaters and APRS. He likes operating portable and mobile more than from at home.

Equally at home on a computer or a radio, you'll find him on both digital and voice modes. He can be found on IRLP node 1483 or on Twitter@vincedeon.

TCA

The Defence of Amateur Radio Fund

The Defence of Amateur Radio Fund (DARF) is a Trust Fund that was established in the early 1990s by the Canadian Radio Relay League to provide financial support for research, and to defray travel expenses of a delegate to World Radiocommunication Conferences to defend the Amateur Radio bands.

The 2019 World Radiocommunication Conference is scheduled to take place from October 28 to November 22, 2019 in Sharm El Sheikh, Egypt. In November 2017 and May 2018, Bryan Rawlings, VE3QN, WRC Special Advisor, attended the Preparatory Meetings in Geneva, Switzerland. It costs a lot to attend a WRC meeting and travel and meeting expenses for a three- to four-week conference can top $10,000 or more in an international city like Geneva – even for the most frugal. Without new donations, DARF funds on hand won't last indefinitely.

Donations can be sent to RAC Headquarters at the address shown below. Please make the cheque payable to "Radio Amateurs of Canada" and note in the memo field "DARF donation". Call or email RAC HQ if you wish to donate by other payment methods or have a question on how to donate.

For more information please see visit https://wp.rac.ca/darf/.

Radio Amateurs of Canada, 720 Belfast Road, Suite 217 Ottawa K1G 0Z5 – rachq@rac.ca; Tel: 1-877-273-8304 | 613-244-4367

Six Metres and Down, continued from page 10

So not only did we work our first W9 QSOs on 10 GHz, but did so completely at random, with no prior arrangement at all. They just happened to be in the same direction as WW8M and heard me calling Don. In the middle of all this, well-known VHF and HF contester Jim, K8MR, cycled up to us and said hello! He was on a cycle tour of the Point Pelee area.

We had some inkling that conditions were reasonably good – the APRS map was quite red between western Lake Erie and most of W9-land, and both of us had just completed a QSO with Murray, VE3WJ, an hour or so earlier from Wheatley (EN82sb) to near Orono (FN03rx) at a distance of about 384 kilometres. Steve, KB8VAO, also completed some QSOs later with the Wisconsin group, from Perry Park, near Cleveland (EN91KT), at a somewhat greater distance."

Interference to Amateur Satellites

The American Radio posted a message that some of our OSCAR satellites are being interfered with by other Amateurs on 70 cm using "hotspots". It may be that people are not aware that the satellites can pick up pretty weak signals.

With regard to the RAC bandplans, the Satellite Sub bands must be kept clear of other users, even if its low power. There is lots of room between 433 and 434.5 MHz for things like low power hot spots, and certainly lots of room between 440 and 450 MHz.

Satellite Sub Bands are as follows:

- 2 metres: 145.8 – 146.00 MHz
- 70 centimetres: 435.0 – 438 MHz

ARRL January VHF Sweepstakes 2019

The Fall Sprints will have been completed by the time you read this, and the January ARRL VHF Sweepstakes will soon be upon us on January 19-21. If you have never tried a VHF contest, there are categories for FM only, as well as low power, portable, rovers and more. Check it out and get your friends on the air!

– 73, Dana, VE3DS

TCA

Presentation of RAC Amateur of the Year Award for 2017: Don Studney, VE7DS and Keith Witney, VE7KW

Prepared by Ed Frazer, VE7EF, former RAC Director for the British Columbia / Yukon Region and former Chair of Trustees for the Canadian Amateur Radio Hall of Fame

On September 11, 2018, RAC Director Allan Munnik, VA7MP/VE7RMP (British Columbia & Yukon Region) presented the RAC Amateur of the Year Award for 2017 to Don Studney, VE7DS and Keith Witney, VE7KW, on behalf of Radio Amateurs of Canada.

Don and Keith richly deserve the award for their outstanding contributions that made VE100VIMY and the Vimy Commemorative Amateur Radio Station TM100VIMY a part of Canadian Amateur Radio history.

The presentation was held during the regular monthly meeting of the Orca DX and Contest Club (ORCA DXCC) in Delta, British Columbia. The Orca DXCC was established in 2010 and is open to all Amateur Radio operators with an interest in HF DXing and contesting; Don and Keith are both members.

Before presenting the plaques, Director Munnik outlined the history of the Award and the Canadian Amateurs who previously received this honour. The Award was created in 1976 by the Canadian Radio Relay League, one of the two societies that formed Radio Amateurs of Canada 25 years ago.

The intention of the RAC Amateur of the Year Award is to recognize an individual who has made an outstanding contribution to Amateur Radio in the past year or has contributed consistently to the welfare of Amateur Radio over a period of several years.

Since the award's creation 41 years ago, only 22 Amateurs have been designated as "Amateur of the Year" including two British Columbia Amateurs: Doug Lockhart, VE7APU, in 1984 for his contribution to Packet Radio; and Ian Procyk, VE7HHS, in 2004 for the development of the Winlink program. The names of the other award recipients are listed on the RAC website.

The VE100VIMY project had its beginnings in 2011 in discussions that Don had at an Orca DXCC dinner meeting. Following months of planning, much correspondence with government officials and several trips to Vimy Ridge in France, Don and Keith organized two major campaigns.

The first was to organize a Canada-wide operation using the call sign VE100VIMY/n starting on January 1, 2017. By the end of March, all 13 Canadian call areas had experienced a one-week VE100VIMY/n activation and more than 38,000 worldwide QSOs.

The second was to establish a special event station at Vimy Ridge and operate it as part of the commemoration of the centennial of the Battle of Vimy Ridge in April 2017.

In accepting the award, Keith commented on the contributions by the local French Radio Amateurs to TM100VIMY which enabled all of the inevitable last-minute problems – despite seven years of planning with three countries and four agencies – to be overcome. He further remarked on the VE100VIMY operations and the contribution to its success by numerous Amateurs across Canada who provided the contacts and provincial/territory organization. Particular mention was made of Fred Orsetti, VE7IO, Gabor Horvath, VE7JH and Attila Holop, HA2NA, for producing the certificates.

RAC Director Allan Munnik, VA7MP/VE7RMP (left) presents the RAC Amateur of the Year Award for 2017 to co-recipients Don Studney, VE7DS and Keith Witney, VE7KW at the Orca DXCC meeting.

Orca DXCC members who were on the TM100VIMY team were on hand to join in the celebration. Back row: Phil Storey, VE7YBH, Dave Shipman, VA7AM, Don Studney, VE7DS, Keith Witney, VE7KW, and Ralph Webb, VE7OM. Front row: Jeanne Wilson, VA7QD and Christine Pires, VA7NLF. Not present: Gabor Horvath ,VE7JH

Don expressed his thanks to Orca members Dick, N7RO and Don, N7BT, who were the QSL Managers for a very complex operation when the VE100VIMY/portable stations were included. He acknowledged the contributions made by sponsors such as Radioworld, SpiderBeam and other suppliers that he approached.

Don also commented that these projects would not have been possible without the great support and cooperation of many individuals and government departments. He was truly humbled by the outpouring of assistance at all stages of planning.

Half of the Amateurs who travelled to Vimy Ridge to take part in the commemorative Amateur Radio station TM100VIMY from April 1 to April 9, 2017 were members of Orca and all but one were present in the room for the official presentation.

To everyone involved, it was an experience of a lifetime.

For the complete story on the VE100VIMY campaign and on the RAC Amateur of the Year Award for 2017 please visit https://wp.rac.ca/canadian-radio-amateurs-of-the-year-for-2017/.

AMATEUR RADIO AND THE G7 2018 CHARLEVOIX
LA RADIO AMATEURE AU G7 2018 CHARLEVOIX

Guy Richard, VE2XTD/VE2QG – RAC Québec Director

As everyone knows, Canada hosted the Group of Seven (G7) Summit on June 8 and 9, 2018 at the Fairmont Le Manoir Richelieu, in La Malbaie, in the Charlevoix region of Quebec. What is less known is that Radio Amateurs actively participated in the event at the request of the authorities. But before going into details a bit of background information is required.

Several decades ago, the Ministry of Public Security (MSP), signed a Memorandum of Understanding (MOU) with Radio Amateur du Québec Inc (RAQI) which provided the following:

1) The MSP will install UHF, VHF and HF Amateur Radio stations in all its regional offices as well as its provincial office.

2) These stations will be operated by RAQI member radio operators and endorsed by the MSP.

3) To be accredited to operate one of these stations, an Amateur Radio operator must successfully complete online training on emergency communications, training prepared by RAQI and training on emergency prepared by the MSP.

4) After completing the necessary training and undergoing a security check, a Radio Amateur receives an accreditation authorizing him to operate the stations at the offices of the Ministry. There are nine stations in the regional offices and one in the provincial office.

The Amateur Radio equipment at these stations is provided by the MSP on RAQI recommendations. Since 40m and 80m HF communications are not always reliable, the MSP authorized RAQI to set up a UHF network between the different sites of the Government of Quebec, which can connect its various regional offices.

In the municipalities in which the regional offices are located, RAQI or the local club connected a VHF repeater to this network. On the first Tuesday of each month, except during the summer, each station is activated to ensure it is functioning properly. This UHF network is commonly called the RTQ network for Réseau Trans Québec network.

The provincial office station has the call sign VE2RUA, while the regional stations have call signs such as VE2RUD for the Québec City area or VE2RUC for the Saguenay region and so on. The Manager of the VE2RUA station is Gaétan Leclerc, VE2LGE. Gaétan is the provincial coordinator of this emergency network for RAQI.

In September 2017, the head of the Regional Organization for Civil Security (ORSC) contacted the provincial emergency network coordinator, asking RAQI to take part in communications support for the G7 to be held in La Malbaie, approximately 1:30 drive east of Quebec, in June 2018.

Comme chacun le sait, le Canada a été l'hôte du G7 les 8 et 9 juin derniers. Ce que l'on sait moins c'est que les radioamateurs y ont participé activement à la demande des autorités.

Mais avant d'entrer dans les détails une mise en contexte s'impose.

Il y a déjà plusieurs dizaines d'années, le Ministère de la Sécurité Publique, que nous appellerons MSP par la suite, a signé un protocole d'entente avec Radio Amateur du Québec Inc., que nous appellerons RAQI par la suite. Ce protocole prévoit que le MSP installera dans tous ses bureaux régionaux des stations radio amateures ainsi qu'à son bureau provincial. Il s'agit de stations UHF, VHF et HF. Le protocole prévoit que ces stations seront opérées par des radioamateurs membres de RAQI et avalisés par le MSP. Pour être accrédité à opérer une de ces stations, un radioamateur doit réussir une formation en ligne sur les communications d'urgences, formation préparée par RAQI et une formation sur les situations d'urgence préparée par le MSP. Suite à la réussite de ces deux formations et à une vérification de sécurité de la personne, un radioamateur reçoit une accréditation l'autorisant à opérer ces stations dans les bureaux du Ministère. On compte neuf stations dans les bureaux régionaux et une au bureau provincial.

L'équipement radioamateur de ces stations est fourni par le MSP sur recommandations de RAQI. Comme les communications HF sur 40 et 80 mètres ne sont pas toujours fiables, le MSP a autorisé RAQI à monter un réseau UHF entre les différents sites du Gouvernement du Québec, réseau pouvant relier ses différents bureaux régionaux. Dans les municipalités où sont situés les bureaux régionaux, RAQI ou le club local, a relié un répéteur VHF à ce réseau. Le premier mardi de chaque mois, sauf en période estivale, chaque station est activée pour s'assurer de son bon fonctionnement. Ce réseau UHF est communément appelé le réseau RTQ pour Réseau Trans Québec.

La station du bureau provincial porte l'indicatif d'appel VE2RUA alors que les stations régionales ont des indicatifs comme VE2RUD pour la région de Québec ou VE2RUC pour la région du Saguenay et ainsi de suite. Le responsable de la station VE2RUA est Gaétan Leclerc, VE2LGE. Gaétan est le coordonnateur provincial de ce réseau d'urgence pour RAQI.

Revenons maintenant au G7. C'est en septembre 2017 que la responsable de l'Organisation Régionale de la Sécurité Civile, ORSC, a contacté le coordonnateur provincial du réseau d'urgence, pour lui demander la participation de RAQI en support aux communications pour le G7 qui se tiendra à La Malbaie (environ 1:30 de route à l'est de Québec) en juin 2018.

In October 2017, a first coordination meeting was held at the Organisation Régionale de la Sécurité Civile (ORSC) office. The meeting was attended by representatives of all the organizations involved in the G7. The purpose of the meeting was to provide information about the G7 to the various stakeholders. The representative of RAQI, the provincial coordinator, was invited and was present at the meeting.

Beginning in November 2017, a series of conference calls between stakeholders were held. These included representatives of the municipal police forces, the Sureté du Québec, the Royal Canadian Mounted Police, the Canadian Armed Forces, the Canadian Coast Guard, representatives of the Ministry of Public Security and RAQI. The conference calls were held on November 13, 27 and December 11 in 2017 and January 15, 29 and February 12 and 26 in 2018.

In February 2018, the ORSC organized a meeting with the Charlevoix Regional County Municipality (in which La Malbaie is located), Côte de Beaupré and Québec City, with the provincial coordinator still present. Following this meeting, a media watch was sent to the stakeholders every week until the opening of the G7 in June.

In March, RAQI received an invitation to participate in the G7 Exercise Sentinelle II which was to take place in April, a preparatory exercise for the G7. The provincial coordinator then worked to identify the Radio Amateurs available for this exercise and to provide them with a pass giving them access to the relevant MSP offices.

Since the MSP regional office for the Québec City area (VE2RUD) is located in Québec City, it was necessary to install a VE2RUD secondary office in La Malbaie. An office of the City Hall of Malbaie was designated for this purpose and the provincial coordinator was responsible for installing a VHF and UHF station. In fact, during the G7, three sites were identified by the MSP as being of strategic importance: La Malbaie, where the G7 was being held; the city of Saguenay, where the Canadian Forces Base (CFB) Bagotville was located and where all invited delegations would arrive; and Québec City where G7 demonstrations were expected.

Mario Bilodeau, VE2EKL, the RTQ's RAQI Manager, was called to make sure that the links between Quebec, La Malbaie and Saguenay were functioning at their very best. Mario went to all the sites involved to ensure their smooth operation and often took the opportunity to upgrade to newer and better equipment.

The G7 Exercise Sentinelle II was held in April and was a collective preparation exercise mainly involving the Québec City area and La Malbaie. The exercise involved representatives of the Federal Government, the Ministry of Health, the RCMP, the Sureté du Québec, the Québec City police and RAQI.

Emergency simulations were prepared for airports, air traffic, roads and waterways, such as the St. Lawrence River and the Saguenay River. This exercise lasted for three days: from April 17 from 12:00 to 17:00; April 18 from 9:00 to 20:00; and April 19 from 9:00 to 12:00.

During the exercise Gaétan Leclerc, VE2LGE, was at the VE2RUD secondary office at La Malbaie Town Hall and Marjolaine Vallée, VE2DOG, was at the MSP provincial office, VE2RUA. Although the exercise was long, Gaétan and Marjolaine held the fort alone and brilliantly. They participated in the various meetings during the exercise and were often consulted on various aspects of wireless communications.

Dès octobre 2017 une première rencontre de coordination a été tenue au bureau de l'ORSC. A cette rencontre assistaient les représentants de tous les organismes impliqués dans le G7. Le but de la rencontre était de présenter aux différents intervenants ce que serait le G7. Le représentant de RAQI, le coordonnateur provincial, était convoqué et présent.

A compter de novembre 2017 une série de conférences téléphoniques entre les intervenants a débutée. Les intervenants étaient des représentants de corps policiers municipaux impliqués, la Sureté du Québec, Gendarmerie royale du Canada (GRC), les Forces armées canadiennes, la Garde côtière canadienne, les représentants du MSP provincial et RAQI. De telles conférences téléphoniques de planifications ont été tenues les 13 et 27 novembre et le 11 décembre 2017 puis les 15 et 29 janvier 2018 et les 12 et 26 février 2018.

En février 2018, l'ORSC a organisé une rencontre avec la Municipalité régionale de comté (MRC) de Charlevoix (dans laquelle se trouve La Malbaie), celle de la Côte de Beaupré et la Ville de Québec, le coordonnateur provincial étant toujours présent. Suite à cette rencontre, une veille médiatique à été envoyée aux intervenants toutes les semaines jusqu'à l'ouverture du G7 en juin.

En mars, RAQI recevait une invitation à participer à l'opération Sentinelle II qui allait se dérouler en avril, exercice préparatoire au G7. Le coordonnateur provincial s'est alors affairé à identifier les radioamateurs disponibles pour cet exercice et à leur procurer des cartes donnant accès aux bureaux concernés du MSP. Comme le bureau régional du MSP pour la région de Québec (VE2RUD) est situé à Québec, il fallait installer un bureau secondaire de VE2RUD à La Malbaie. Un bureau de l'hôtel de ville de la Malbaie a été désigné à cet effet et le coordonnateur provincial s'est chargé d'y installer une station VHF et UHF. En fait, lors du G7, trois sites ont été identifiés par le MSP comme d'importance stratégique : La Malbaie, où se tiendrait le G7, la ville de Saguenay où se situe l'aéroport militaire de Bagotville où devaient atterrir les avions de toutes les délégations invitées et Québec où des manifestations anti-G7 étaient attendues.

Le responsable pour RAQI du Réseau RTQ est Mario Bilodeau, VE2EKL et c'est à lui qu'on a fait appel pour s'assurer que la partie du réseau qui relie Québec, La Malbaie et la ville de Saguenay soit au meilleur de sa forme. Mario s'est rendu à tous les sites impliqués pour s'assurer de leur bon fonctionnement et en a profité bien souvent pour changer les équipements présents par de plus récents et performants.

En avril s'est tenue l'exercice Sentinelle. Il s'agissait d'un exercice de préparation collectif. L'exercice impliquait principalement la région de Québec et La Malbaie. Cet exercice faisait intervenir des représentants du Gouvernement fédéral, du Ministère de la Santé, de la GRC de la Sureté du Québec, du corps de police de la ville de Québec et RAQI.

Les pires éventualités étaient simulées pour les aéroports, le trafic aérien, les routes, et les voies maritimes comme le fleuve St-Laurent et la rivière Saguenay. Cet exercice a duré trois jours, le 17 avril de 12:00 à 17:00, le 18 avril de 9:00 à 20:00 et le 19 avril de 9:00 à 12:00.

Pour cet exercice, Gaétan Leclerc, VE2LGE, était au bureau secondaire de VE2RUD à l'hôtel de ville de La Malbaie et Marjolaine Vallée, VE2DOG, au bureau provincial du MSP soit VE2RUA. Bien que l'exercice fût de longue durée, Gaétan et Marjolaine ont tenu le fort seuls et avec brio. Ils ont participé aux différents conciliabules pendant l'exercice et furent souvent consultés sur différents aspects des communications hertziennes.

Throughout this operation, they received many visitors to their respective stations and explained the role of Radio Amateurs in emergency situations and presented the Amateur Radio equipment required for such situations. It was a great showcase for us because many local municipalities and even New Brunswick officials visited us.

The main finding of the exercise was that although the RTQ network was working well – and even if the repeater of the Amateur Radio club of Charlevoix VE2RUA could be reached directly from Québec City – it was sometimes difficult to use the RTQ network at the position where the VE2RUD station was located at La Malbaie Town Hall, which cut us off from the Saguenay Region. As a result, Gaétan, VE2LGE, asked Mario, VE2EKL, to see how this problem could be fixed.

From La Malbaie's Town Hall, Mario took a look around and noticed a communication tower on a mountain on the other side of La Malbaie in Cap-à-l'Aigle. Mario inquired as to who owned the site and immediately contacted his owner to ask if he would agree to install a repeater to establish a connection with the RTQ network for the duration of the G7. The owner agreed immediately and Mario installed a repeater with his personal equipment.

Since this site was in the line of sight with La Malbaie City Hall, access to the RTQ network was now perfect and the link with the VE2RUC office in Saguenay was excellent. The new installation was made in early June. At the same time, the Amateur Radio club in Charlevoix fine-tuned its facilities to allow a direct link with Québec and its link with the RTQ network in case it was required during the G7.

There was a great deal of collaboration with the other members of the MSP emergency network and Amateur Radio clubs in the surrounding areas and their support was assured in the event of any problems. We took the opportunity to deploy small secondary sites of communications with the Health and Safety of Quebec in La Malbaie thanks to the collaboration of Radio Amateurs of the club of Charlevoix.

The communications support service of Amateurs was requested on June 7, 8 and 9 from 7:00 to 19:00.

At the MSP provincial office, VE2RUA was operated by Marjolaine, VE2DOG and Guy, VE2XTD, on June 7 and 8, and by Marjolaine, VE2DOG and Jacques Paré on June 9.

The VE2RUD station at La Malbaie was operated at the same time by Gaétan, VE2LGE, Bernard Simard, VA2SQ and Bernard Deschênes, VA2BDN

The Saguenay station, VE2RUC was operated by Bernard Potvin, VE2AYK (note there were three Bernards on the air).

Tout le long de cette opération, ils ont reçu de nombreux visiteurs à leurs stations respectives et ont expliqué le rôle des radioamateurs en situation d'urgence et présenté l'équipement radioamateur requis pour de telles situations. Il s'agissait d'une belle vitrine pour nous puisque plusieurs municipalités des environs et même des fonctionnaires du Nouveau Brunswick nous ont ainsi visités.

De cet exercice, la principale constatation que nous avons eue est que bien que le réseau RTQ fonctionnait très bien et même qu'en utilisant le répéteur du club radioamateur de Charlevoix nous pouvions passer en direct avec VE2RUA à Québec, il était parfois difficile, de la position où était située la station VE2RUD à l'hôtel de ville de La Malbaie, d'utiliser le réseau RTQ ce qui nous coupait de la région du Saguenay. Gaétan, VE2LGE, a donc fait appel à Mario, VE2EKL pour voir comment on pouvait remédier à ce problème.

De l'hôtel de ville de La Malbaie, Mario a fait un tour d'horizon du regard et a remarqué une tour de communication sur une montagne de l'autre côté de la baie de La Malbaie, à Cap-à-l 'Aigle. Mario s'est informé pour savoir à qui appartenait ce site et a aussitôt communiqué avec son propriétaire pour lui demander s'il serait d'accord pour qu'on y installe un répéteur en lien avec le réseau RTQ pour la durée du G7.

Le propriétaire a accepté immédiatement et Mario y a installé un répéteur avec de l'équipement personnel. Comme ce site est en ligne de vue avec l'hôtel de ville de La Malbaie, l'accès au réseau RTQ était maintenant parfait et le lien avec le bureau VE2RUC à Saguenay était de qualité supérieure. Cette nouvelle installation a été faite au début de juin. Au même moment, le club radioamateur de Charlevoix a peaufiné ses installations qui permettent un lien direct avec Québec ainsi que son lien avec le réseau RTQ advenant que son aide soit requise lors du G7.

Il y a eu beaucoup de collaboration avec les autres membres du réseau d'urgence du MSP et de clubs radioamateurs des régions limitrophes. Leur support en cas de problèmes nous était assuré. Nous en avons profité pour déployer de petits sites secondaires de communications avec la Santé et la Sureté du Québec à La Malbaie grâce à la collaboration de radioamateurs du club de Charlevoix.

Pour les radioamateurs, leur service de soutien aux communications a été requis les 7, 8 et 9 juin de 7:00 à 19:00.

Au bureau provincial du MSP, VE2RUA a été opéré par Marjolaine, VE2DOG et Guy VE2XTD les 7 et 8 juin et par Marjolaine, VE2DOG et Jacques Paré, VE2CJP le 9 juin.

Le station VE2RUD à La Malbaie, a été opérée aux mêmes heures par Gaétan, VE2LGE, Bernard Simard, VA2SQ et Bernard Deschênes, VA2BDN.

As mentioned earlier, the RTQ network is a UHF network to which Radio Amateur clubs link local VHF repeaters.

For the needs of the G7 we could count on the following repeaters:

- VE2CTT at 147.000 MHz from the Amateur Radio Club of Charlevoix
- VE2OM at 146.940 MHz from RAQI and the Amateur Radio Club of Quebec (CRAQ)
- VA2RKT at 145,290 MHz at Cap à l'Aigle (Charlevoix region)
- VE2CRX at 146.610 MHz at La Baie (Saguenay Region)
- VE2RKY at 145.210 MHz at Alma (Saguenay Region)

The preparation for the G7 was daunting for all stakeholders involved and, in particular, the high security required for the event. As a result it may have discouraged some demonstrators from visiting the site and there were no major demonstrations reported except for a small act of sabotage which disrupted Internet communications in Baie St-Paul between Québec City and La Malbaie for a few hours.

During the official debriefing after the G7 Summit, Radio Amateurs were officially thanked for their involvement.

We believe that this significant event will enable several municipalities to establish links with their local Amateur Radio clubs for possible emergency situations in terms of their technical facilities, communications skills in emergency situations, all in respect of the MSP-RAQI Memorandum of Understanding for the Province of Quebec.

All of the Amateurs who participated in the G7 Summit are proud of the service that they provided. They are also very pleased with the contacts they made with the highest authorities in emergency services and also with the coverage by the international media.

Amateurs played a significant role in a important international event in which an incident could have caused disruptions in major communication systems.

It was not the case but we were ready.

Guy Richard, VE2XTD/VE2QG, graduated as a Civil Engineer in 1968 and is currently retired from the Quebec Ministry of Transport. From 1968 to 1976 he participated in CB radio, but the demands of the family and the profession took him away from his dream of becoming a Radio Amateur. It was during a transfer from Montreal to Quebec City that he met a member of the Amateur Radio Club of Quebec (CRAQ) and was finally able to complete a training course and become a Radio Amateur.

He obtained his Basic certification in 1989 and the Advanced certification in 1990 with the Morse skill at 15 wpm. Since then he has been working in HF, VHF and UHF, for his pleasure and often as a volunteer for many sports activities as well as emergency operations in his region.

Active at his club, he was a member of the Board many times from 1992 to 2016, including serving twice as Vice-President and three times as President.

His involvement with Amateur Radio also included Radio Amateur du Québec Inc. (RAQI) from 2005 to 2017 as a member of the Board and as President for the last two years. Since 2016, he has served as the Director for the Quebec Region for Radio Amateur of Canada.

La station de Saguenay, VE2RUC a été opérée par Bernard Potvin, VE2AYK. (Il ne fallait pas se tromper de Bernard, comme vous voyez il y en avait trois sur les ondes).

Tel que mentionné plus haut, le réseau RTQ est un réseau UHF auquel les clubs radioamateurs greffent des répéteurs locaux. Pour les besoins du G7 nous pouvions compter sur les répéteurs suivants :

- VE2CTT à 147.000 MHz du club radioamateur de Charlevoix
- VE2OM à 146.940 MHz de RAQI et du Club Radio Amateur de Québec (CRAQ)
- VA2RKT à 145.290 MHz à Cap à l'Aigle, (Région de Charlevoix)
- VE2CRX à 146.610 MHz à La Baie (Région du Saguenay)
- VE2RKY à 145.210 MHz à Alma (Région du Saguenay)

Comme chacun le sait, la préparation du G7 a été telle, pour l'ensemble des intervenants, à tous les niveaux et particulièrement au niveau de la sécurité, que cela a pu décourager certains manifestants à se présenter sur les lieux de telle sorte qu'aucun événement désagréable majeur n'a été signalé. Seul un petit acte de sabotage a perturbé, pendant quelques heures, les communications internet à Baie St-Paul qui se situe entre Québec et La Malbaie a environ une trentaine de minutes de route de cette dernière.

A la demande des autorités, les radioamateurs étaient en opération dans l'éventualité d'un incident majeur qui aurait pu engorger les liens de communication usuels et empêcher les communications entres les différents sites touchés par le G7.

Lors du débriefing officiel après le G7, les radioamateurs ont été officiellement remerciés pour leur implication.

Nous croyons que cette opération pourra amener plusieurs municipalités à tisser des liens avec leurs clubs radioamateurs locaux pour d'éventuelles situation d'urgence en regard de leurs installations techniques, de leur compétence en communications et en situations d'Urgence, le tout dans le respect du Protocole d'entente MSP-RAQI pour la province de Québec.

Les radioamateurs impliqués sont fiers de leur participation au G7, soit par leur soutien à l'organisation et par les nombreux contacts humains entre eux et avec les plus hautes autorités en matière de situation d'urgence tout au long de cette activité qui avait une couverture médiatique internationale.

Ce ne fût pas le cas mais nous étions prêts.

Guy Richard, VE2XTD/VE2QG, a obtenu son diplôme d'ingénieur civil en 1968. Il est actuellement retraité du Ministère des Transports du Québec. De 1968 à 1976 il a fait un peu de CB, mais les exigences de la famille et de la profession l'ont éloigné de son rêve de devenir radioamateur. C'est lors d'un transfert de Montréal à Québec pour le travail qu'il a rencontré un membre du Club Radio Amateur de Québec (CRAQ) et qu'il a pu suivre une formation et devenir radioamateur.

Il a obtenu sa licence de Base en 1989 et la supérieure en 1990 avec la compétence Morse à 15 m/m. Depuis ce temps il opère en HF, VHF et UHF, pour son plaisir et bien souvent comme bénévole pour de nombreuses activités sportives ainsi que des opérations d'urgence de sa région.

Actif au CRAQ, Il a été membre du CA a de nombreuses reprises de 1992 à 2016 dont deux fois à titre de vice-président et trois fois comme président.

Son implication pour la radio amateure s'est aussi portée vers Radio Amateur du Québec Inc, (RAQI) comme membre du CA de 2005 à 2017 dont les deux dernières années à titre de président. Enfin depuis 2016 jusqu'à ce jour il est directeur pour le Québec au CA de Radio Amateur du Canada (RAC).

System Fusion II: The History and Future of Yaesu Digital Voice Radio

Cory GB Sickles, WA3UVV

The adoption and advancement of DV (Digital Voice) Radio is one of the hot topics in Amateur Radio today. However, DV Radio isn't necessarily new and all flavours of DV (DMR, D-STAR, NXDN, P25 and System Fusion) are not equal. While some methodologies of DV Radio can trace their lineages back to the 1980s, the first one to be used to any known extent was P25 or APCO-25 – named for the Association of Public-Safety Communications Officials' Project 25.

The full concept and product line of P25 was introduced to North America in 1990. P25 ushered in some new ideas in same-site and multi-site networking, exclusive NAC (Network Access Code) talk groups and mixed-mode environments. The latter was important as it allowed customers to upgrade to digital in more affordable means, as their respective budgets allowed. Further features that were offered fit into the category of things we do not use in Amateur Radio, such as encryption. However, the narrower bandwidth advantages were certainly something we could use in many areas. Since P25 radios and repeaters were priced for municipalities and commercial interests – but not the average Amateur – P25 was embraced mostly by those associated with the two-way LMR (Land Mobile Radio) business in some way.

Observing the direction of digital growth within LMR, the Japan Amateur Radio League (JARL) conceived of a DV methodology that would use GMSK (Gaussian Shift Minimum Keying) – popular in those first digital radios of the 1980s and digital cellular telephones. This methodology had the advantage of transferring data, direct radio-to-radio connections within a network, and a narrower bandwidth of 6.25 kHz – vs the 16 kHz typically required by analog FM.

The translated to English name of this project was D-STAR (Digital Smart Technologies for Amateur Radio). As there are industry interests within the JARL, Icom became interested in the production and marketing of D-STAR transceivers and repeaters. However, the JARL required that two companies must be willing to offer D-STAR equipment. By this time, I believe Icom was already partnering with Kenwood to develop NXDN (NeXt-generation Digital Network) LMR products, as a less-expensive alternative to P25. More about NXDN is coming up.

The details are murky, but if you search the Web you can find pictures of a Kenwood TMW-706S and of the Icom ID-800, and you will see a genetic match, with the exception of the badging. To my knowledge, Kenwood never actually sold any TMW-706S radios, but this bit of theatre was apparently enough to get the blessing of the JARL.

Icom's full release of D-STAR – with some last-minute changes – arrived in 2004. Although the JARL had a mixed-mode design in their specifications, Icom elected to drop that in favour of a digital-only offering, when it came to repeaters. As most radio clubs and individual owners of 2m repeaters did not want to give up analog FM VHF service, the vast majority of D-STAR repeaters ended up on UHF.

The full release of NXDN occurred in 2005. To differentiate product lines, Icom called theirs IDAS (Icom Digital Advanced System) and Kenwood branded theirs NEXEDGE, which is more a unique name, than an acronym. While Kenwood offers a 12.5 kHz BW mode, the narrower 6.25 kHz is the standard that they share with Icom and is the most likely format you will experience in Amateur Radio.

In 2006, we saw the full release of DMR (Digital Mobile Radio) – offering dual-timeslot TDMA (Time Division Multiple Access). The biggest advantage of TDMA is that it can allow for more than one conversation at a time – as long as each individual needing access to the repeater is wishing to use a different timeslot than the other. It does this by dividing the digital streams into 30 milliseconds bursts – actually 27 ms with a 3 ms interstitial window – or slots.

If both (or more) need the same timeslot, then someone has to wait and the repeater will let the additional user know this with a denial tone. In an LMR environment, transmission periods are short and this doesn't happen too often. In the Amateur Radio environment, transmissions are longer and can be more frequent so the likelihood of getting (what is colloquially known as) "bonked" is greater.

Adoption of any and all of these took some time as LMR emission standards had to be approved for the Amateur Service. Further, the expense of new technology – especially when priced for municipal and commercial budgets – is something of a barrier to widespread experimentation.

Yaesu offers a Digital Voice Radio based on C4FM

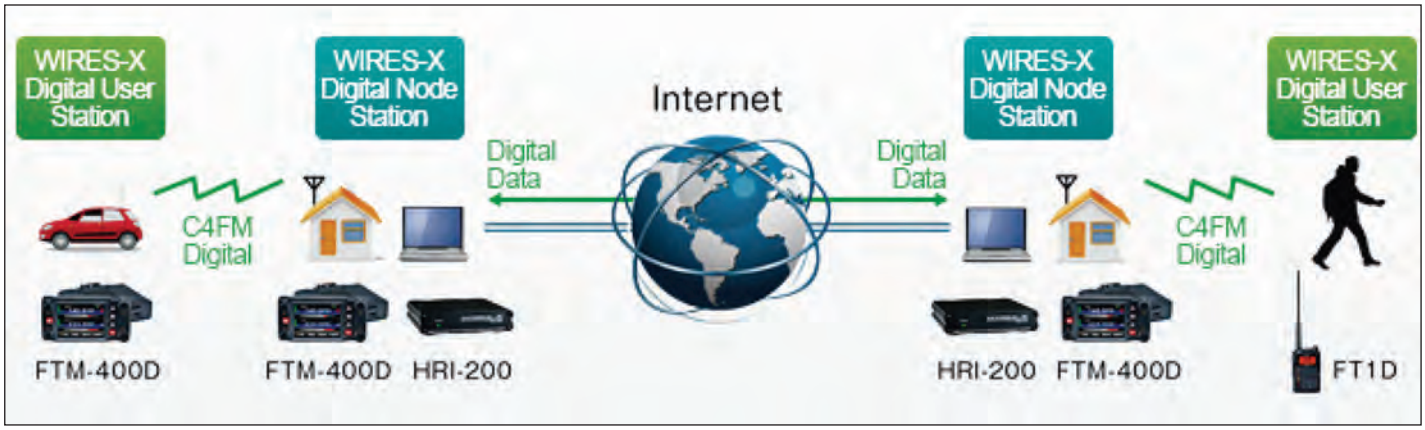
By the time we got to 2014, D-STAR was the most widely-adopted DV methodology in use on the Amateur bands. If someone mentioned "digital voice" or "digital radio", the default thought was toward D-STAR. However, Yaesu had conceived of another DV methodology. At first, Yaesu offered the dual-band, dual-VFO FT1DR portable. At that time, the new concept was referred to simply as FDMA C4FM (referring to Frequency Division Multiple Access, modulated by 4 level FSK), but by the time of the complete rollout of portable, mobile, repeater and networking interface, the product line was known as "System Fusion". While a small pocket of Amateurs in my area were having fun with the portable (and its many features) on simplex, the announcement was welcomed.

Yaesu had researched the market and asked Amateurs what they liked and did not like about existing DV methodologies. Although many felt we did not "need" another form of DV in Amateur Radio, early adopters and experimenters felt Yaesu might have a good idea, but it would be difficult to make headway into a market where D-STAR was the most popular way to go.

Yaesu offers discounted DR-1X repeater for Digital C4FM and Analog FM mixed mode operation

In the first quarter of 2014, Yaesu announced a Beta Testing Program, whereby interested and qualifying Amateur Radio clubs could obtain a dual-band (a significant advancement over other DV machines) DR-1 repeater, which would support DV and legacy analog FM, without cost. The idea was to replace an existing repeater and encourage the adoption of System Fusion – as interest warranted. In consideration, each club was to have a point of contact who would document any problems, number of digital users, overall performance and other related items – each month.

This gave Yaesu an advantage in entering the market and accelerating adoption. When the Beta Testing Program ended, those clubs were given the option of purchasing a new DR-1X (production model) repeater for a severely discounted price, which incorporated changes as suggested by the emerging user base. While the price for the DR-1X was listed as US$1,895, Yaesu decided to build on the inertia and offer it to clubs with



existing repeaters for US$500 – with the same intent as before. In purchasing a discounted DR-1X, buyers agreed to operate it in AMS (Automatic Mode Select) or digital-only modes.

Most clubs that took advantage of the offer were enthusiastic and wanted to promote System Fusion. Sadly, some others thought of it as just a way to get an inexpensive repeater, with no intention of supporting new technology. Many of those have reconsidered their ethics, but others have not.

Growth of System Fusion and the increasing number of repeaters was dramatic. In relatively short order, System Fusion's adoption outpaced an installed base of older DV technologies. In reviewing RepeaterBook.com listings – a very good resource for locating repeaters in a given area, especially digital assets – and using the all-common 2m and 70cm bands only, I found 75 DMR, 99 D-STAR, 7 NXDN, 12 P25 and 151 System Fusion for Canada as of mid-October 2018.

D-Star repeaters cannot do Analog FM operation

Aside from discounted repeaters – plus better-quality audio than DMR and D-STAR – AMS was possibly the key reason that Amateur Radio clubs were encouraged to give this new DV methodology a try. D-STAR was implemented by Icom as a digital-only product – when it came to repeaters. As such, most repeater owners were less than thrilled about the idea of losing analog FM capabilities on their 2m frequency pair. This is a big reason that the majority of D-STAR repeaters are found on the 70 cm band. Whereas others support mixed-mode analog and digital operation, analog was left out when it came to networking options.

This trend toward UHF was reflected in the successful ID-31 portable, which was a monoband portable, since many did not need a dual-band radio. A few years ago, Icom discontinued the model, but in recent months they reintroduced it with some new features.

With AMS, the repeater and the transceivers can automatically shift between legacy FM and digital transmissions. Thus, if two or more Amateurs are conversing digitally, and someone needs to break in with an analog-only radio, they can. Each station so configured will revert down, without need for user-interaction. Once the analog QSO is over, one Amateur can select to go back to DV and the other radios will automatically follow.

In order to keep non-DV users from having to listen to the digital signals – which are reminiscent of dial-up modem tones – all they have to do is enable tone squelch or DCS (Digital Coded Squelch) with the same CTCSS (Continuous Tone Carrier Sub-audible Squelch) or digital code as used on that repeater. They will see there is activity, but if they don't hear anything, they can safely presume the activity is DV.

Yaesu WIRES-X Networking through the Internet

In Japan, there are no repeaters on their 144~146 MHz band. Repeaters operation starts at 430 MHz. But also there are no System Fusion repeaters – at all.

It appears this situation exists because D-STAR is the "blessed" DV methodology and experimentation with any others is discouraged. However, since simplex System Fusion operation is allowed and more than a few Japanese Amateurs live in high-rise apartment buildings in major population centres, a node-based networking scheme known as WIRES (Wide-coverage Internet Repeater Enhancement System) is popular.

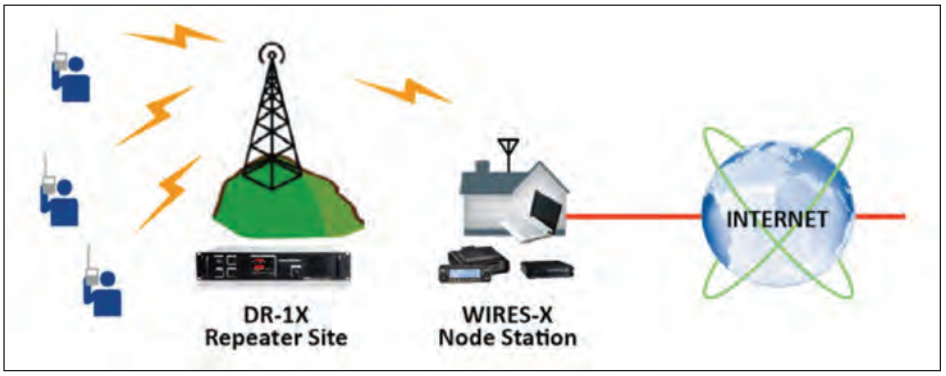
The current version is known as WIRES-X (see page 42). While previous (I and II) versions supported only analog communications, WIRES-X also supports digital.

Elsewhere in the world, WIRES-X is thought of as a means to link repeaters. A given node can be comprised of the HRI-200 interface, Windows-based computer running the WIRES-X application and either particular transceivers or a Yaesu System Fusion repeater. The WIRES-X node hardware connects to the Windows-based computer by a USB cable, which in turn, must have an active Internet connection. If the WIRES-X connection is to be digital, then radios such as the FTM-400 or FTM-100 must be used. If the choice is analog, then almost any radio with a high-speed data connection (typically implemented with a six-pin mini-DIN) can be utilized.

Within the WIRES-X environment, there are nodes (assigned to each interface terminal) and rooms (which are portals by which many users can connect and interact). Each node and room is assigned a unique numeric value. WIRES-X users with more visual radios – such as the FTM-400XDR, FTM-100DR, and FT2DR – can view rooms in a graphical menu format. The more basic models can make selections by directly entering the number.

When certain radio models were introduced – such as the FTM-3200DR mobile and FT-70DR portable – they could make use of a WIRES-X room already in use by a node, but could not control the node in order to select another room. Yaesu subsequently released firmware upgrades that allowed those radios to fully control a WIRES-X node. This is one of the advantages of newer-technology radios – the ability to add new features to existing equipment.

While WIRES-X can be implemented with the HRI-200 connected directly to the repeater, the need for an Internet connection at a remote site may be problematic. If your repeater shares space with a broadcast radio or television station, then chances are good that you might cajole a tap out of their connection.



Sometimes it is best to network the Yaesu repeater through a remote WIRES-X node.

If not, then the more popular remote node is probably the way to go. As most node owners want to be able to readily access their setup without a long drive up a dirt road – especially in inclement weather – this consideration alone may drive the location and configuration question.

Here again, System Fusion shows an advantage over other DV methodologies that require an Internet connection at the repeater. While microwave bridges can be set up with a pair of suitable transceivers, the additional attachment to a commercial tower may result in a monthly expense.

New DR-2X Repeater and Trade-in Program

In mid-2017, the dual-band DR-2X repeater began shipping. While the exterior looks much like its predecessor, internally it is different. While the DR-1X was a more basic design – the DR-2X comes equipped with greater intelligence and a broader feature set. It also has overtemperature sensing. If the repeater becomes too hot while running at its rated 50W, it is designed to automatically lower the power setting to 20W, until the overtemperature condition is resolved.

A look at the back panel reveals four N connectors, instead of two. This repeater supports two receivers and the transmitter can be directed to choose an alternate frequency, from the primary one. The DR-2X also supports over-the-air control, through the second receiver connection. Such access is limited to control operators that are known to the repeater. The DR-2X also introduced a new networking concept – IMRS (Internet-linked Multiple Repeater System) – as part of the System Fusion II product enhancements.

While WIRES-X is a server-based network standard, IMRS is not. Although it uses TCP/IP addresses as you would with the Internet, it is also Internet independent. You can choose to use the Internet, but if you wish to implement your own intranet, then that is fine, as well. Some EmComm groups have been interested in a non-Internet means of linking digital repeaters together and this was part of the concept of IMRS. WIRES-X has advantages in that it is more of an ad-hoc design, where any Amateur can set up a node at any time. IMRS requires more planning and someone functioning in a system administrator capacity is suggested.

DG-ID and DP-ID

This introduced the DG-ID (Digital Group) and DP-ID (Digital Personal). The latter is part of the control operator white list in a given DR-2X repeater.

DG-ID performs two functions. It can be used for local repeater access – in much the same way as CTCSS or DCS is used with analog FM repeaters or radios. While you could conceivably use a DG-ID of your own choosing, it is suggested that you adopt an idea of equating DG-ID values with the 38 standard CTCSS tones. As the DG-ID of 00 allows you to listen to all other DG-IDs in use on a repeater, the table would run from 01~40 – with 39 reserved for odd, no or non-standard tones and 40 to connect two DR-2X repeaters at a single site or some alternate, commonly understood function.

By the way, single-site linking through IMRS and DG-ID can be accomplished with nothing more than a CAT-5 crossover cable – the same as employed by many other Ethernet router-to-router or switch-to-switch connections. If you have a VHF and UHF DR-2X repeater at the same site, this is the simplest and fastest way to bridge them together – while staying in the digital domain.

How Group IDs may be applied to Canada

That leaves 41~98 (with 99 for another use) to access pre-assigned groups of DR-2X repeaters. Since Canada has 10 provinces and three territories, a fairly manageable means of assigning DG-ID groups to major cities, provinces, regions, etc. can be envisioned.

WIRES-X can also be used for such wide-area networking and is already in rooms such as America-Link, CQ UK and CQ Canada-Link. Each networking concept has its pluses and minuses. I encourage repeater groups, coordinators, users and all concerned to determine what you would consider best practices in implementing these options and opportunities. As DG-ID is not an IMRS-exclusive feature, keep in mind that WIRES-X can make use of it as well.

There is more to establishing a Repeater than buying the Yaesu Repeater Equipment

While Yaesu has made the cost of ownership of a System Fusion repeater as low as possible, there are other costs associated with repeater ownership. The cost of duplexers, hardline, antennas, along with other concerns – not the least of which is a suitable location – may make the addition of a completely new repeater difficult. In situations like this, I suggest returning to the way that WIRES-X is implemented in Japan – through nodes that serve a community of users.

If one can be established at a club member's home or office – in a high or open location – this can work almost as well as having a repeater with a smaller footprint. While a general guideline in Amateur Radio is to use the minimum amount of power to make contact, my feeling is that this is one of the situations where higher power settings in user radios is justified. With a repeater, you can hear a station on the output frequency. With a half-duplex node, you might not hear someone accessing it if they use low power; this is often known as the hidden transmitter effect.

In such a case, accidental interference is an inevitability. With higher power and a tighter area – akin to cellular telephones – the chances are much better that you would hear the other station and be able to avoid as many incidents of accidental interference. The cost of a computer, HRI-200 interface and FTM-100DR or FTM-400XDR (if configuring a DV node) plus antenna system will typically be much less than the investment in a completely new repeater. In addition, cost of ownership should be less or fairly non-existent as to things like site maintenance, rent and so on. However, the establishment of simplex node sites has to be considered carefully with the proper and coordinated choice of simplex channels within a congested urban area. Local Repeater Councils should be consulted for such assignments.

All of the DV methodologies used on the Amateur Radio bands are open standards, which are documented with a CAI (Common Air Interface). The information in a CAI allows anyone with

sufficient talent to create products that are compatible with others that use that standard.

A few months after the Beta Testing Program began, Yaesu released their digital standards documentation and this has encouraged others to design and market System Fusion compliant products. The document is a worthwhile read, even if you have no interest in designing a new product. It will give you some idea of what goes into the DV data stream – including metadata like your call sign and GPS position – plus a look into a fairly robust FEC (Forward Error Correction). If you ever used digital modes like RTTY, you should be familiar with the "Mark" and "Space" tones – representing a binary 0 or 1. RTTY makes use of FSK (Audio Frequency Shift Keying as modulation to an SSB radio). In more modern terms, this could be thought of as C2FM. With C4FM, there are four frequency shifts at work and a di-bit binary arrangement, that is FSK at +/- 1.5 kHz deviation and +/- 3.0 kHz deviation – representing 00, 01, 10 or 11. This doubles the data bit rate from the basic data modulation symbol rate.

Personal Low Power Hot Spot Cross-Mode Digital Devices

While no one has yet released a compatible radio, a number of alternate network POP (Point of Presence) interfaces have been selling well. The DV4mini, ZUMspot, SharkRF openSPOT, and others have become popular. Such devices are designed to allow a System Fusion enthusiast to connect to rooms – many bridged to WIRES-X rooms – across the Internet.

In addition, while some Amateurs have been patiently waiting for the promise of a multi-methodology transceiver to become a reality, a solution to talking across different methodologies – affectionally known as "The Universal Translator" – is already at hand. After much nagging by a friend, I purchased a SharkRF openSPOT. It allows me the opportunity to use my System Fusion radio to talk to DMR users. I can see the subscriber ID number (DMR, NXDN and P25 do not embed call signs in the digital streams) of the DMR station. This extends the usefulness of both of our chosen transceivers.

The openSPOT can deliver up to 20 mw to its antenna connector as it is meant for nearby use. That said, I was standing in my driveway one morning and happened to gaze out at the tower where a UHF-configured DR-1X happened to be – high on a ridge – 13 kilometres away. I was suddenly inspired to attach a quarter-wave antenna to the openSPOT (still inside the house) and tune it to the repeater's frequency pair. My curiosity was rewarded with a solid connection and I could now use the openSPOT to remotely attach the repeater to the network.

Shark RF connects directly to your router by an Ethernet Cable

While this arrangement does not afford users the flexibility of a WIRES-X connection, it does provide for something extra in my community. So that the repeater is not tied up all day with a network connection – discouraging local contacts – I put the openSPOT on a seven-day timer and limit the network hours. Certainly, this is not what such devices are designed for, but Amateurs have a reputation of making things work in ways they were not intended.

There are also protocol converter boards that can be purchased to enable DV operation on most existing analog FM repeaters. The MMDVM previously sold by Bruce Given, VE2GZI, has been popular, but an improved and simpler design – with better documentation and more accurate setup can be found in the STM32-DVM (http://www.repeater-builder.com/products/stm32-dvm.html) which is produced by Scott Zimmerman, N3XCC. With the latter, you can obtain it in kit form or wired and tested. With some interfacing to your older repeater, it too can join the digital domain – including support of System Fusion.

The Yaesu Line-Up of Digital Voice C4FM Capable Products

I've covered repeaters and networking so let us move onto radios. At the moment, I know of two portables (FT-70DR, FT2DR), five mobiles (FTM-100DR, FTM-400XDR, FTM-3200DR, FTM-3207DR and FTM-7250DR) and one all-band, all-mode transceiver (FT-991A) positioned for fixed operation. That's eight radios in all. In addition, there are three models that have been retired (FT1DR, FT1XDR, FT-991) but which are still supported with firmware updates.

System Fusion was designed as an inclusive DV methodology – supporting analog and digital. But the company also has worked to make the radios as economically inclusive as possible. When operating digitally, the basic mobiles and portables (FT-70DR, FTM-3200DR, FTM-3207DR and the FTM-7250DR) will display the call sign of the station you are receiving and that of the repeater if one is being employed. As mentioned earlier, you can make use of selective access with IMRS and control applicable WIRES-X nodes. I think of these as radios for "Casual Users" who are interested in getting the core features.

"Power Users" who want the full feature set – mostly including APRS, bit-mapped colour or greyscale touch screen, dual-VFO, memory programming through microSD cards, support for picture transmission, the ability to function as digital nodes, and more. These radios (FT2DR, FTM-100DR, FTM-400XDR) represent more value, albeit at a higher price.

Rounding out the radio line is the FT-991A, which offers a nice set of DV-related features, plus colour touch screen, DSP filters, built-in antenna tuner, USB connection for digital keyboard modes, coverage of HF, and the 50, 144, 430 MHz bands – in an all-mode "ham shack in a box" concept. Keep in mind that C4FM uses 12.5 kHz emission bandwidth and therefore cannot be used on HF bands below 29 MHz.

Unlike other DV methodologies, the radio setup is very easy. There is no need to preregister to use networks. When a radio is first turned on, it prompts you to enter your call sign. Once that is done, you are ready to operate locally or through the networks.

Conclusion

I hope this article has served to give you a better understanding of DV in general and System Fusion specifically. While we all may have our favourites it does not preclude us from trying something new. Digital Voice is a communication resource that is more advanced than analog FM. At present, approximately 22% of all repeaters worldwide are DV in some form. This number continues to grow each year, but also consider that this means approximately 78% of repeaters are still just analog.

Just as FM eclipsed AM on our VHF and UHF bands so will DV become dominant. Until that time, it is still prudent to support analog, with a goal of advancing the state of the art in Amateur Radio – today and tomorrow.

With his grandfather's guidance, Cory began experimenting with electronics when he was three years old. He became licensed as a Novice over 40 years ago and holds an Extra Class licence. He was an early experimenter with microprocessors and digital electronics, extending his talents into a career path, including television production. Cory is active in various aspects of Amateur Radio, from various digital voice methodologies to satellite communications and homebrewing – sometimes with older tube technology. He has written columns and articles for a number of publications and currently serves as the American Radio Relay League's WPA Section Public Information Coordinator and a member of the League's VE program. He is also a member of Radio Amateurs of Canada. He can be reached at wa3uvv@gmail.com.

QUA – A TOPICAL DIGEST

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In early August I had the privilege of attending the Pacific Northwest DX Convention held this year (as it is once every four years) in New Westminster British Columbia. It was a pleasure to meet up with a few people I already knew and to make the acquaintance of others.

As a very casual DXer and contester, I found it remarkable to see the enthusiasm and dedication to the pursuit of DX exhibited by so many of the attendees. Altogether it was really great to spend a few days in the company of others who share a passion for radio.

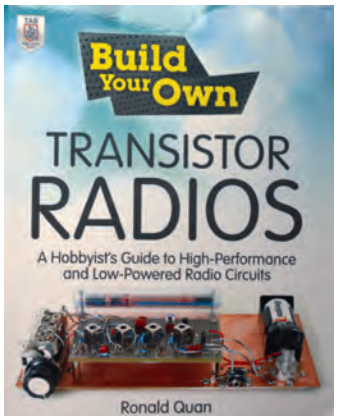
At the convention Neil King, VA7DX, described the operating and hot and uncomfortable conditions experienced by the operators on the KH1/KH7Z DXpedition to Baker Island.

Later, Keith Witney, VE7KW, described the cold and uncomfortable conditions experienced on the unsuccessful trip to Bouvet Island. I think I will stick to portable operations near home, thank you!

Closer to home was Mikhail Zavarukhin's description of his IOTA expeditions to KL7 and an remarkable explanation of satellite detection by Scott Tilley, VE7TIL.

In an evening presentation Guy Immega, VA7GI, outlined a fascinating potential project in Africa that could alleviate many social and ecological problems in the area around Lake Chad and the next morning Dave Johnson, VE7VR, described his trip to Botswana where he combined a holiday and attempts at radio operation. There were other speakers too, and all provided interesting insights and demonstrations of expertise in various areas. How great it is that a common fascination with radio brings together so many people with interests that span a range from technology to travel and understanding of other peoples and cultures.

How to Build a Transistor Radio



For many years I have gathered a good collection of radio and electronics books and, from time to time, I enjoy looking over them and picking one for re-reading.

Recently the book I chose was "Build Your Own Transistor Radio" by Ronald Quan. Except for a 40 metre software-defined radio (SDR) described in Chapter 12, the transistor radios Quan describes are meant for reception of the broadcast band. However, the radios he presents range from tuned radio frequency (TRF) designs to various regenerative types to superhets (including a one transistor superhet!). Some of the radios have very low power requirements; for example, 150 µA at 1.2 V. In the text Quan clearly explains the design constraints and the decisions that have to be made to make the operation of the various radios possible, and just for these insights alone, the book is well worth reading. Each radio design also includes a clear description of the parts required (and sources) so it should be relatively easy to construct any of the radios in the book.

Whereas the first 12 chapters in the book are descriptive – and contain the radio construction information – the last chapters of the book (13 to 23) contain the mathematics and theoretical descriptions of many radio circuits. Quan says, "The second part of this book will concentrate on tutorials of various subjects related to electronics, so I hope that readers will stick around for that. I will do my best to explain some of the principles of electronics with no more than high school math." I think this section is well worth reading for its discussion of oscillators, mixers, noise and In phase and quadrature (IQ) signals, to name a few topics.

Window Line

In a very interesting article in the August 2018 issue of *QST* entitled "A Novel Approach to Using Window Line", by John Portune, W6NBC, describes experiments in which he tested the supposition that window line must be separated from other conductors by a considerable distance if it is to function properly.

In his tests he enclosed a length of 450 ohm window line in polyethylene foam tubing of the type used for insulating 3/4 inch hot water pipes. At the input he used a 9:1 ratio balun to match the impedance of his vector network analyzer to the window line impedance. The far end of the line was left open circuit so that there would be total reflection of the test signal at that point.

Four conditions were tried with the foam-encased window line: 1) lying on a dry concrete surface; 2) wet garden soil; 3) an aluminum roof; and 4) in free air a few feet above a concrete surface. Condition 4 was the control situation.

John's results are quite remarkable. He says, "As I expected, there was variation between runs. Soil and concrete caused the most deviation, but the variations are small – 15 percent at the most, and certainly not the giant jumps hams expected."

He suspects that "the reason for the surprisingly small loss in these adverse situations may be because the bulk of the line's field does not extend more than an inch or so from the line. Most of the field exists between the conductors." He concludes that "there are many practical possibilities for deploying window line in situations where coax was once thought to be the only player" and he even suggests that a foam-encased window line feeder could be directly fastened to a tower leg with tie wraps.

Solar Eclipse QSO Party

The same August 2018 issue of *QST* contained a brief mention of results from the Solar Eclipse QSO Party of August 2017.

The results seem to match what one might expect and they certainly reflect what I found in my 40m operation: 20m decreased propagation for an hour before and after eclipse maximum whereas on 40m path lengths increased for the 45 minutes before and after eclipse maximum. On 160m and 80m there were band openings of 25 to 45 minutes.

The scientific paper "Modeling Amateur Radio Soundings of the Ionospheric Response to the 2017 Great American Eclipse" outlining these results is contained in the American Geophysical Union journal Geophysical Research Letters.

Marconi's Transatlantic Experiment

I found an article by David Sumner, G3PVH, in the July 2018 RSGB journal *RadCom* to be very interesting. In this article entitled "UK to Newfoundland, 1901 Style: the Possibility of HF Communication by Marconi", David considers how it might have been possible for Marconi to hear signals in St John's from a transmitter at Poldhu, Cornwall in the United Kingdom.

According to David and John Belrose, VE2CV, the spark transmitter that was used would have had a frequency of about 500 kHz and between 1500 and 1800 UTC in December 1901. This would have been a very unfavourable frequency for transatlantic communication. However, from his analysis of the transmitter and its antenna system and from experiments he performed, David suggests that there would also have been a strong signal generated at about 10 MHz. He analyzed and experimented with receiving equipment of the type Marconi used too, and made calculations using VOACAP to estimate the propagation between St John's and Poldhu.

In summarizing his findings he says that Marconi's spark transmitter could have generated a second frequency around 10 MHz with the same peak power as that at 500 kHz, and that the transmit antenna would have been effective at this higher frequency. At St John's he feels that the kite-supported receive antenna would have been in a good position and have provided a good impedance match to the coherer detector at 10 MHz (but not at 500 kHz).

Finally, from his VOACAP calculations he says that the Maximum Usable Frequency (MUF) was likely above 10 MHz at the time of the Marconi test. Given losses in the transatlantic path, he estimates the voltage to the load impedance of the coherer at about 35 mV and the minimum detectable signal at 20 mV. Altogether I found the article fascinating for its combination of historical insights and modern day science.

End-Fed Multiband Antennas

Several years ago I experimented with a 20m end-fed half-wave dipole for use with my Yaesu FT-817. I found it to be a convenient, easy to set up antenna that gave acceptable performance. I used information from the website of Steve Yates, AA5TB, to guide my experiments and the construction of my antenna. You can find the excellent material he presents at http://www.aa5tb.com/efha.html.

I really like my 20m end-fed half-wave dipole because of its combination of performance and convenience. The convenience is the result of it being an end-fed antenna as only one support is needed, and this feature really simplifies its use. One end is raised to the support and a short feedline connects the bottom end of the antenna to the transceiver.

Over much of the past year, my friend Bruce Chapman, VE7EDT, has carried out extensive tests on end-fed antennas. Initially he was quite skeptical that an end-fed antenna could be a good performer, but as a result of his experiments his opinion has changed and he is now using his end-fed antenna as his main antenna for the 80 and 40 metre bands and often for 20m too.

As you can tell from the above paragraph, Bruce's antenna is a multiband antenna. This is possible because it is cut as a half-wave antenna at the lowest frequency of operation, in his case, 80m. Since it is fed near the end the impedance at this point is high, somewhere around 3000 ohms. As a full wavelength on 40m, two wavelengths on 20m, approximately three wavelengths on 15m and four wavelengths on 10m, the antenna also presents a similar high impedance on these bands, and therefore can be matched to a 50 ohm feedline on all of them with a broadband transformer.

Bruce used an FT240-43 toroid for the transformer core (Mouser part #623-5943003801, about $6). He has experimented with a number of different turns ratios. The transformer shown in Figure 1, for example, has a ratio of 2:15, but with an antenna at a different location he used a 2:14 ratio. His QRP version of the antenna transformer (see Figure 2) uses a 3:22 ratio and an FT114-43 core (Mouser part number 623-5943001001, about $1.50).

Bruce suggests starting with a 3 to 24 ratio and then removing turns to achieve the best match. He says that some experimentation is in order "since every installation will be a bit unique". As you can see from Figures 1 and 2, the wire forming the primary winding is twisted together with that used for the secondary and then once the two (or three) primary turns are completed, the secondary winding continues on around the toroid core.

The high voltage capacitors shown in Figures 1 and 2 are connected across the primary of the transformers. They are added to provide a better match on the

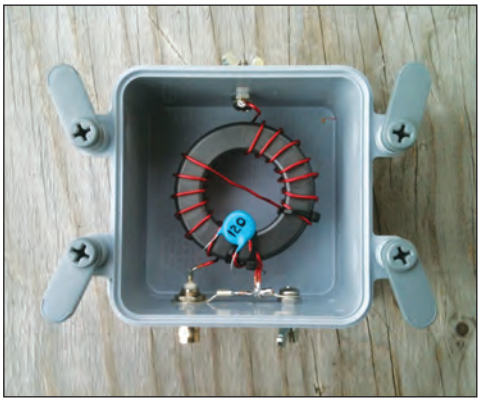


Figure 1: The transformer is wound on an FT240-43 toroid core using enamelled wire of #14 to #16 gauge. The grey electrical box of about 4 x 4 x 2 inches is the housing.

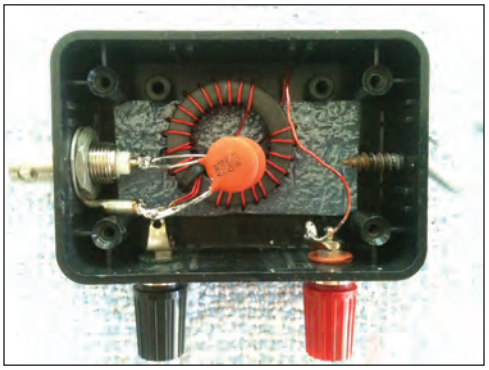


Figure 2: This is a QRP version of the matching transformer. It uses an FT114-43 core.

higher frequency bands and have little effect on the lower frequency bands. Bruce found values of around 100 pF seem to work well but again some experimentation is in order. High voltage capacitors of 100 pF or 220 pF could be used singly or in series or in parallel combinations to find optimum values. Mouser parts for suitable 100 and 220 pF capacitors are #81-DHRB34B101M2BB and #81-DHR4E4B221K2BB respectively.

Installation of these end-fed antennas seems to be very flexible. At his home, Bruce has an 80m to 10m version of the antenna with the feedpoint high on his tower and 134 feet of wire sloping downwards over a bank behind his house. He uses the tower as a ground connection.

At another location he has a 40m to 10m version with the feedpoint near the ground and 67 feet of wire sloping upwards and outwards to form a stretched inverted L shape. For this configuration he says a ground plate, ground rod or a set of counterpoises or some combination of these work well. These antennas are directional with the strongest signal in the direction of the slope.

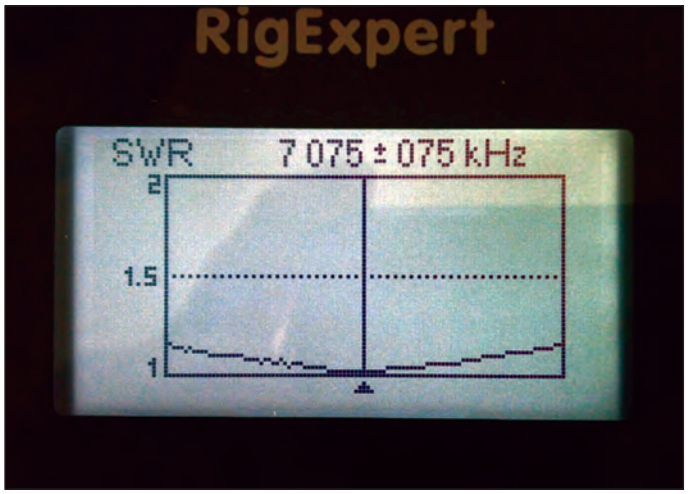


Figure 3: 40m SWR measurement for the QRP version of an end-fed antenna whose lowest frequency of operation is 40m. This is the antenna whose matching transformer is shown in Figure 2.

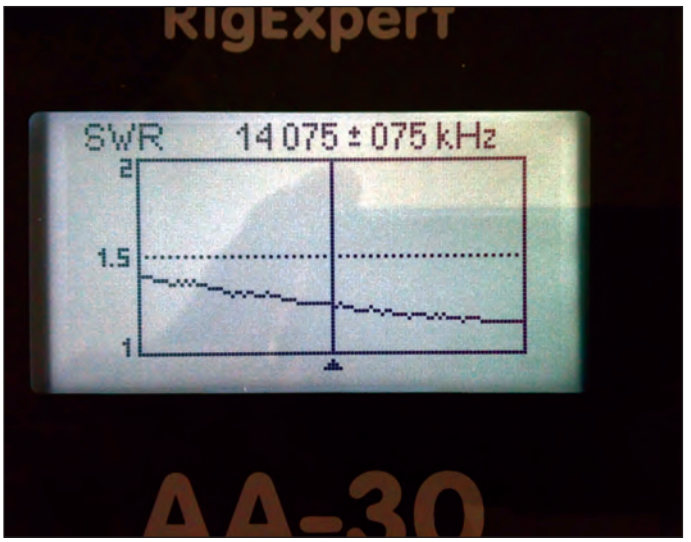


Figure 4: 20m SWR measurement for the same antenna as is shown in Figures 2 and 3.

Figures 3 and 4 show Bruce's measurements of SWR for the QRP version of his antenna shown in Figure 3. As you can see, the antenna presents a good match on the 40m and 20m bands, and the results on other bands are good too.

I think that end-fed antennas of this type have much to recommend them. They are easy to set up and offer good performance on multiple bands. Their end-fed nature lends itself to installation in places where a centre-fed antenna would be difficult to erect.

Since this issue of TCA is primarily concerned with emergency communications, it seems to me appropriate to consider an HF antenna so suited to this use.

I thank Bruce Chapman, VE7EDT, for the extensive information and photos he provided. If you wish, you can contact him directly for additional information at VE7EDT@gmail.com.

As always, I hope to hear you on the air. If you want to contact me by email you can do so at vy1kx@rac.ca.

TCA

AMATEUR RADIO AND THE 1998 ICE STORM IN QUEBEC

LA RADIO AMATEUR ET LA TEMPÊTE DE VERGLAS EN 1998 AU QUÉBEC

André Huot, VE2HUO

On the morning of January 5, 1998, a light rain was forecast with a “risk” of ice for southern Quebec. Few people saw the coming drama except the members of the Emergency Group based in Montérégie.

By the evening of the same day, there were already nearly 50,000 Hydro subscribers who were without power. Wired telephony and cellphones were also beginning to suffer the effects of the ice storm.

The emergency group had begun to mobilize to be able to guarantee the communications. Gasoline, track vehicles, warm clothes and survival food had already been put in a safe place in case it was necessary to intervene in a self-sufficient way.

Around midnight, the Civil Protection Centre was put on alert and RAQI (Radio Amateur Québec Incorporé), the global network of Amateur Radio operators was immediately solicited to manage communications. The telephony was paralyzed and even the cellphone system, which was supposed to be able to withstand every situation, yielded under the weight of the ice or the destabilization of microwave links.

The worsening weather conditions resulted in approximately 850,000 consumers without electricity. The Government of Quebec appealed to the Armed Forces to support the generalized effort that was needed.

Amateur Radio stations were even asked to join the various command posts erected for the occasion. St-Hyacinthe was a privileged place in front of the magisterial extent of the damage: crashed high-tension lines, broken trees blocking the roads, gas stations with no supplies, and circulation was at best very slow on the few roads still open. In the case of Montérégie, the breakdown and its aftermath lasted 35 days.

It is now known that the RAQI member clubs in the storm-affected areas were able to provide communications until the complete restoration of the telephone and wireless links. At times, there were nearly 150 operators on duty for the emergency network and related services.

The Department of Public Security has recognized the essential contribution of Amateurs and they support the preservation of these key links in times of emergency in case they are ever needed again.

I have been an Amateur since 1991 operating mainly in 2 metres.

In 1998, I was recruited to work with the Royal Commission of Inquiry on the Ice Storm in Québec and was assisted in preparing the RAQI report among the different organizations involved in the Storm. I have also been involved with many others Royal Commissions since then.

I spent a full year sailing toward Europe, the Canary Islands and the West Indies. I became VE0HUO and I have transmitted on shortwave radio and using packet communications.

I later sold the boat and the radio and have operated on 2 metres since then.

Le 5 janvier 1998 au matin l’on annonçait une faible pluie avec « risque » de verglas pour le sud du Québec. Rares furent les gens qui virent venir le drame qui s’annonçait sauf les membres du Groupe d’urgence basé en Montérégie.

Dès la soirée du même jour, il y avait déjà près de 50 000 abonnés de l’Hydro qui étaient privés d’alimentation électrique. La téléphonie filaire et la cellulaire commençaient aussi à subir les affres du verglas.

Les membres du groupe d’urgence avaient commencé à se mobiliser pour être en mesure de garantir les communications : essence, véhicules sur chenilles, vêtements chauds et nourriture de survie avaient déjà été miss en lieu sûr au cas où il faudrait intervenir en toute autarcie.

Vers minuit, la centrale de protection civile fut mise en alerte et le Réseau global de RAQI des radioamateurs fut sollicité immédiatement pour assumer le suivi des communications : La téléphonie était paralysée et même le cellulaire, réputé à l’épreuve de tout, cédait sous le poids de la glace ou encore par déstabilisation des liens micro-ondes.

L’aggravation des conditions climatiques priva d’électricité près de 850 000 abonnés. Le Gouvernement fit appel aux forces armées pour apporter un soutien à l’effort généralisé qui s’imposait.

L’on pria même des radios amateurs de se joindre aux divers postes de commandement érigés pour la circonstance. St-Hyacinthe fut un lieu privilégié devant l’étendue magistrale des dégâts : lignes à haute tension fauchées, arbres cassés bloquant les routes, stations-service à sec pour ravitailler les gens et circulations au mieux très lentes sur les routes encore ouvertes. Dans le cas de la Montérégie, la panne et ses séquelles durèrent 35 jours avant le retour de la lumière.

L’on sait maintenant que les clubs membres de RAQI des secteurs affectés par la tempête purent assurer les communications jusqu’au rétablissement complet des liens téléphoniques et hertziens. À certains moments, il y eut près de 150 opérateurs en fonction sur le réseau d’urgence et sur les services connexes.

Le ministère de la Sécurité publique a su reconnaître l’apport indispensable des amateurs et il aide à maintenir les liens d’urgence si jamais nous en avons encore besoin.

J’ai été un amateur depuis 1991 fonctionnant principalement en 2 mètres. En 1998, J’ai été impliqué dans l’organisation de la Commission royale d’Enquête sur la tempête de verglas survenue en janvier 1998. D’où mon implication avec RAQI lors de la soumission des divers rapports d’organismes. J’ai aussi collaboré à de multiples commissions d’enquête par la suite.

J’ai largué les amarres pendant un an pour naviguer à voile vers l’Europe, les îles du Canaris, les Antilles et un retour graduel au Québec. À ce moment je devins VE0HUO et j’émis alors en Ondes-Courtes et sur le « paquet » pendant un an.

J’ai par la suite vendu le bateau et le radio. Je n’ai gardé qu’un 2 mètres depuis.

TCA

20TH ANNIVERSARY OF THE 1998 ICE STORM: ONTARIO

Barrie Crampton, VE3BSB

In January 1998 the Lanark North Leeds ARES group was mobilized to provide emergency communications due to the damages caused by a severe ice storm that bought down power lines, disrupted telephone service and put rural residents in need of warm shelter, supplies and hydro.

On January 9, 2018, the Perth Radio Station Lake 88.1 FM featured programming on the 20th anniversary of the Ice Storm and had interviews with the County Warden and Perth Fire Chief who had coordinated the disaster relief efforts, and also with Barrie Crampton, VE3BSB, LNL ARES Emergency Coordinator during the 21-day period that ARES provided support communication.

During the 20 minutes on-air ARES interview, Barrie, VE3BSB, had the opportunity to explain that ARES was initially called out to provide mobile communications between Hydro repair vehicles that came from unaffected communities to facilitate repairs to downed hydro lines. The various municipal hydro services did not operate on common frequencies and did not have interoperability between vehicles and dispatch. An Amateur operator with personal equipment was assigned to each of the out-of-County vehicles and a base station was set up at the initial Command Centre.

As the magnitude of the effect of the ice storm escalated, a total of eight shelters were established at community halls and schools across the County. A supply and food distribution was set up in Perth to support these shelters, none of which had radio or telephone communication. A County Emergency Operations Centre (EOC) was located at the Lanark County Administrative building in Perth.

The ARES base station moved to this facility and each of the community shelters and distribution centres were staffed by Amateur Radio operators. The tasks were to provide updates on the numbers of citizens that were seeking shelter or supplies, to locate individuals by other family members, to order food and supplies from the distribution centre and to provide general communication between the EOC and other shelters.

At the time, LNL-ARES membership consisted of 30 Amateurs, but this was quickly augmented, bringing to 92 the number of Amateurs who operated over a 21-day period.

Amateurs from ARES Renfrew – like Bob Howard, VE3YX, Fred Prins, VE3FPB and Dennis Smyth, VE3MSW – came and stayed at our QTHs to work their shifts at the shelters. The Tri-County Amateurs from the Madoc area collected and sent radios and generators. Almonte ARC ARES members manned the shelter at Clayton in the northeast sector of the County.

Barrie Crampton, VE3BSB, was licensed in 1954 and was issued the call VE2WQ. He held the call VE8PF while working in the Arctic with Spartan Air Services. Barrie currently lives in Perth, Ontario and is the Emergency Coordinator with the Lanark North Leeds ARES Group.

The following article was written by Mike Kelly, VE3FFK, for the Ottawa Amateur Radio Club's newsletter "The Groundwave" just after the Ice Storm in 1998. Thank you OARC!

January 20, 1998: Wow, what a way to start the year. How did you do in what has come to be known as ICE STORM 98 (always in capitals)? What did you do?

Unlike some people, I actually did have an emergency plan in place for a power outage. Unfortunately, the plan only went out to 72 hours. Fortunately, like many city dwellers, my power was out for just long enough to rig the house for a long outage, then it came back on. Time to update the plan. When did hydro start calling them outages, rather than failures?

Before you start feeling too comfortable about the fact that all your favourite repeaters stayed on the air, remember that several in the outlying areas *did* go down, leaving our country cousins with a tough job of communicating. My tuque is off to those guys and gals who in the middle of their own crises also got out there and kept their local areas connected. Many performed well beyond what anyone could have expected of them.

According to an Industry Canada cumulative situation report, we had a close call in this area: "...information received from CBC that the TV tower in Camp Fortune Quebec (near Ottawa) is very icy, cracked and dangerous. CBC employees were asked to evacuate...". I don't know if this is the same tower that VE2CRA is on, but it is certainly in the same neighbourhood. Sometimes it's more than just "nice" to be in an area served by multiple repeaters.

Real Amateurs (CW or not, VA or VE) take that old "be prepared" thing seriously, so were you prepared? Weather isn't going to get any more predictable in your lifetime. Get with it.

Around here, the J-poles held up, and did very well. The ice formed symmetrically around them. They couldn't decide which way to fall, so they stayed up. The wire antenna was already down, but not too many of the organic supports were lowered. Mostly I lost a lot of small stuff that got in the way of the antenna. Now that I can see where it should go, I will put it up (once I get the ice off my laneway, and the dead wood off my backyard.)

All in all, the upcoming Ski Marathon is looking like it will be a piece of cake compared to what we have all just been through.

73& treat ur generator kindly, you never know... mk VE3FFK

You can read this article and other accounts of the Ice Storm in the Groundwave's archives at https://www.oarc.net/pages/about/newsletter/ and scrolling to the February 1998 issue in the "Groundwaves for Previous Years". Mike Kelly, VE3FFK, is currently the Assistant Emergency Coordinator for the Ottawa ARES / EMRG Group. You can read his report on page 63 of this issue of TCA.

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Silver / Argent

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Bronze / Bronze

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Keith Antonelli, VE7EXH
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David Barnes, VO1YA
Geoff Bawden, VE4BAW
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Michael Bell, VE3NOO
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Markus Biehl, VA3MQS
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Christina Marie Comeau, VA3WTZ
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Updating Emergency Communications and Amateur Radio Public Service in Canada's North

Ron Thompson, VE8RT

Yellowknife in the Northwest Territories has been our home for over 12 years. For the last five years we've owned our own home that backs onto an old mine site, but is still only a 15-minute walk from downtown.

Within a year or two of moving in, with the help of club members, we put up a salvaged 10 metre tilt-over tower and have been working away at setting up our home station (shared with the XYL Laura, VE8LT and our son Nathan, VE8TN). We could see ourselves retiring here.

Since we moved here there have been some real and some potential threats pop up. Thankfully, most have been short-lived, but some had the potential to become a larger scale disaster.

The real threats have included power failures during the coldest part of winter with some homes and businesses having their plumbing freeze up (see note 1).

We have had concerns about forest fires that were too close to home – one of which was started by a raven (see note 2) that burst into flames when it came in contact with the power lines and then fell into the brush below. Ravens have been frequently been blamed for power outages.

Although not life threatening, it didn't come as a surprise when we lost electricity, the Internet or cellphone coverage (see note 3). On one occasion flights were delayed due to high altitude volcanic ash from an Alaskan volcano (see note 4).

The 2014 Fire Season

Since we've been here we'd come to expect smoke from local forest fires to linger over the city. But 2014 was an exceptional year. In July, the (only) highway south was closed for days at a time due to fires and smoke.

The daytime sky was darkened the entire summer by thick smoke that compromised the air quality. The most dramatic event happened on July 30, 2014.

As businesses were closing and traffic (yes we do have a mini-rush hour) was at its peak, the skies darkened further as ash fell like snow. A line of thunderstorms blackened the horizon, illuminated by frequent lightning. Just after 5 pm it turned dark enough to turn on the streetlights and drivers needed their headlights, as the rain started.

Overhead lightning that appeared as a reddish colour from the smoke made the city's rush hour traffic look like an exceptionally well scripted scene for an end of the world movie. Within a couple of hours the storms moved on, but the fires and smoke were with us into fall.

Perhaps it was the extended road closures – and this particular storm – that prompted very public discussion about the city's emergency preparedness, and ability to evacuate the population should another fire threaten us. The city's emergency plan (see note 5) has a shelter-in-place plan and they give good reasons for it. Since the 2014 fire season things have calmed down considerably, as have the public concerns about being prepared for the next one.

Common Elements in the North

Although Yellowknife is a major population centre north of 60, we share the following traits with many other communities and hamlets.

1) There is a single road in or out of town, or perhaps no all-season road at all, making evacuation difficult, slow, or by air or water (at smaller airports aircraft can't land or take off with reduced visibility in smoke).

2) If travelling by road, there are no larger communities along the only highway for several hundred kilometres and there is no fuel, food, emergency services or accommodations.

3) The utilities – including power, phone, and Internet – may not be available when needed. Our fibre-optic line has been damaged by lightning, construction work, forest fires and vandalism.

4) Cellphone coverage doesn't extend beyond the city limits.

5) The CBC is switching off their AM broadcast stations; FM doesn't have the range, especially at night, that the AM stations did, public broadcasts are less likely to be picked up on the highway.

6) Outside of the Yukon, in Canada there are only two repeater sites north of 60 and maybe a dozen active Amateurs (most of them live in Yellowknife). No Amateur Radio clubs of any size either.

7) Emergency long-range communications then comes down to the available satellite phones and "Spot"-like devices.

8) Radio Amateurs do not have a close relationship with their community with respect to being an emergency service volunteer or organization.

Northern Reflections

The north of decades ago was a different place. Travel by road was challenging and seasonal. Hay River, served by a rail line, facilitated the shipping of goods across Great Slave Lake (Yellowknife, still celebrates the annual beer barge party in spring) and down the Mackenzie River. Along with the seasonal marine traffic, you could use ice roads or fly in what are now classic aircraft like the Norseman, Beaver and Otter (all Canadian made) and DC3 to name a few. Telegraph lines connected places to the outside world, while Amateur Radio operators might do a phone patch or pass a message for you.

Along with the NORAD Distant Early Warning (DEW) line sites, remote governments outposts had Amateur Radio stations for their isolated staff. Mining sites too had Amateur Radio stations, Garth, VE8NSD, talks about the Pine Point mining community having a large and active Amateur Radio club in its day.

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Even here in Yellowknife, Amateur Radio operators are remembered by the older generation for their public service and phone patches at a time when the phone may not have been available or affordable. The Amateurs and their iconic towers and HF beams are still remembered.

From time to time, like unearthed fossils, remnants of the old days surface. Such as the occasional antenna system removed from a tower that was part of an extensive VHF repeater system that covered from 10m through to 70cm, from Fort Smith in the south, Fort Providence (Rae-Edzo), Bechecko, to Yellowknife in the north, and likely other sites I haven't heard about yet.

While researching for this article I also came across this interesting information, that there was at least one Amateur Radio station operating as part of the Residential School System. It is mentioned on page 120 of "Canada's Residential Schools: The Inuit and Northern Experience: The Final Report of the Truth and Reconciliation Commission of Canada, Volume 2" under the heading "Extracurricular Activities" (see note 6).

Today's Reality

Contrast that with today. A check of the Innovation, Science and Economic Development Canada's call sign database turned up just over 90 VE8 call signs. Of those some are Silent Keys, some have moved away, some appear to have no connection with the territories, many aren't active, and there are multiple call signs assigned to one operator. So who is left? I've only heard activity on HF from three or four communities outside of Yellowknife in the NWT.

I wouldn't say that we're prepared to provide emergency services yet; it would be a major challenge with so few operators. We've seen this before in developing nations following a major large-scale disaster. On multiple occasions the worldwide Amateur Radio community is asked to keep certain frequencies clear so as to not interfere with emergency communications to and from the disaster zone. Such was the case during the Haiti earthquake of 2010, and in the years since with major cyclones in the Pacific, or the 2017 hurricane season in the Caribbean. A patient watch is kept for any signals, but more often than not nothing is heard; no one capable of getting on the air is there.

Following those types of disasters, volunteers – who are unfamiliar in most cases with the language, geography or the local customs – make their way to the disaster zone for short-term assignments. Once their term is complete they head home. Wouldn't it make a big difference if volunteer groups of teachers and mentors did assignments to teach and equip the local population to be licensed, equipped, and prepared for the "next one". I'm not aware of an organization that does that.

2017 Atlantic Hurricane Season

It is over a year later and many of the Caribbean islands devastated during the 2017 hurricane season are still recovering. Puerto Rico's slow recovery is still in the news. Its well understood that rescue and relief efforts were hampered by the power grid outage, roads and bridges damaged, and the large-scale communications failures. Add to that high solar activity and poor propagation.

Some help did come from outside including from Radio Amateurs. Asked to participate with the Red Cross the American Radio Relay League (ARRL) planned on sending a team of 50 operators and Amateur Radio gear to assist. Fewer than 50 were actually sent, and following the operation there were some potentially helpful criticisms made of the effort, and the lack of emergency preparedness on the ground before the hurricane. It's a bit long at 148 minutes, but the online "Ham Radio Now podcast, HRN 359, EmComm Extra #18: Force of Two" (see note 7) provides some critical but helpful insight into this joint operation. Of note is when they mention being at a hospital that had a fully functional emergency HF station ready to go, with an antenna that no one knew anything about or how to operate.

Our club, the Yellowknife Amateur Radio Society, is the guardian of a similar station that I've nicknamed the "millennium cube". Like a time capsule it contains a portable HF station complete with antenna, modem, IC-706MkII, power supply, cables, antenna, coaxial cable, manuals, and so forth. As I recollect there were no standard operating procedures covering on how to set it up, how to use it, who to contact, or emergency communications procedures. Maybe it was up to the clubs to provide that information. Someone though, at some level of the government, provided a reasonably thorough emergency communications kit, motivated by the anxiety over the one-time Y2K changeover at New Year's Eve 1999.

Ongoing Threats in the North

Now with Y2K behind us, what do we have to be concerned about? Probably at the top of the list is the fire threat.

Heard over and over again in the media this year, usually on reports covering the BC wildfire season, we're told that in the future larger more threatening fires will occur with greater frequency and threaten population centres (see notes 8 and 9).

Weather-related events in the north probably don't make the national news very often, but they can be a serious threat. Have you heard about the ice-tsunami that wiped out a heard of muskox along the Arctic coast; it could have been a community instead (see note 10).

Not to discount other potential disasters, the Mackenzie valley is seismically active, as is the Yukon and further west and north.

What Could be Done

Setting the emergency communications aspect of Amateur Radio aside for the moment, getting stations established and active in the northern communities could reap some benefits. Its a very social activity, connecting cultures and communities worldwide. Its a hobby that offers opportunities for experimenting with radio on the air, developing technical and communications skills. Its an activity that doesn't rely on having cellphone or Internet access; and of course there are no subscription charges, no one can disconnect you.

Amateur Radio here, as elsewhere, has been very undervalued, but we could borrow some ideas from other countries which have recognized the importance of Amateur Radio as a public service after being faced with a disaster.

Following a major earthquake in Nepal on April 25, 2015, "Earthquake Preparedness and Disaster Relief in Nepal: A Position Paper", was prepared by "A Joint Initiative of the American Society of Nepalese Engineers (ASNEngr), America Nepal Medical Foundation (ANMF), and Computer Association of Nepal – USA (CAN-USA)" which included the following text under the heading of "Amateur Radio Training of Civilian First Responders" (see note 11):

"Nepal has numerous institutions that could potentially assist in disaster management, including The Nepal Red Cross Society, the trekking community, and the Nepal Scouts (Nepal Scouts 2013). Amateur Radio training can be provided to all members who are interested. The Ministry of Information and Communication (MOIC) presently conducts qualifying examinations for individuals interested in obtaining Amateur Radio licences. The Nepal Amateur Radio League (NARL) has advocated for the advancement of civilian Amateur Radio in Nepal for decades. Under NARL's advocacy, the number of Amateur Radio licensees has grown tremendously."

It is my understanding that the international community, including Amateurs from India came to their aid shortly after and since then.

What About Northern Canada?

I've lived here long enough to have my perceptions of things adjusted to the northern reality. Now I believe that a "Made in the South" solution without northern participation and input is not likely to succeed. Resources – equipment, training, finances (travel is very expensive) and manpower – are not available in the North to promote Amateur Radio beyond the largest communities.

What are some of the challenges?

In the Northwest Territories we have 11 official languages (see note 12). We're usually under the auroral oval. It certainly looks nice and brings in lots of tourists, but it makes a mess out of any HF communications efforts. And D-Layer absorption is another common problem.

Transportation and shipping costs (lets not even consider the cost of living) are very high. The high cost of transportation makes travel for conferences or training pretty much unaffordable.

Some places are better than others in this respect, but not beyond the larger centres as there are few people to help locally with training and technical problems, or mentoring.

Since our club is member-funded, larger projects are beyond our ability. There is a high turnover of our membership, many move here from down south and may stay until they retire, or until they find suitable employment in the south, and then they leave. Most of our members live in rented accommodations or on small city lots, limiting antenna installation and resticting operation to low power levels to avoid any interference problem with their neighbours.

We do not have a club station that is accessible 24/7. We haven't yet found a place for a club location where we could install wire antennas or a tower.

Our communications, although we're listed in the territorial and city emergency plans, with government agencies could use some improvement

We do not have contact with northern communities, in particular with First Nations peoples.

Where We Stand Now

Our local club barely reminds me of the Peel Amateur Radio Club of 1969 when my dad and I studied for our Amateur exams.

The Amateur classes were well attended out at the Emergency Measures Operations (EMO) building, but I had some problems breathing in there as smoking was permitted indoors.

We all learned code, theory, regulations, and then there was the excitement of someone bringing in a new Yaesu radio and after class we stood around for a demonstration.

The Yellowknife Amateur Radio Soceity (www.ykars.com) isn't at all like that. Most of our active membership (remember there are a handful of us) don't get on the air at all; some don't have any gear. But without question they all make an important contribution. They are always out for coffee or a meeting; one member is a homeless street person who self-studied and almost aced both the Basic and Advanced exams.

Perhaps its only here, but we've recently been approached by some radio control enthusiasts who are attracted to the experimental aspect of Amateur Radio and would like to integrate it into their drones and surface vehicles.

Sadly, the First Nations peoples are very much under-represented and this is a high priority item on my wish list of things to change. I've approached the Northwest Tribal Emergency Management Council (http://nwtemc.org/) and its clear that they see value in Amateur Radio certification and in managing their own emergency responses.

First Nations peoples have had decades of HF SSB operating experience.

Its been the backbone of in-the-field communications for the Hunters & Trappers Association – radio isn't new to them.

George, VE8GAC, Ron, VE8RT, Nathan, VE8TN (my youngest son), Ian, VE8IR, Mikaël, VE8MT, Bob, VE8BOB, and Chris, VE8WD.

Is There a Plan?

At present there is no plan, only some avenues and ideas to work from. A few years ago one of our members proposed offering a Basic communications and message handling course to Amateurs and non-Amateurs alike so that non-Amateurs would be able to work with us using FRS, CB or other legal means. We should take a closer look at some of the training courses offered by the Vancouver Emergency Community Telecommunications Organization (VECTOR) which was described on page 49 of the May-June 2018 TCA.

Until recently we offered an annual Basic certification course. The number of newly certified Amateurs strangely did not drop off after we discontinued it. The new Amateurs had what it took to self-train and we haven't had one failure. We are considering organizing an Amateur Radio certification course each year if we have enough interest.

Although it may be very difficult to do, we should also explore distance training methods and then try to address the problem of how to get a student together with an Accredited Examiner without someone going broke.

We should also explore Near Vertical Incidence Skywave (NVIS) further, although it too can be impacted by our poor propagation conditions. 75 metres through 40 metres are good bands for NVIS.

Although challenging to a small club we'd like to reach out to High Schools to conduct High Altitude Balloon Experiments and

demonstrate Amateur Radio (HF, VHF, satellite) to interested students.
We could demonstrate how Amateur Radio can interface and enhance computer, robotic and drone activities.

Work with Amateurs who are active on satellites to explore the easy to access FM satellites as an emergency communications method that isn't affected by propagation. And from there explore digital satellites for messages.

Encourage, and enable, Amateurs to make use of the Winlink email system as it does not rely on the Internet.

Lastly, and perhaps this should top the list, encourage constructive communications including face-to-face meetings when and were possible.

Some Excellent Resources

The book, "Amateur Radio Digital & Voice Emergency Communications, 2nd Ed.," by Gordon L Gibby, KX4Z, and Barry Isbelle, N2DB (ISBN 978-1548004347) has been the most useful resource I've found for emergency communications, and I highly recommend it.

To better understand why and when HF doesn't work as we think it should, check out "Propagation and Radio Science: Exploring the Magic of Wireless Communication" by Eric P. Nichols, KL7AJ, 2014, ARRL, ISBN 978-1625950277.

In addition, since most of us live in or adjacent to the boreal forest, I'm also going to mention the following book as recommended reading as it sheds some light on the history and likely future of our forests: "Firestorm, How Wildfire Will Shape Our Future" by Edward Struzik, 2017, Island Press, ISBN 978-1610918183. The book has much to say about Fort McMurray and the risks to communities. Although the book was published in 2017 it has been widely referred to by the media in the coverage of this year's record setting fire season in British Columbia.

Closing Thoughts

With the increased tourist interest in the High Arctic and recreational shipping traffic through the Northwest Passage – do you remember the almost $500,000 in rescue costs for the ship that ran aground – we may see Radio Amateurs who are unfamiliar with the land and unprepared for the risks, coming to activate grid squares and IOTA islands. It is already happening. We should build our own Amateur Radio presence in the North. Who knows, perhaps before the ageing urban Amateurs become inactive there may be younger local enthusiasts to keep up the activity.

Finally, perhaps somewhere in the foreseeable future, Amateur Radio will participate in the Emergency Prevention, Preparedness & Response Workgroup (see note 13) of the Arctic Council.

They are the "leading intergovernmental forum promoting cooperation, coordination, and interaction among the Arctic States, indigenous communities and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic" (see note 14).

We'd like to see that happen in our time.

Notes and References

1 http://www.cbc.ca/news/canada/north/yellowknife-without-power-for-3-hours-at-37-c-1.2478831

2 http://www.cbc.ca/news/canada/north/flaming-raven-starts-forest-fire-cuts-power-to-yellowknife-1.2678608

3 http://www.cbc.ca/news/canada/north/n-w-t-highway-3-fire- threatens-internet-cellular-service-1.2695572

4 https://www.vancouverobserver.com/news/environment/flights-cancelled-and-out-regina-yellowknife-after-volcano-alaska

5 https://www.yellowknife.ca/en/living-here/emergency-plan-and-preparedness.asp

6 https://teachingcommons.lakeheadu.ca/sites/default/files/inline-files/TRC%20Vol%202%20Inuit%20and%20Northern%20Experience_0.pdf

7 https://www.hamradionow.tv/episodes/2017/10/27/hrn-359-emcomm-extra-18-force-of-two

8 "Fire Storm How Wildfire Will Shape Our Future" by Edward Struzik, 2017, Island Press, 978-1610918183

9 http://www.cbc.ca/news/canada/british-columbia/ b-c-wildfires-last-summer-triggered-mega-thunderstorm-with-volcano-like-effects-1.4635569

10 https://www.theatlantic.com/science/archive/2018/01/the-ice-tsunami-that-entombed-the-arctics-weirdest-mammal/550808/

11 http://www.asnengr.org/earthquake_position_paper/

12 https://www.pwnhc.ca/official-languages-of-the-northwest-territories/

13 http://www.eppr.org/

14 http://www.arctic-council.org/index.php/en/

Licensed with his Dad (VE3EHT – SK), in 1970 as VE3CZV, Ron has lived and worked in avionics across Canada and St. Pierre et Miquelon (licensed there in 1992 as FP5EK).

He currently operates on HF through mode B on satellite from Yellowknife as VE8RT and VE8TEA. He lives with his wife Laura, VE8LT, and youngest son Nathan, VE8TN, and keeps the heat on by working for Buffalo Airways in Yellowknife.

Working Towards a Canadian Consortium of Emergency Management Non-Governmental Organizations

Glenn MacDonell, VE3XRA

Radio Amateurs of Canada participated in the inaugural meeting of national non-governmental organizations (NGOs) involved in emergency management on September 12 in Ottawa.

The meeting was proposed by some of the NGOs that participate in provincial councils and who appreciate the value of these organizations at that level, and wanted to explore the interest in establishing a national counterpart. As well as increasing communication between members, each provincial council provides a forum for discussion with provincial governments and there was also an interest in engaging the federal government through a national council. Participants discussed the value of such a national body and considered possible roles, mandates and membership.

Back row: Glenn MacDonell, VE3XRA; Justin Wright and Brian Riddell (Team Rubicon); Brent Davis, VE6BWD (Samaritan's Purse); Perron Goodyear, VE3PSG (Salvation Army); Melanie Soler (Canadian Red Cross); Bruce DeBoer (World Renew); Bob Laarman (World Renew USA); Michel Doré, VE2MDC (St. John's Ambulance).

Front row: Jessica McKeachie (Salvation Army); Nicole Normand (ADRA Canada); Ross Penner (Mennonite Disaster Services); Anita Odondi (Adra Canada – Adventist Church); and Christine DeBoer (World Renew).

The NGOs participating in the meeting provide services at all phases of a disaster or emergency. They included many organizations I knew of such as the Canadian Red Cross, St. John's Ambulance and the Salvation Army. There were also several organizations I had not encountered previously that are involved in the recovery phase of a disaster, providing volunteers and support for clean-up (such as Team Rubicon) and repair, and rebuilding (Mennonite Disaster Services, Samaritan's Purse, World Renew, ADRA Canada).

Radio Amateurs provide a focused specialized service helping out in emergencies that result in communications disruptions. We tend to operate at the local level serving clients such as municipalities or another NGO providing assistance during the emergency.

All of the organizations present understood the role Radio Amateurs can play and, not surprisingly, several of the representatives of other emergency management NGOs were Amateurs including a representative of each of the Salvation Army, St John's Ambulance and Samaritan's Purse.

At the opening of the meeting Stephanie Durand, the Director General, Policy and Outreach for Public Safety Canada, outlined the history and current role of her department. In particular she noted their interest in advancing a "whole of society" approach to disaster/emergency management that would improve the understanding of disaster risk in all of society and enhance disaster response coordination as well as strengthen recovery efforts. She understood that we were considering the possibility of creating a national NGO council and agreed that a well functioning organization playing this role could be very helpful and looked forward to a mutually beneficial relationship with it.

The meeting considered the organization and functioning of various provincial NGO groups in Canada as well as both the national and state VOAD groups (Voluntary Organizations Active in Disasters) in the United States as part of a process to define the mandate and activities of such a council.

Although our role in emergencies is quite specific and different from that of many of these groups, it is useful for us to understand the overall system as it provides the context within which Radio Amateurs will operate during emergencies. In addition, we all face common concerns such as attracting and maintaining volunteers and providing support to those who have helped out in traumatic situations. Working with other emergency management NGOs and Public Safety Canada can provide us with information and insights that will help us be more effective.

Canada is a large country and the institutional arrangements vary from province to province. Emergencies are often local or regional. RAC has addressed these challenges by following the "Incident Command" doctrine used by many other organizations and countries so that operators can work anywhere in Canada and be familiar with the procedures.

RAC has also decentralized in order to give full autonomy to various groups across the country. RAC provides support to ARES groups and other EmComm groups but they get operational direction from the clients they serve. We understand that these groups need to organize themselves so that they be most effective in working with their clients.

RAC provides standardized training though its Certified Emergency Coordinator (CEC) program, support in geographically-based Sections through our Section Managers and their appointees, and opportunities to share "best practices" through articles and regular reports in TCA.

There was general agreement to continue working towards establishing a new organization, tentatively entitled the Canadian Consortium of Emergency Management NGOs.

A working group will draft a Terms of Reference, governance structure and proposed membership to be considered at a second meeting on October 30 in Vancouver.

Activating a Rare Arctic Island for Islands On The Air

Fred, VE1FA/KL7 and Helen, VA1YL/KL7

Nearly every summer since 1991 a group of us have activated a Canadian maritime island for the Radio Society of Great Britain's Islands On The Air (IOTA) contest. Next to the American Radio Relay League's DXCC, the RSGB's IOTA is one of the most popular ongoing contests in Amateur Radio with almost 1,200 islands and island groups worldwide to collect. Although we always generate pileups and have fun, the islands we usually activate – like Fogo, St. Paul, Whitehead, Seal, Pictou and Bon Portage – aren't at all rare.

Round Island is one of the Walrus Island group in the Bering Sea, west of mainland Alaska. Our daughter Margaret, VE2ZOO, has spent the last three summers collecting biometric data on Round Island's amazing wildlife for the Alaska Department of Fish + Game (ADF+G).

This summer Margaret invited us to visit her there and of course we said yes! While we were going primarily to see her and her wild arctic habitat, we couldn't resist checking on the group's IOTA status.

It turns out that the Walrus Island Group (NA-121) is very rare, with only 6.4% of all-time IOTA chasers having worked it. The last activation was many years ago.

We couldn't resist! We first obtained the necessary permits from ADF+G. Then we put together a "fits in the overhead bin" station. It consisted of an Icom IC-706 Mk2G transceiver, a tiny switching power supply, 70 feet of quality mini-8 foam co-ax, and a common feed double 40m-20m dipole made with tough, light 24-ga kapton-coated silvered wire.

Total station weight, with all accessories: 11.4 pounds. This station – nicely padded with socks, shirts and long johns – rode in my suitcase in the overhead bins of most of the 10 flights needed to get us there and back. The only exception was the ancient six-seat Piper to Togiak that didn't have bins, overhead or anywhere else.

Because there are no trees on Round Island we also had to bring a duffel bag that contained seven 4-foot lengths of fibreglass and aluminum masting, 1/8" Dacron guy cord and halyard, plus aluminum stakes and hardware. Our boots and sleeping bags rounded up the bag.

On July 3, we arrived in the Yup'ik (Eskimo) village of Togiak, on Alaska's west coast (Bristol Bay) and contacted the driver who was supposed to take us by boat the 35 miles out to Round Island the next morning. After a night filled with anticipation – and a great dinner of king salmon caught 200 yards away a few hours earlier – the boat driver decided not to go.

July 5 was a go and we were off in his light launch, skipping across the big swells pushed by the 225 HP outboard, and passing a big Russian tug and barge selling tax-free oil to one and all.

The huge hump of Round Island (it is 1400 feet tall, with a broad, low plateau on the east side) grew and grew, until we finally nosed into Boat Cove. The island, clothed in waist- to chest-deep grass was a most brilliant green up to the raw rock and tundra near the mountain top. The entire population of six – four visiting tourist-photographers plus Amber and Margaret, the ADF+G staff – came down to greet us.

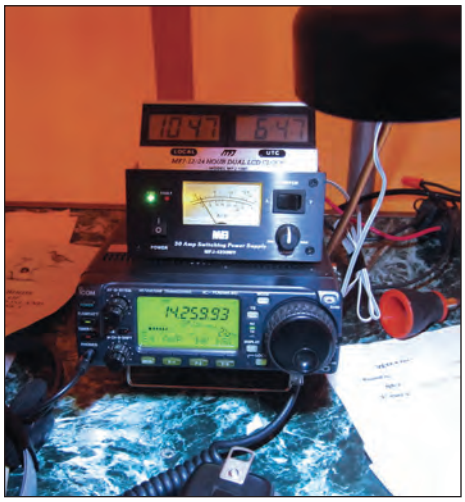
There is only a single small dwelling/office/lab on the island, which is Margaret and Amber's, but for us Margaret had set up their auxiliary "Weather Port", a Quonset-style tent, tall enough for a small table and chair, making it both our dorm and radio shack.

Fred, VE1FA/KL7, Helen, VA1YL/KL7 and their daughter Margaret, VE2ZOO.

Interestingly, on each of the nine places it is permitted to camp on Round Island there is a platform made of 1" x 6" "boards" of recycled plastic. Each of these platforms rests on and protects the site of an ancient house or hut, probably used when hunting walrus. The oldest was occupied 6,000 years before the present. It made us wonder who was sleeping a few feet below us.

Antenna setup went smoothly, except for the strong cold wind and occasional blasts of fine rain – and the deep grass that would "disappear" anything you dropped! The island's power for computers, satellite links, lights and the Explore.com walrus "critter cams" was produced in a shed with triply redundant wind turbines, solar panels and methanol-powered fuel cells. Unfortunately, the shed was close to our tent and it generated a continuous and evil S-5 to S-7 buzz across 20 metres.

Our "Weather Port" QTH and noisy power shed. Note the shadow of our antenna.



The Round Island station. The clock is wrong: if the time zones were uniform we would have been 11 hours behind UTC, but with daylight savings and distorted zones we were actually 8 hours behind UTC.

Disconnecting the co-ax showed the buzz was entering the Icom IC-706 entirely via the antenna. Added to this was some "audio QRM", as one of the shed's wind turbines had bad bearings, which whined loudly when the wind blew – which was 90% of the time. We couldn't move our Weather Port or the power shed so we just had to work with it.

Before leaving home we sent Bill, NG3K, who posts IOTA Announced Operations online, our planned operating dates and approximate frequencies, which he posted and passed on to other DX sites, so when we went on the air crowds were waiting!

On July 7 our first "CQ CQ CQ from Round Island, NA-121. This is VE1FA/KL7 standing by" went out on 20m from the Weather Port. Propagation on 20m was poor, but the ops who responded were very excited! I was surprised by one of the first calls as it was very strong, like he was next door, from Kamchatka. Wait a minute, Kamchatka *was* next door!

There were many very faint JAs who would probably have filled our log, but unfortunately for them Round Island's 1400-foot mountain was exactly between Japan and our antenna, blocking RF up to about 50° elevation. Fortunately for North America and Europe, we had a clear 25-mile wide ocean takeoff to the east from our antenna which was about 100 feet above sea level.

West coast Vs and Ks were relatively strong and clear, but many central US and EU stations got through also, especially I, D, F, SM, OM and R – but strangely only a single UK station on the Isle of Man!

Our biggest disappointment: no Canadian Maritime stations were logged, although Garry Hammond, VE3XN, was there with a good signal as he always is!

We spent much of our week hiking, photographing and observing the myriad flowers, seabirds, foxes, Steller sea lions and walrus haulouts with our expert Margaret. The weather changed constantly from leaden gray skies, strong, cold wind and driving drizzle to crystal blue skies warm breezes with magnificent scenery and views in all directions!

Unfortunately, between the attractions and distractions of beautiful Round Island, the power shed buzz and the poor propagation we only logged 179 unique QSOs. We were pleased to see that about 60% of our contacts were from outside North America so our little dipoles and 100W worked pretty well! By early August we had already received direct cards from more than a quarter of the stations logged including many IOTA Honour Roll members.

Margaret, VE2ZOO, ADF+G technician observing walrus haul-outs (pink masses on beach) from halfway up Round Island.

VE1FA/KL7 operating in the Weather Port. VA1YL's laptop died so we paper logged. The lamp is homebrewed: an ABS pipe cap with LEDs glued inside attached to 3/16-inch copper tubing screwed to one of the 706's mobile mount holes. Think the July wind off the Bering Sea is warm? Look at my clothes...

Our thanks to those who persisted and made a QSO with us and our sincere regrets to those who tried unsuccessfully to work us, especially those we almost got before the QSB whisked you away!

QSL cards are via the Bureau or direct to VA1YL/VE1FA's QRZ address. If you're not sure you're in the Round Island log, please email VE1FA first to verify! Direct cards will get a prompt return.

If you would like a live glimpse of Round Island, Google "Explore walrus cam" and watch the 1500-3000 pound "big boys" lounging on Main Beach and First Beach of this very special island.

July 7-10, 2018 Round Island (NA-121)

QSO Breakdown by Country / Stations Worked

W, A, K, N: 59; U, R, EU: 22; I: 18; VE, VA: 16; DK,DL: 15; JA: 13; SM: 7; OM: 5; KH, EA: 4 each; CT, F: 3 each; OE, ON, KL: 2 each; OZ, S57, MD, HC, TF, OH, SP: 1 each.

Total QSOs: 179 (including three dupes)

Total: 22 countries; WBA (Worked Both Archibalds) Award: UA0CW, RA0OLT

Fred, VE1FA, is a microbiology professor/ researcher retired from McGill University and the Pulp and Paper Research Institute of Canada. First licensed as VE2SEI in 1988, he became VE1FA in 2003. Helen, first licensed as VE2YAK in 1992, became VA1YL in 2003 and is active in the Canadian Ladies Amateur Radio Association (CLARA). Both enjoy ragchewing, DXing, island DXpeditions, Field Day, RAC and IOTA contests. Fred also enjoys restoring old radios, homebrewing radios and antennas, and helping "newbies" to enter our great hobby.! They live in Canard, Nova Scotia and can be contacted at hfarchibald@ns.sympatico.ca.

Recommendations for an Amateur Radio Station in an Emergency Operation Centre

J. T. (Mitch) Mitchell, VE6OH

The purpose of this document is to outline the equipment and concepts that may be needed for the establishment of an Amateur Radio station at an Emergency Operation Centre (EOC).

Local needs will often override these recommendations and each EOC will have different requirements. For example, a provincial EOC will be different than a city or county EOC.

There needs to be a clear description of the expectations of the Amateur Radio Station: local, provincial or national communications. Testing the communications concepts should be carried out as a desktop exercise before any specific equipment is determined.

If there is to be a military presence in the EOC then there should be a dialogue with the local military liaison as well as the Canadian Forces Affiliate Radio System (CFARS). Local police and other emergency agencies may have similar needs.

It is not the intent of this document to describe specific equipment that may be required but to generally lay a framework for equipment and concepts. New EOCs or improvements in an EOC may take a long time and equipment availability will change. Specific equipment should be specified at budget time.

An Amateur Radio station at an EOC is required to have a station licence and a station sponsor and must have an Advanced class licence. It is recommended that the station sponsor be an experienced and active operator.

Purpose of the Station

The purpose of an Amateur Radio station in an EOC is to provide backup using non-infrastructure point-to-point communications with long-distance stations, via HF radio, and/or short distances, via VHF/UHF, to other Amateur Radio stations in times of a major infrastructure communication failure.

Amateur Radio communication can also provide supplemental communication for non-governmental organizations (NGOs) when the NGO is operating at an event.

Radio groups, such as the Amateur Radio Emergency Service (ARES) and other EOCs that have similar stations, may also be part of the communication network. Manned by certified qualified volunteer Amateur Radio operators, the station provides a reliable backup to normal infrastructure communications that are prone to failure during times of emergency. The station shall be set up for different types of operation: voice, data, and both HF and VHF.

HF Amateur Station

An Amateur Radio HF station operating voice SSB (Single Side Band) on high frequencies (1.8 to 30 MHz) may be used for long-distance communication. It is expected that most communications will be between 1.8 and 7 MHz for a provincial operation.

An HF Amateur Radio digital station (data only) can be used for point-to-point data or a gateway for email. A gateway is a portal for sending standard email via HF radio. Care should be taken to ensure there is little or no interference with the voice HF station.

VHF/UHF Amateur Station

An Amateur Radio station operating voice on VHF/UHF FM (Frequency Modulation; VHF ~146 MHz and UHF ~440 MHz) may be used for short-distance communication.

From a radio perspective, the EOC should be located on high ground away from any power lines, industrial plants or other locations that can cause radio frequency interference (RFI), which can raise the RF noise floor rendering most communication systems unusable.
It should be noted that power line companies are required by law to take action to prevent interference (see ICES-004: Alternating Current High Voltage Power Systems). In the event that RFI at an EOC is high, a radio link to an off-site receiving site may be required.

Radio Room

The Radio Room should be situated with access to the outside wall for easy installation and maintenance of the equipment. This wall should be close to the radio towers. There is an advantage for the operators to see and have access to the main operational area so windows and direct access to the main operation is desirable. The site may also need sound absorption and/or sound deadening panels.

Operating Positions

There will need to be three and possibly four operating positions: 1 for HF voice; 1 for HF Pactor/Data; 1 for VHF/UHF; as well as space for expansion if required.

Other Considerations

Headsets should be used in the radio room. A portal to connect external equipment into the radio room from the outside is an advantage. This is especially useful if there is to be a military presence or the EOC is to use a portable communication system. A common ground point needs to be installed for antennas and equipment.

Operation

A Memorandum of Understanding (MOU) with each local and provincial ARES Amateur Radio group is an asset. Each group must also be RAC or ARES affiliated. This ensures that the Amateur Radio operators are trained to national standards maintained by Radio Amateurs of Canada.

RAC maintains operational procedures and standards for members of ARES. ARES affiliated Amateur Radio groups provide a source of equipment and manpower in times of need. All ARES members are familiar with the Incident Command System that is used in many EOCs. Most ARES groups have portable communication equipment that can be deployed on short notice and are self-contained with HF, VHF radios and antennas.

Voice HF: This mode allows the experienced Amateur Radio operator to communicate with other stations using correct NATO voice procedures. The system should be tested by checking in with established nets.

Data HF: The station may be set up to use common digital modes or “sound card modes” such as PSK and WINMOR. The mode **must** be ARQ (error correction and/or error checking). Point-to-point data or radio to email gateway is possible.

PACTOR modulation is preferred for email gateways.

WINMOR modulation (sound card mode) is possible at reduced speeds.

MOUs should be in place with other groups to support data modes.

RMS Client Data HF (RMS Express): Using a PC computer to interconnect the HF radio using the PACTOR modem, this station will have the ability to connect to a remote RMS (Remote Message Server) for the sending and receiving of internet email via radio.

RMS Server Data HF: The station could act as an RMS Server Gateway when not in use as a client station. RMS Server mode will usually not require any support or maintenance except for the occasional software upgrade.

Voice VHF/UHF – FM / SSB: Operating as a standard FM Radio (VHF/UHF). The purpose of this radio is to provide local communications to/from the local EOC to Amateur Radio groups such as local ARES volunteers.

Communication may be direct or via repeater linking systems for greater distances. Repeater systems are infrastructure-based and are subject to outages as is any other infrastructure-based system.

Communication between distance locations may be possible via a repeater linking systems currently in place. Linking of repeaters is infrastructure-based communication and therefore it should not be relied on.

Operating as an SSB radio: The VHF station could be used for longer distance communications. Horizontally polarized gain antennas would be required as well as Power Amplifiers.

Equipment Requirements

Radio Transceivers: Any HF radios to be used must be simple HF radios. The operation of the station may be by several different operators and a simple setup is important. Two HF radios, voice and data may be required.

HF transceiver voice-only radio usable on HF from 1.8 MHz to 30 MHz and one HF transceiver (Data use) to be used as a digital data radio on HF from 1.8 MHz to 30 MHz. This unit should be fully controllable by external software. It should also have USB-type audio connections for data modes. The radios must have auto antenna tune ability.

VHF/UHF: Newer modulation modes should be avoided until the standards are fully developed and more users are using them.

Antennas and Towers

Antennas and towers are site specific and must be engineered for each site. Typically, 20 to 40 metres high are common and cost effective. The towers must be engineered to match the antennas on the tower. Non-penetrating flat-roof mounts and mounts on the building for guying may be required.

Vertical polarization is most common from FM mode. Horizontal polarization is most common for SSB mode.

HF Antennas: There should be several antennas covering 1.8 MHz to 30 MHz. Ideally, a beam antenna that covers 7 MHz to 30 MHz range would be best; this implies a log-periodic antenna. This is the most flexible and it would be suitable for ALE operation and/or CFARS or Military use.

HF Dipole antennas may be of the inverted “V” design. These are band specific and more than one antenna will be required.

Wire dipole antennas resonant at:

- 80m band (~3.7 MHz) Wire Dipole inverted “V”
- 60m band (~5.2 – 5.4 MHz) Wire Dipole inverted “V”
- 40m band (~7 MHz) Log-periodic antenna or inverted “V”

Terminated broadband folded dipole antennas should not be used if it is possible to install resonant antennas.

RF Coax cable: 100 % shielded RF cable is required. This is to keep interference from radios out of other equipment in the building. 100% shield cable has less loss that normal coax cable. Some electronic systems that are of poor quality, such as computer speakers, may be susceptible to RFI. Care should be taken to not use poor quality RF cable.

Most radio equipment in this document requires a nominal 13.8 Volts DC. Most suppliers provide compatible power supplies for their radios, there are several aftermarket power supplies available at low cost.

Full battery backup for the radios should be considered.

Linear power amp: An HF linear power amp may be required. If an HF linear power amp is required then provision for 240 or 208 volts single phase at 20 amperes will be required in the radio room. If an HF linear amp is used, it will connect to the voice-only unit and must be fully solid-state, mated to the transceiver and must have auto band select ability. In addition, it must have an internal automatic antenna tuner with fault protection.

Operation of an HF linear amp at full power (2.25 kW) peak envelope power (PEP) may only be by an Amateur with Advanced certification. The amp may have to be limited to 560 Watts PEP output if it is to be use by an Amateur without the Advanced endorsement. VHF linear power amp may be required if SSB mode is to be used.

Filters: Both VHF/UHF and HF band specific filters should be used to reduce interference.

Internet Access

An Internet connection that is a standalone system not part of internal network may be required. Installation is not covered in this document and is site specific.

Other Equipment

All equipment to be installed in the EOC should be RFI free. Some LED lights may cause high levels of RFI.

Such things as light dimmers, some heating/cooling controllers and battery chargers can raise the RF noise floor for all radio communications systems and cause major problems.

Electrical Power

Generally, power consumption of an EOC is low. It is assumed that the EOC will have backup electrical power. Several standard outlets 120 Volt / 15 amp services will be required. It is advantageous to have the radio room powered with a separate ground to the mains power panel. Segregated ground system should be considered. One 208 or 240 Volt single phase at 20 amps may be required. A ground line to the building ground should also be provided.
Note: this is an RF ground and not an electrical ground.

Support Groups and Equipment

Most Amateur Radio groups that are RAC/ARES affiliated have portable repeaters and portable operational units that can be deployed on short notice. These units can provide extended local communications to an affected area when necessary.

J.T. (Mitch) Mitchell, VE6OH, CFARS Call CIW308, has Advanced certification with Basic, Morse and is an Accredited Examiner. He is a RAC Past Director for AB/NWT/NU and has held previous Executive positions with the Northern Alberta Radio Club and is the CFARS Provincial Representative for Alberta. He supports a repeater system VE6GPS as well as an HF Winlink Gateway.

Mitch is a retired Certified Engineering Technologist and is the current Director for Alfa Radio Limited. He has given several radio related talks at conventions and to the military. He is also Certified by the Justice Institute of British Columbia in Incident Command Systems (ICS).

A Visit to the Tokyo, Japan Ham Fair 2018

Keith Baker, KB1SF/VA3KSF

In late August, I had the distinct honour of again being an "ambassador" for the Dayton Amateur Radio Association (DARA) at the big Tokyo Ham Radio Fair in Tokyo, Japan. Our mission was to personally invite Japanese Amateurs to join us in Dayton, Ohio for next year's big Dayton Hamvention.

However, unlike the Dayton Hamvention, which is sponsored by a local (albeit large!) Amateur Radio Club (DARA), the Japan Amateur Radio League (JRRL) – the Japanese equivalent of the American Radio Relay League (ARRL) or Radio Amateurs of Canada – is the principal sponsor of the Tokyo Ham Fair each year.

While Hamvention recently moved from its long-time home at Dayton's Hara Arena (which is now closed) to new "digs" at the Greene County Fairgrounds in Xenia, Ohio in 2017, for the past several years, the Tokyo Ham Fair has been held in a *huge* convention complex called the "Tokyo Big Sight". In fact, the complex is so massive that the Ham Fair occupied only *one of many* large convention areas at the venue. And all of it was conducted under a single, massive roof.

Needless to say, our booth at the 2018 Ham Fair was very busy. We spoke with hundreds of Japanese Amateurs, posed with scores them for countless pictures (and gave away all of the Hamvention "trinkets" that we had brought along!) during the two-day event. I've since learned that this year's Ham Fair attendance was about the same as previous years, with upwards of 39,000 Amateurs from all over the world in attendance.

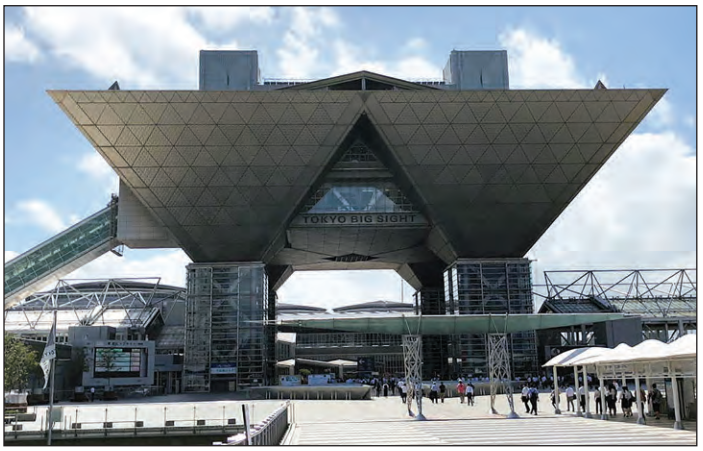
Now, 39,000 may seem like a lot of Amateur Radio enthusiasts attending a single show. But, then again, it's important to remember that the area in and around Tokyo (the so-called Kanto Plain) contains some 42 *million* people. That's nearly one-third of the population of Japan as a whole and some six million more than the *entire* population of Canada! In addition, it's also important to remember that the vast majority of those 42 million people are just a one-hour commuter train and/or subway ride to and from the Tokyo Big Sight.

So, trying to compare or contrast attendance figures as a measure of the "bigness" of the Tokyo Ham Fair as compared to others is an "apples and oranges" proposition.

Clearly, as with the Dayton Hamvention and the International Ham Radio Exhibition in Friedrichshafen, Germany, the Tokyo Ham Fair is a world-class event for Radio Amateurs as well as for shortwave listeners and scanner enthusiasts in the Far East.

A young lady at the ICOM booth demonstrates the many features of their ID-51, D-Star-capable handheld.

Now, some may also (rightly) wonder why DARA incurs the expense of sending teams to set up booths at these other events while also inviting those other event organizers to reciprocate and send their representatives to Hamvention.



The 2018 Tokyo Ham Fair, sponsored by the Japanese Amateur Radio League (JARL) and others was held on August 25 and 26 at the Tokyo Big Sight, a huge convention complex in the Waterfront District of Tokyo, Japan.

Dayton Hamvention members included Jeff DeVoe, K8JTD, Keith Baker, KB1SF/VA3KSF, Don DuBon, N6JRL and Michael Kalter, W8CI.

As usual, Yaesu had a very large booth presence at the 2018 Tokyo Ham Fair including the WIRES-X display (see the article on page 21).

Besides inviting foreign Amateurs to travel to their respective shows, I'm told this is also done because the Dayton Hamvention Committee firmly believes that "a rising tide lifts all boats". That is, they view successful Amateur Radio gatherings, regardless of their sponsors, not as "competition", but rather, as a much larger team effort in helping to sustain and grow the *entire* Amateur Radio and shortwave listening hobby worldwide.

All manner of HF/VHF/UHF equipment is offered for sale at the Tokyo Ham Fair.

One of the many ideas that the Dayton Hamvention gleaned and adopted from attendance at the Tokyo Ham Fair in past years is a large QSL wall where attendees can post their own QSL cards for all to see.

Not only that, members of the Dayton Hamvention Committee will also tell you that the exchange of ideas about "what works and what doesn't" with these other Amateur Radio expositions has helped *everyone* involved to produce far more innovative, enjoyable and rewarding shows for their respective attendees. Clearly, this team approach has turned out to be a valuable "win-win" activity for all concerned and is obviously well worth the nominal additional investment required by each show to make it all happen.

During this year's Tokyo Ham Fair, I also saw many old friends and made what will most certainly become long-lasting friendships with many others. The Japanese people, including their Amateurs, are impeccably clean (you can eat off the floors of their commuter and subway trains), refreshingly polite and are also well dressed to a fault. In addition, Amateurs in Japan take great pains to introduce their youngsters to the hobby and to encourage them to both design and build their own equipment at a *very* early age.

Bottom line: If business or pleasure takes you anywhere near Tokyo during the last few weeks of August or the first few weeks of September, be sure to mark your calendars for at least one day attending the Tokyo, Japan Ham Fair.

Keith Baker, KB1SF/VA3KSF, is TCA's "Amateur Radio Satellites" columnist. Thanks for taking a break this issue, Keith.

ALLAN K. THURBER, VE1RG, RECEIVES EMERGENCY MANAGEMENT EXEMPLARY SERVICE AWARD

Radio Amateurs of Canada and the International Repeater Group are pleased to offer congratulations to Allan K. Thurber, VE1RG, on being recognized with an Emergency Management Exemplary Service Award.

Federal/Provincial and Territorial Ministers recognize the work being done across Canada to prevent, prepare for, respond to and recover from emergencies and disasters. The award ceremony was held on May 24 in Ottawa, attended by nominees and was addressed by The Honourable Ralph Goodale, Minister of Public Safety and Emergency Preparedness.

The Emergency Management Exemplary Service Award is a prestigious recognition for exceptional service and achievement. This award – a partnership between provincial, territorial and federal governments – recognizes recipients who have achieved excellence in their respective fields.

Al Thurber, VE1RG, has been involved with New Brunswick Emergency Measures Organization (NBEMO) and he has been an Amateur since 1973.

For more than 45 years, he has been an integral communicator during emergencies throughout the province of New Brunswick, such as the 2017 ice storm in the northeast of the province of New Brunswick.

His leadership and organization skills enabled NBEMO to communicate with emergency services during the province-wide communications blackout in August 2017.

His dedicated volunteerism has shown great commitment to enhancing emergency communications capacity in New Brunswick.

In addition to his volunteer work with NBEMO, Al is also a member and Past-President of the International Repeater Group.

At the Award ceremony, Minister Goodale stated:

"Across Canada, there are many individuals and groups working hard to keep us safe who often go unnoticed. The recipients recognized today have not only achieved excellence in their field, they have helped keep us safe and resilient. I'm grateful to provinces and territories for their collaboration to recognize these leaders nationally for the first time, and look forward to working with them to award this prestigious honour to deserving individuals across Canada each year."

Rick MacMillan, VE9MTB
President – International Repeater Group

Dirk Moraal,
VY1NM
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Tagish, YT
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RANDOM THOUGHTS...

We are Vulnerable...

On Literature and EmComm:

Has anyone read the book "The Day of the Triffids" by John Wyndham?

My copy of the book was printed, in Canada, by gum, in 1951. I also saw about three minutes of a TV miniseries, long forgotten, which I later regretted missing, but eventually, with the help of Bill Karle, VE1YY, I received a DVD of the original 1962 movie, in time for Christmas viewing. The company that puts out these re-mastered copies calls itself ©CheezyFlicks. Take that as a bit of a warning and read the book first.

There is also a 2009 remake of the movie which is quite good (©Triffids Productions Limited and Triffids (Canada), so be patriotic and watch this one), but neither film follows the book too closely.

In short, a beautiful bright emerald green "meteor shower" – probably "radio"-active, HI! – damages the optic nerves of all who watched it, and, urged on by the press and radio DJs reporting on the "magnificent event" almost everybody did, bringing the world to a blinding halt. Darn near.

As this is going on, all these chattering genetically modified psychopathic hybrid plants called Triffids escape from the oil farms (which today we would call bio-fuel projects) and are rooting and shooting poison stingers and feeding on helpless humans who, after an appropriate interval – how do I say this delicately – are slowly being absorbed.

Anyway, I won't bore you with details, but will mention that in the entire book, there is no reference to Amateur Radio going out and saving the world when all other forms of communication fail. In the movies either.

You'd think, eh? But, alas, no. However, there was a mention of AM broadcasts vanishing, no reason stated why (I'll bet you a pint of prune juice it was probably the lack of DJs, and no thanks to those darn Triffids, either!).

The book did mention that while shortwave DX reception was QRN'd, MW was fine.

My faith was partially restored when a single line in the book read, and I paraphrase, "Somebody was tap-tapping away on the 41m band".

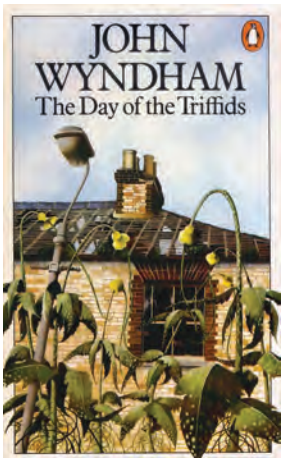
My guess is, probably a lonely Amateur running portable in the aftermath of the disaster.

And what would that work out to be: CW, maybe even QRP, around 7.137 MHz? I'd have to check and see if that was legal back in those days although it would have been a moot point as far as the situation they were mixed up in was concerned.

And in a bit of a side note, one character in the book was despondent because he could not continue building his "radio store" empire to auto industry proportions but he vowed to do it one day and become a millionaire. A reality check would have been helpful there.

So while there were a few mentions of radio to make the story more enjoyable, the blatant overall omission of Amateur Radio as being a saving force sort of stood out.

It is worth reading the book again; maybe it can get us to rethink realistic disaster situations response and emergency communications. For example, we might want to review a few things, like digital modes for example, which will no doubt be high on the users list since digital is so efficient, but it has some drawbacks that are obvious. For one thing it might exclude listeners who are not equipped to decode the digital signals.



Then, I was informed that during floods in Manitoba one year, the military used satellite phones due to lack of radio propagation, as did the Chilean government during their 2010 major earthquake disaster. So think practical things, like considering whether the satellites would even be working.

If you will need computers, you will need electricity. When I think about "The End", I can see how high tech can fail us so easily. One blindingly pretty emerald green meteor shower, massive CME (coronal mass ejection), or maybe a man-made or unexpected from-out-of-this-world disaster and hey – we're all out of business if any of us are left.

We had better think back to simpler days when we did not rely too much on incomprehensibly advanced technology which itself relies heavily on incomprehensible high tech devices, and electrical power, which relies heavily on damming rivers or high tech fossil fuels extraction which heavily relies on – oh well, you get the connections.

Anyway, and a good point too, it is a lovely excuse tor stocking up on more ham gear, but stuff which focuses on the type appropriate for facing the various possibilities offered by major upheaval.

How about CW and pedal-powered generators in the ham shack? Anyone?

73, and, as Boy Scouts say, "Be prepared"!

73, May the Luck be with you.

TCA

The Historic Peterborough Flood of 2004

John deLagran, VE3VL – Peterborough ARES Interim Group Coordinator

On July 15, 2004, the City of Peterborough experienced a record 175 millimetres of rainfall over the City, with 78.8 millimetres measured in a one-hour period between 3:30 am and 4:30 am. One weather station at Trent University measured 240 millimetres of rain during the two-day event.

Storm sewers quickly backed up and streets were flooded over the curbs in the downtown area. With the many hills surrounding Peterborough, streets became fast-moving rivers and intersections became lakes. Cars stalled and while some were abandoned, the occupants of others awaited rescue.

Sewer manhole covers lifted out from the water pressure and road washouts were occurring. Normally small creeks swelled and bordering houses and businesses were quickly inundated with torrents of water. Basement windows gave in with the water's force and basements quickly flooded. Sanitary sewers backed up contaminating all contents of the basements.

The Emergency Response

The Fire Department was inundated with calls across the entire City. Calls ranged from flooded basements to fire alarms. As conditions worsened, the Fire Department received a call reporting a collapsed roof at an Extendicare Nursing Home. It was immediately apparent at this point that the city's Emergency Control Group should be activated to deal with the extraordinary situation. The EOC call-out was initiated.

The Extendicare residents had to be evacuated. The evacuation took almost five hours and relocated 171 long-term care residents to the Evinrude Centre (hockey arena), without incident. Another 25 people were rescued, mostly from their half-submerged vehicles.

The Emergency Operations Centre activated and was fully operational by 5:30 am. The Declaration of Emergency was made by Mayor Sutherland at 7 am.

In the hours that followed, the flood waters receded from the streets but basements were flooded, the damage was done and the cleanup started.

Five hundred homes and business had hydro metres pulled and 1,000 gas disconnects were made due to the flooding.

One thousand basements were pumped out and their destroyed contents were removed to the landfill. The declaration of emergency was not terminated until two weeks later on July 29.

Peterborough ARES contribution

The following account is a collection of memories from the Amateur Radio Emergency Service (ARES) and other Radio Amateurs who participated in the emergency.

Details, after 14 years, are foggy but the results were very clear. ARES helped!

Robert Kearns, VE3KEA, was the Peterborough ARES Emergency Coordinator to the 16- to 19-member group. At least 12 of these were available to respond and contributed over the course of the city's emergency.

Robert was called at 6 am by the city's Emergency Control Group and, being up to his ankles in his own flooded basement, immediately called Jim Pearce, VE3PLP, and appointed him Communications Coordinator of the ARES group. Jim was assigned to the Fire Department (FD) Emergency Trailer and arrived at 6:30 am to work with the FD Communication Coordinator. Frank Hancock, VE3HFJ, was already there and was busy phoning and awakening ARES members.

For just short of three weeks, daily from 8 am to 7 pm, Jim worked with the Fire Department dispatching mobile ARES members to assist with communications with the on-site firemen, other volunteers and home owners.

Twenty-eight Fire Departments from across the province sent fire personnel to help pump out basements during the cleanup.

Doug, VE3DEG and Hilda, VE3HIG, guided out-of-town firemen around the city for a week.

Ken, VE3KP, escorted and provided communications for members of the Mennonite Disaster Services (see page 37) to homes that needed basement contents removed and piled on the side of the street for garbage pickup. The Mennonites members would commute daily from the Kitchener area.

An ARES station was also set up in the Evinrude Centre which was used as an evacuation centre for the residents of the flooded Extendicare facility.

Teresa, VE3TZM, Hilda, VE3HIG and Keith, VA3HXC, manned the radio and relayed messages as rooms were made ready for the evacuees in the vacant Marycrest Nursing Home across town.

Barry, VE3BLM, spent most of the day and evening at Marycrest relaying messages back to the Evinrude Centre as rooms were cleaned and ready to move more people in.

By the middle of the third week, the emergency activities were coming to an end. The Fire Department's Emergency Trailer, the Amateur Radio operators and the various volunteer operations were finally able to close down.

Jim summarized it well by saying:

"Our participation might be applauded but there were a lot of other volunteers doing a lot of heavy lifting jobs who have not been publicly thanked.

There were fire chiefs and firemen from near and distant towns and villages who came, unasked, to help.

The Mennonites people drove in from Kitchener farms daily. They didn't ask what can we do, they just pitched in. So many untold stories."

Recognition and Commendations

The ARES members who participated received certificates of appreciation from the City of Peterborough and the Province of Ontario in a public ceremony.

The following Amateurs participated in the response efforts:

Robert, VE3KEA (SK), Frank, VE3HFJ (SK), Rick, VE3IQZ, Keith, VA3HXC, Teresa, VE3TZM, Barry, VE3BLM, Jim, VE3PLP, Mary, VE3JTM, Hilda, VE3HIG, Doug, VE3DEG, Bill, VE3MEW and Ken, VE3KP.

Contributors to this Article

Jim, VE3PLP, Doug, VE3DEG, Ken, VE3KP, Barry, VE3BLM and Rick, VE3IQZ

Additional Information

CBC archives:

https://www.cbc.ca/archives/entry/the-2004-peterborough-flood

Kawartha NOW newspaper:

https://kawarthanow.com/2014/07/13/peterborough-flood/

Amateur Radio in Tisdale, Saskatchewan: A Success Story

Bj Madsen, VE5FX – RAC Midwest Director

The Emergency Measures Organization (EMO) of the town of Tisdale, Saskatchewan and the surrounding community entirely fund and maintain the local Amateur Radio repeater and its autopatch facility.

How did this lovely arrangement come about and why is it not more common?

In Saskatchewan, at least, every community is required to have an emergency plan in place and a significant part of this plan revolves around being able to effectively communicate with each of the participants.

When Tisdale was developing their plan, back in 2003, the EMO coordinator, Jack Wilson, was looking for citizen volunteers who might serve on the EMO board and become a part of the Emergency Operations Centre. Being new to the community, I met with Jack and offered my services as an Amateur Radio operator. In a small community, volunteers are rarely turned away so I had a job: I was immediately charged with being the Communications Director.

One of our mandates was to stage a "mock disaster" to exercise the various aspects of the EMO, to organize and exercise the Emergency Operations Centre (EOC), and to generally provide the various stakeholders with a somewhat real-life experience in event of a disaster.

Our scenario involved a busload of people overturned on the edge of town. The Royal Canadian Mounted Police (RCMP) were involved, ambulances were called, the fire department was on site and the hospital was set up to receive casualties. Each of these parties had their own radio systems but they were unable to talk with one another. The RCMP couldn't talk with the EMTs, etc. In anticipation of the headaches which might result from this lack of cross-communications, I had set up a repeater at my home, outside of Tisdale and equipped each service with an operator and a suitable handheld radio. Now everyone could communicate with the EOC and everyone knew what the other guys were doing "in real time"!

It worked very well. The success of the mock disaster exercise was attributed, in part, to successful communications between the participants.

Following this, it was not that hard to convince the participants that Amateur Radio should play a critical part in future events, mock or real. The EMO Coordinator, in particular, was enthusiastic about the real potential of Amateur Radio. After all, he got the credit for a successful exercise and could readily see the benefits. When I suggested that it would be very useful to get more people certified as Amateur Radio operators, he was very supportive and we ended up running three classes. The coordinator and his wife and sons attended the first class and obtained their certification. Various other members of the EMO also attended and were ultimately certified and with the classes now available, a number of local citizens also attended and obtained their certification. As a result, Tisdale ended up with a significant growth in our Amateur Radio population.

The local repeater was made up of vintage bits that I had assembled and it was set up at my home outside of town. This was not ideal: it was decided that autopatch was desirable and doing that at our location was not practical.

The local RCMP had their radio system set up on top of the highest building in town and they moved to a tower of their own.

We offered to clean up their abandoned site for them and, in so doing, inherited a much better site for the Amateur Radio repeater. Because it was made up of assorted bits of antique radio gear, it was fairly easy to convince our EMO Coordinator to support – to the Town Council and the surrounding municipalities – the value of having a reliable system in case of disaster.

In fact, he did his presentation so well that they ultimately gave him a budget for communications purposes, which subsequently resulted in the purchase of a new 2-metre repeater, a UHF radio to allow us to link to the neighbouring town of Nipawin and then on to the City of Melfort. They purchased a new duplexer for the system and a new antenna. When that antenna ultimately failed, they happily funded a replacement. They also paid for an autopatch system and allowed us to buy a new controller for the system. And, if something blows up, we are assured that all we have to do is ask and funds will be available for a replacement.

When my wife and I now attend EMO meetings, it is heartening to look around the big table and see all of the Amateurs who often outnumber those who have not yet been enlightened.

Why is every community not doing something like this? It is certainly a win-win scenario. The Amateurs obviously come out ahead, no longer having to fund their local repeater out of their own pockets and the community gets access to a reliable system and a trained group of radio operators who work for free. All the community has to do is fund the repeater.

In my experience, the Amateurs will be happy to provide their time, experience and expertise in exchange.

I have been fascinated with radio since I was a kid on a farm in southern Saskatchewan. I built crystal radios and experimented with antennas and DXed for broadcast stations at night. I studied for and earned my Basic Amateur Operator's Certificate in 1978, licensed as VE5ADA. The following year, I acquired the Advanced Certificate and call sign VE5FX and discovered contesting on SSB.

I served as Assistant Director and Deputy Director for the Midwest Region for several years and have been the RAC Midwest Director since January 1, 2017. I also ran the Incoming QSL Bureau for over 20 years.

Professionally, I began working as an Architectural and Engineering Technologist for a few years and then went back to school to become a Teacher. I taught public school in Weyburn, Saskatchewan for 28 years and ran a radio club for the students for most of that time. When I retired from teaching in 1999, my wife Kathy, VE5FL and I moved to Tisdale, Saskatchewan where we established an acreage. While teaching, I also operated a photography business for a few years and later worked as a Financial Advisor, which I continue to do on a limited basis.

TCA

The Golden Packet 2018: A First for Canadian Amateur Radio

Gérald Lemay, VA2GLU

I've always wondered about communications along the Appalachian Trail, that famous 3,500 kilometre hiking path from Springer Mountain in Georgia to Mount Katahdin in Maine, taking six months to traverse on foot.

Along the trail, there is inconsistent Internet service and unreliable cellphone coverage. In an emergency situation, "how would a hiker communicate?"

Bob Bruninga, WB4APR, the inventor of APRS (automatic packet reporting system) has demonstrated an answer. On the third Saturday in July, for the 10th year in a row, dozens of dedicated US Amateurs install temporary APRS stations at peaks along the Appalachian Trail and communicate during an event called the "Golden Packet".

The Golden Packet has connected Georgia to Maine each year, but this is the first year in which the APRS link has been extended by two stations along the International Appalachian Trail into Canada. From Maine's Mount Katahdin, the International Appalachian Trail enters New Brunswick traversing the highest peak in the Maritimes at Mount Carleton and then heads towards the Gaspé Peninsula of Québec.

A message from the US Mount Katahdin Team (named KATHDN-15 and labeled "C" on the map), was received by the Canadian Mount Carleton Team (MTCARL-1 and "B" on the map) and a message from the US Mount Washington team (MTWASH-13) was received by MTCARL-1 and digipeated to the Canadian Mount Blanc Team (MTBLAN-1 and "A" on the map) in the Matane Wildlife Reserve of Québec.

In 2018, the Canadian participation in the event consisted of seven individuals and three Amateur Radio clubs.

Dan Montpetit, VA2KEY, from the West Island Amateur Radio Club (WIARC) in Montréal, has maintained an active participation in the Golden Packet since 2012 and continues to monitor transmissions. This year he did so from Mount St. Joseph near Montréal, which is not along the Appalachian Trail but close enough to digipeat messages. Dan's enthusiasm sparked the involvement of the other members.

The APRS map showing Mount Katahdin (C), Mount Carleton (B) and Mount Blanc (A).

Team VA2CMQ, the Mont Blanc Team, in the 2018 Golden Packet.

The Mount Blanc Team consisted of Clermont Gaudin, VE2EEG, Jean Parent VA2JPI, Richard Bouchard, VA2RBC and André Raymond, VE2BZO. The first three are current members of Club de radioamateur de Matane (VA2CMQ), where Clermont and Jean, the club's Vice-President, have installed linked repeaters throughout Matane, Québec, and where Richard is the club's webmaster.

The temporary antenna installation at the summit of Mount Carleton.

Interestingly, André is a former member of the Club de radioamateur de Matane, but now resides in Drummondville, where he is the Vice-President of CRADI (Club radio amateur de Drummondville Inc.).

The Mount Carleton Team also had a strong CRADI presence. Gérald Lemay, VA2GLU, is the current President of CRADI and Sylvie Roberge is his wife.

This brief summary of our Canadian experience does not do justice to the heroic efforts of the dedicated Amateur Radio operators who have hauled gear and themselves up dozens of peaks along the Appalachian Trail during these 10 years of the Golden Packet.

We were thrilled to be a small part of this important and fascinating project. Next year, we hope to involve more Canadian Amateur Radio operators, add more stations into the Gaspé region of Québec Province along the International Appalachian Trail and continue to participate in Bob Bruninga's Golden Packet.

Gérald Lemay, VA2GLU
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The International Repeater Group (IRG):
Serving Radio Amateurs and the Public in the Maritimes and Beyond

Rick MacMillan, VE9MTB
President
International Repeater Group

Served agencies in New Brunswick and neighbouring jurisdictions benefit from one of the most robust emergency communications systems in the country, thanks to decades of a close working relationship between Radio Amateurs and Emergency Managers.

History and Membership

From its formation in 1974 with a few repeaters, the International Repeater Group (IRG) gained the respect of government and they worked together to build a province-wide repeater system available for the use of Radio Amateurs.

It now covers almost everywhere in New Brunswick and signals reach into other bordering provinces and the state of Maine. Assistance from the provincial and federal governments, combined with membership dues, available grants and volunteer technical help, has allowed the system to grow.

Today, the International Repeater Group is one of the largest Amateur Radio clubs in the Maritimes. Annual member dues of $15 per year help pay for IRG activities and hardware upgrades. While the system is open to all Amateurs to use, members have access to the linking codes allowing them to talk across the province or throughout the Maritimes.

Infrastructure

The IRG system now includes 25 VHF and UHF repeaters. All the repeaters are located at secure government sites with backup power. Repeaters are grouped into “zones” which can be linked to each other, or all at once. Linking between sites is done over a digital microwave system, no Internet is required. Wide area coverage at each site ensures a good measure of overlap and redundancy if there is a hardware failure. Any IRG repeater can also be linked to most repeaters in Nova Scotia and Prince Edward Island.

Revamped System

The IRG took advantage of a recent revamp of the provincial government’s digital microwave system to completely revamp our system at the same time.

Through an agreement with the New Brunswick Emergency Measures Organization, and with help of the Department of Transportation and Infrastructure’s Radio Communication Branch, repeaters and controllers were updated to improve reliability and the repeater zones were grouped to more closely match EMO’s regions.

The end result of the upgrade was a more reliable and easier to use system that still only requires a few DTMF tones to link anywhere. Not only is the IRG system used by members for casual nets and regular friendly contacts, all repeaters are tested with a weekly training net.

The IRG system has become an integral part of any emergency exercise, whether operators are at an emergency operation centre, a shelter or even at home relaying messages.

Served Agencies

Emergencies in New Brunswick are coordinated by the Province through the Emergency Measures Organization (EMO).

With almost every activation of the Provincial Emergency Operation Centre (PEOC), Radio Amateurs are included as part of the structure of the PEOC and Amateur Radio operators are also included in the Regional EOCs to provide a vital backup communication link.

Amateurs are also often deployed to municipal EOCs or out into the field when needed. In each case, the IRG system provides a reliable method of contact anywhere in the province.

The IRG has recently renewed formal agreements with the Province’s health authorities. Amateur Radio equipment has been placed in most hospitals and at the Department of Health central office to provide backup communications.

Amateur Radio is also included in the plans and exercises relating to NB Power’s Point Lepreau Nuclear Generating Station. The IRG system is also used to provide support to Environment Canada through CANWARN activations in severe weather conditions (http://ecoa.ca/canwarn.shtml).

There are also some very active local Amateur Radio clubs throughout New Brunswick who also provide local EmComm support for municipal and regional groups, using club members and club repeaters, along with their local IRG repeaters as required.

Some Recent EmComm Activities

During the ice storm of 2017 which paralyzed communities in the northeast portion of the province with downed power and phone lines, Amateurs were deployed to assist with communications. In total, Amateurs were activated for 338 hours over a two-week period.

In August 2017, two simultaneous fibre-optic cable breaks disrupted telephone, public service radio and Internet services to wide areas of the Maritimes. Immediately, Radio Amateurs were on the air using the IRG system and were organizing deployment at the request of EMO, ready to go where they were needed to cover any needs arising during the outage. Fortunately, phone and data services were restored within a few hours.

In the record-breaking flooding of the St. John River in early May 2018, radio operators spent a total of 436 hours over at the provincial and affected municipal EOCs. All during this time, the IRG system remained up and ready to cover any backup communication needs.

A Win-Win for Everyone

Over the years, IRG Radio Amateurs have gained respect with served agencies, and have demonstrated that Amateur Radio can provide a reliable backup to regular communication means.

Users of the IRG system are familiar with how their repeaters work and what they will do. Having a robust repeater system available to volunteer Amateur Radio operators “24/7/365” means that they can focus on getting the message through in emergencies.

Musings of an Emergency Coordinator / "Rescue on the Rock"

Paul Giffin, VA7MPG – Emergency Coordinator

In the last few years there has been considerable attention given to our part of the world with the small earthquakes and the large fires in Alberta and British Columbia. Initial media reports were not complete and certainly raised the level of concern of the general public.

There always seems to be a problem with communications during a crisis. In my 40+ years of being exposed to and involved in emergency communications I have noted that every debriefing seems to mention communication: how it either failed or did not live up to expectation. The failure of the cellular phone system during the Stanley Cup and other events in Vancouver is one such example.

In today's society, if you turn off cellphones and social media, you can then stand back and watch as things grind to a halt and are then soon followed by confusion and anger. This was clearly demonstrated after an earthquake in Mexico City when cellphones and social media crashed (https://www.wired.com/story/mexico-earthquake-volunteer-response/).

These items are mentioned not to make a case for Amateur Radio emergency communication. That case had been made more than enough times. They are only mentioned to show how much society today demands instant information. Communication is critical.

In my travels I have yet to meet an Emergency Coordinator who has said:

- "I have enough volunteers"
- "I have enough equipment"
- "Everyone who is part of the emergency response system is on the same page."

Over the years I have often heard Amateurs say:

"I don't need to join an emergency group; when something happens I'll be there."

Although I rarely say it I often think, yes you will be there but...

1) Will you have the appropriate training?

2) Will you know where to report?

3) Will know the expectations and protocols of the group for which you are providing the service?

4) Will you be familiar with the local emergency management protocols?

5) Will you meet the criteria set out by local/provincial/federal governments to access the appropriate areas?

6) Will you remember that you are a radio operator and not someone who makes operational or administrative decisions? Will you remember that you are part of the wheel and not the centre of the wheel?

7) How do you respond under stress? Do you even really know?

8) Will you know how to operate the equipment?

In essence you will be part of the problem, not part of the solution.

Time spent with an emergency communication group does not have to be excessive. If you are fortunate enough to have a weekly net, you can then combine that time with a monthly meeting and it could work out to roughly two hours a month.

Two members of the Coast Emergency Communications Association in front of their station during the "Rescue on the Rock" simulated emergency test (see the article on the next page). From this site both voice and digital communications were established. On the wall of the truck you can see the large status sheet used in concert with the Civil Air Search and Rescue Association (CASARA) and their aircraft as well as message logs.

Simulated emergency exercises of course would require additional time.

Emergency communication volunteers often say that the more realistic the simulated emergency exercise is, the more they like it. The exercise is a time to learn, both how you will react, and what your job will be.

Some volunteers say that sitting at home and checking into a net is nothing compared to attending a realistic simulated exercise and trying to remember everything: from the logging process, to setting up the Grab and Go Kit, to the phonetic alphabet. Some even forget their own personal Grab and Go Kits: such as food, water, medications (if required) and so on.

They soon realize the statement "If you can't take care of yourself how you can expect to help others" is very valid. They also realize that they respond differently when under stress. Having been exposed to the stress and being debriefed after an exercise lets people learn they are not alone when their stress reactions kick in. It also provides each person with the opportunity to learn and think about how they did, what they would do differently next time, and how they can improve their performance.

In our most recent simulated emergency test (SET) it was interesting to watch the new members of the group. As the day wore on and the pressure increased it was "What have I gotten myself into here!" They quickly came to realize the importance of our motto: "Amateur Radio Is A Hobby – Emergency Communication is a commitment".

Volunteers are the bread and butter of emergency communications and Emergency Coordinators have to make sure the commitment is not too onerous.

Do your volunteers know how to properly work the team equipment? Most will say yes. I have had highly dedicated people simply "freeze" during a, SET as a result of the increased stress. They are now valued members of the group because regular training has taught them how to recognize and deal with stress. It has also made them very familiar with the equipment.

How often does your team conduct training? Your unit may not have the newest equipment with all the bells and whistles, but can each member of your team work the equipment and set up a station at a "new" location?

Are your members proficient in both voice and digital procedures? Do they know local protocols/procedures? Do they know *and understand* their role in the overall response?

These are just some of the questions I have had to answer and learn to deal with in my time as an Amateur Radio Emergency Coordinator. While these questions may seem very basic the issues are often overlooked.

Each unit will have their own local specifics, but the important point is to remember our role and why we are there. Then the Emergency Coordinator needs to make sure you can meet the demands of the role.

Not every Amateur operator needs to be involved in emergency communication, but we need enough Amateurs to do the job and right now we are sorely lacking.

I once read an article which said a good Amateur has a motto: Preparation, Education and Service to the Community.

When you think about it most Amateurs would probably agree with that statement. Service to the Community is an interesting topic in itself.

"Rescue on the Rock": A Simulation

On Saturday, July 14, 2018, "Rescue on the Rock" – a simulated emergency test and training scenario for Ground Search and Rescue teams as well as communications teams – was held near Nanaimo, British Columbia on central Vancouver Island. The training scenario was a mixture of urban and rural events. The day was sunny and very hot.

The rural Ground Search and Rescue training event was organized by the Nanaimo and the Arrowsmith Ground Search and Rescue units. The scenario involved a crash of a helicopter with 14 passengers and crew who had mock injuries with everything from broken bones to internal and head injuries. Once the crash site was located the injured had be to be evacuated for medical aid.

The crash occurred in the mountainous region behind the City of Nanaimo. In the scenario there was good communication within the search area, however communications back to the City of Nanaimo required the use of Amateur Radio.

The scenario involved a crash of a helicopter in a mountainous region. Photo courtesy of Nanaimo Ground Search and Rescue.

A debriefing session during "Rescue on the Rock". Photo courtesy of Nanaimo Ground Search and Rescue.

The urban portion of the event was organized by the Coast Emergency Communications Association (CECA). One hour before the helicopter search started the City of Nanaimo Fire Rescue Department responded to a "Hazmat incident" at the local Aquatic Centre, which is located next to a secondary school and is one of the city Reception Centres. At the school there were 200 children at a basketball camp. It was determined that the immediate residential area, including the school, needed to be evacuated.

At 8:30 am over 100 Ground Search and Rescue members commenced a search for the helicopter crash site and its victims. The Mid-Island Air Search and Rescue Society, a unit of the Civil Air Search and Rescue Association (CASARA), also participated in the search with multiple aircraft. They also had a representative at the Search and Rescue Command Post. At 9 am the City of Nanaimo issued an "evacuation order for several blocks" around the Aquatic Centre.

Members of the Coast Emergency Communications Association (CECA) were activated initially for the air crash, but were then required to assist with the Hazmat situation. The Nanaimo Emergency Operations Centre radio room acted as net control. A total of nine Amateur stations were operational during the event. This included the site in the bush with the Ground Search and Rescue Command Post. Other stations were established at Reception Centres and Comfort Centres in Nanaimo to deal with the "evacuees."

There were several interesting points to this day. It was the first time we had to deal with two very different events at the same time in the Emergency Operations Centre. Normally, you would have several different sites doing different things, but they would all be related to the same incident. In this case we had incidents at rural and urban areas happening at the same time.

The Ground Search and Rescue units looked after communications with their searchers while Amateur Radio provided the outside communications as well as communication liaison with the local airport and with the CASARA Search Headquarters and the Royal Canadian Mounted Police (RCMP).

We also established Reception Centres at locations which were not normally used including a church and at a corner of a large shopping mall. In addition, St Johns House was used as a Comfort Centre. This provided challenges for CECA members who had to establish functioning digital and voice stations in the new places. We were also able to transmit photos from the Ground Search and Rescue site back to the Emergency Operations Centre (EOC).

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PUBLIC SERVICE / ARES

Operation "Better Together"

Larry Gorman, VE3LGN – CEC Emergency Services Coordinator

The Region of Waterloo held its annual social services emergency training exercise on Wednesday, September 5 and Kitchener-Waterloo ARES (K-W ARES) was a significant participant.

Ryan Maeck, Regional Social Services Emergency Management Coordinator

Finally, and with great support from the Regional Social Services Emergency Management Coordinator, Ryan Maeck (pictured above) we were fully integrated as active partners in this event. In the customized Incident Command System hierarchy we are positioned as a part of the Logistics section.

The exercise took place at a municipal recreational centre in the city of Kitchener.

To qualify, an Evacuation Centre has to have a variety of public service amenities, such as washrooms, showers and a proper food service preparation area – as well as ample space, and individual rooms for the anticipated evacuee processing.

By my count there were 13 primary services present.

Our ARES team arrived early and went about introducing ourselves and our services.

In total there were over 75 individuals participating in the exercise.

There has been a paradigm shift in how these annual multi-agency exercises are being staged by the Region. It became apparent from past exercises that the learning curve was rather flat and that these exercises were collapsing under their own weight, ie, too complex and all inclusive.

The Region encompasses three cities and four municipal townships. Each of these is also required to run an annual exercise, but they are more modest in size and scope. Unless a local municipality requests Regional assistance, they are individually responsible for their local emergency management.

Only the active social agencies were included in this exercise, omitting Fire and Police departments as well as the Regional and Municipal administrative officials. In a genuine emergency this command group would operate from the Regional Headquarters or Emergency Operations Centre (EOC). The extensive top-down exercises were not working out so more preliminary staging was necessary.

For this exercise the idea was to integrate and coordinate the routines of the participating social welfare agencies in one central place. In the simulation, a busload of evacuees, who were victims of a community flash flood, was processed through the many services in a sequential and logical manner. One of the smaller municipalities requested that the Region manage the situation.

Operation "Better Together" was a full-day event.

The morning sessions involved groups setting up their posts and considerable time was allotted to establishing intergroup working relationships.

A feedback session concluded the morning activities. One representative from each group, including ARES, convened to resolve any issues. The exercise could then proceed smoothly after the break when the evacuees arrived.

The evacuee bus was met by a triage group and the victims were directed into the facility for suitable processing. One of the large gymnasiums was reserved for their use after initial situational evaluation.

Messaging via Amateur Radio

Our ARES group was assigned an office adjacent to the building's reception desk in a central location with full office facilities including power access. We did bring backup emergency power supplies.

The Net Control centre included a radio operator and a message handler to manage the flow of information.

Our three roving members spent most of their time on the floor explaining our services and our role in this exercise, and handing out an information package and message forms. In every case we were welcomed and queried about our services. By the end of the exercise most agencies had completed and returned the message forms.

Following our directional signage, created by Peter, VA3PTB, a number of participants dropped by our office with some very interesting questions about Amateur Radio and how ARES would handle emergency message passing.

An Emergency Operations Centre (EOC) was not part of the official plan in this exercise. However the Regional Coordinator was anxious that Amateur Radio execute some simulated connections to the remote EOC. In a real emergency situation this would officially be located at the Regional Headquarters. Consequently, he created a series of theoretical two-way messages which our Net Control was to process throughout the exercise.

Operation "Better Together": Lessons Learned

This event was staged as a preliminary step in an escalating sequence, to be built on annually. Its purpose was to create better cohesion between all of the on-the-ground agencies. In previous exercises ARES has always been welcome, but it seems to have been perceived as more of a sideline curiosity. With all the modern hands-on communication technology out there "who would ever need third party assistance?"

As an additional challenge, ARES served as the only contact between the Regional EOC Headquarters and the Evacuation Centre.

Actual messages were created and submitted for relay by the on-site agencies. In the short time for the active part of the exercise we processed 10 messages from a variety of sources.

I had intended to engage several off-site Amateurs ahead of time to handle simulated off-site messages to the EOC and participating agencies, but came up short. We were pleasantly surprised on working a net to find a number of unexpected mobile Amateurs willing to participate. The net expanded as a number of mobile operators checked into the net and were willing to participate as potential message handlers.

Our group was continuously engaged throughout the exercise. The addition of four off-site radios was an added feature. This included the option of an operator with HF capabilities and a high grade antenna system.

ARES was part of the ongoing feedback loop that ensured a total collaborative experience. For more information visit the K-W Amateur Radio Club at http://kwarc.org/ares/ and at http://kwarc.org/.

"Better Together", as observed in retrospect, would appear to have lived up to its intentions. This was an all-round positive exercise. K-W ARES has been assured an even greater role in the upscaled exercise for next year.

Amateurs who participated in this exercise: Ben, VE3ST, Gord, VE3EOS, Larry, VE3LGN, Paul, VA3PDC. Peter, VA3PTB. Off-site radio contacts included Patrick, VA3PAF, David, VA3DKL, Rich, VE3DCC and Roger, VE3RKS.

I achieved my Basic Amateur Radio certification in 1992 and became a member of the Kitchener-Waterloo Amateur Radio Club, with 12 WPM code endorsement thereafter. During the early days of packet radio experimenting, I was a founding member of the Waterloo Wellington Packet Group and produced a monthly "Packet Racket" column for our newsletter, The Kilowatter, for many years.

Since 1999, I have been the coordinator for our Emergency Services, which includes the CANWARN severe weather spotting program and ARES. Since 2012, I have focused specifically on ARES activities. In 2011, I achieved my RAC Certified Emergency Coordinator designation.

My hobbies, aside from Amateur Radio, include summer-long cruising the North Channel of Georgian Bay in my sailboat, and downhill skiing throughout the winter. I retired from teaching Geography in 1996.

Larry Gorman VE3LGN – CEC
ARES Coordinator
K-W Amateur Radio Club
http://kwarc.org/ares/ and http://kwarc.org/

SQUAMISH ARC PARTICIPATE IN FIRE RESCUE OPEN HOUSE

Gursimran Gill, VA7GUR CEC

On September 30, members of the Squamish Amateur Radio Club and the Amateur Radio Emergency Service participated in the annual Squamish Fire Rescue's open house event by setting up an information booth.

This event was a great opportunity for the public to learn about various emergency services including: Squamish Fire Rescue, the Royal Canadian Marine Search & Rescue, Squamish Search & Rescue, WildSafeBC, the Royal Canadian Mounted Police, the Red Cross, the Squamish Nation Peacekeepers, the BC Ambulance Service, the Squamish Emergency Program and the Amateur Radio Emergency Service (ARES).

The purpose of our booth was to drive interest in Amateur Radio, and create awareness about ARES, Radio Amateurs of Canada (RAC), the American Radio Relay League (ARRL) and the Squamish Amateur Radio Club.

There was display of multiple Amateur Radio equipment including VHF, UHF, HF voice, Digital HF (FT8 mode) and the Automatic Positioning Reporting System (APRS). In addition, members provided handouts about RAC, ARES, the ARRL and Emergency Preparedness, and also delivered information to interested personnel about how to get involved in the Amateur Radio Service. Many young children were very excited when they got an opportunity to talk on the air using VHF radios.

By setting up portable antennas and running emergency power, we demonstrated the ability of Amateur Radio to be operational during an emergency or disaster – when all else fails. It was obvious that participation in this event not only created awareness to the general public about our hobby, but also created a connection with members of other emergency response agencies.

Participants in this event were John, VE7CUU, Gursimran, VA7GUR, Cameron, VA7JT, Tom, VE7NG, and Wayne, VE7SWR.

Gursimran Gill, VA7GUR CEC
Section Emergency Coordinator
ARES BC South West Region West
Squamish, British Columbia

AMATEURS SUPPORT THE 2018 MS BIKE TOUR

Nicole Boivin, VE3GIQ

For the second year in a row Nicole, VE3GIQ, Treasurer of the Ottawa Valley Mobile Radio Club organized the communications for the MS Society Fundraiser. Seven Amateurs from the Seaway Valley Amateur Radio Club (SVARC) and eight from the Ottawa Valley Mobile Radio Club (OVMRC) participated. In recent times, this is the fourth year running that Amateurs support this event.

On August 18 and 19, 566 bicyclists rode from Metcalfe, Ontario to the NAV Centre in Cornwall, stayed overnight and most rode back to Metcalfe on Sunday. Amateurs staffed these end points along with five intermediate rest stops.

Net Control was established at the South Nation Conservation Authority near Finch (the mid-point rest stop) served by repeaters VE3MTA Bonville and VE3MPC Orleans. There were also two mobile operators; one rode the sweep bus and I rode in the Admin vehicle.

Volunteers manning this event were: Tim Bailey, VE3TXB; Nicole Boivin, VE3GIQ; Earle DePass, VE3IMP; Frank Fullum, VE2KOI; Larry Giguere, VA3RSQ; Hal Green, VE3HWG; Art Horovitch, VE3AIH; Suzan Horovitch, VE3EXN; Ernie Jury, VE3EJJ; John McGowan, VA3JYK; David Niemi, VA3NIE; Hermanna Noorthoek, VE3UNV; Doug Pearson, VE3HTR; Norm Rashleigh, VE3LC; and Dave Scott, VE3ZZU.

This was the first year that we had a radio operator onboard the admin vehicle with the Event Manager, Stephanie Desjardins. This gave her real-time status information over the entire event.

We received very positive feedback from the staff, volunteers and riders alike for the role that we played. Due to a shortage of staff and volunteers, some Amateurs went beyond the call of duty in helping to load and unload bicycles from a transport truck on Saturday.

Following the event several on-air debriefing sessions were conducted with participants to gather feedback on the event and a report was prepared and tabled with the MS Society. We have done this every year, with a view to improving the process for both the sponsor and radio ops. I recommend this practice for all public service events.

In summary, the event was successful in reaching its fundraising goal of $500K. Next year we will do it again, only better!

Amateur Radio traffic assisted the coordination of first aid by the Canadian Ski Patrol, the logistics dispatch of food, supplies and rider pickup, repair vehicles and the tracking of bike traffic.

Art, VE3AIH, Frank, VE2KOI, and the relief operator Dave, VE3ZZU, were at Net Control on Saturday.

Hal, VE3HWG, at Woodlands Park.

Hermanna, VE3UNV and Suzan, VE3EXN, at the NAV Centre.

Norm, VE3LC, and John, VA3JYK, at the start line at Metcalfe.

Nicole Boivin, VE3GIQ, has been an Amateur since 1967, but allowed her licence to lapse in the 1980s when she moved from Quebec back to Ontario. She was re-instated in 2015, and have been a member of RAC, the OVMRC and a participant in the MS Bike Tour ever since.

THE SPORTS PAGE
— The Canadian Contest Scene

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The World Radiosport Team Championship

The World Radiosport Team Championship (WRTC) 2018 was held in Germany this summer and is now in the history books.

There is a wealth of information on their website at http://www.wrtc2018.de/en/.

I was looking forward to the week in Lutherstadt Wittenberg with some trepidation.

Almost 150 of the world's premier contesters, judges and referees who qualified over the previous four years or were selected for WRTC 2018 filled the halls, bars and social areas of the event hotel.

Virtually every moment of the first two days made me catch-my-breath as familiar ops with legacy call signs zoomed past me to greet each other.

I knew many of the North American teams and entrants. It was the plethora of foreign ops and guests like myself that I found so amazing. Prior to this my exposure to many of these superlative ops had been limited to on the air activities or Facebook.

Nothing can compare to the hands-on experience of hugging, meeting, pressing flesh that an international event like the one provided by WRTC and the organizers. The Deutscher Amateur Radio Club (DARC) and committee did an amazing job coordinating and hosting this mega-event. I can't thank them enough.

Make your plans now to attend the next WRTC in Bologna, Italy in the summer of 2022."

Congratulations to all the winners, participants, judges, volunteers and those who made the special effort to attend in person. An amazing amount of work went into not only hosting this event, but also for participants who had to not only qualify, but to get their gear to the site!

One thing we rarely get to hear about is how things were from those who were actually there. They can offer both a unique and interesting perspective so I reached out and recruited some help from three Amateurs and asked for their comments about the event.

First up, we have Cary Rubenfeld, VE4EA, who was there with his XYL Marion who happened to be "in the neighbourhood" and was there as an observer.

Cary Rubenfeld, VE4EA: "My XYL and I happened to be in Europe for the summer visiting family. With a little convincing, she agreed to accompany me to Lutherstadt Wittenberg, a quiet town of approximately 50,000 people, located 100 kilometres from Berlin.

Team Canada at WRTC 2018

John Sluymer, VE3EJ: "WRTC 2018 went off without a hitch but was not without some worry up front. The logistics of getting all the required equipment to Germany – without excessive cost and without importation problems upon entry to the European Union – and the airline restrictions on the number of pieces of luggage combined with absolute weight per piece restrictions were cause for consternation for most competitors.

Various teams handled the transportation in different ways, with none facing importation issues to the best of my knowledge and none going bankrupt in the process.

Teams were met at the airports and train stations by a well-prepared German organizational team. Accommodations were excellent as was the food. At the operating sites, teams of very competent volunteers were present for the duration of the event to ensure that necessities were looked after.

The contest started with a lot of uncertainty about activity levels and propagation. It was hard to envision the level of local European activity that ultimately determined the best strategy on where to be at any given time. We knew that activity would be high, but underestimated the impact that local activity would have on our strategy. At the end of the day most North American teams were lower in the standings than what might have been anticipated. In hindsight, we would likely have done things a bit

The team tent where operators would set up their station, generator to supply power, tower with antennas, and outdoor facilities.

differently, but it is arguable that those who finished at or near the top may also have revised their thinking, resulting in an even better showing.

When all was said and done, two teams with Canadian representation finished in the top half while three finished in the lower half of the standings.

Other North Americans (with the exception of the team consisting of N6MJ and KL9A) finished similarly down in the pack.

The Europeans clearly understood propagation better and knew how to handle the volume of "locals", particularly on the low bands. It was a fair competition and congratulations are in order to the top finishers.

Kudos to Chris, DL1MGB and the German organizing committee for orchestrating a very successful WRTC. The closing ceremonies had the announcement that Italy will sponsor WRTC 2022. We will all have to wait for announcements regarding the qualification process as we begin the journey toward the next one."

Paul Bittner, W0AIH: Paul sent a variety of photos that he took while visiting WRTC 2018. They showed one of the tents, some of the participants, and the wonderful camaraderie among the participants and visitors who were there. It is amazing to look at the simple antennas that the participants used. While Paul was able to ride around to many stations, he also had to stay at least 250 feet away to minimize disturbing the participants during the event.

Closing Comments

It was wonderful to get to hear some of the firsthand observations and to see the photos, courtesy of Victor Androsov, VA2WA. Thanks Victor!

There are many more photos posted on the WRTC website, along with logs, videos and a wrap-up of the event.

For more information visit: http://www.wrtc2018.de/en/.

As has been announced, WRTC 2022 will be held in Italy, with details to follow in the coming months. Start planning now!

Hope to see you on the bands!

– Tom, VE3CX

ARRL SWEEPSTAKES, CW

Call	QSO	Mult	Section	Class	Score
VY2ZM	1,234	83	MAR	SOHP	204,844
VE7CC	1,020	81	BC	SOHP (A)	165,240
VE3CX	942	81	ONN	SOHP (A)	152,604
VA3RAC (VE3KI, Op)	897	81	ONE	SOHP (A)	145,314
VY1AAA (VE1RM, Op)	840	81	NT	SOHP	136,080
VE3NNT	713	82	ONE	SOHP	116,932
VA3DF	696	81	ONS	SOLP (A)	112,752
VE5SF	680	81	SK	SOLP	110,160
VE3YT	664	81	ONS	SOLP (A)	107,568
VA7ST	707	76	BC	SOHP	107,464
VE3ZI	664	80	ONN	SOHP	106,240
VE3NE	655	81	GTA	SOHP	106,110
VE6EX	656	80	AB	SOQRP	104,960
VE5ZX	613	80	SK	SOLP	98,080
VE2FK	620	79	QC	SOHP (A)	97,960
VE3RZ	586	80	GTA	SOHP (A)	93,760
VE3MM	597	77	ONS	SOHP	91,938
VE7KW (VA7DX, VE7KW, Op)	569	80	BC	MOLP	91,040
VE4GV	544	77	MB	SOHP (A)	83,776
VA7KH (VA7KH, VA7VK, Op)	540	76	BC	MOLP	82,080
VE3GFN	522	78	GTA	SOLP (A)	81,432
VA3SB	519	78	ONE	SOLP	80,964
VE7XF	482	80	BC	SOHP (A)	77,120
VE3MGY	477	78	ONS	SOLP (A)	74,412
VE3SMA	478	76	GTA	SOLP	72,656
VE3BR	441	79	GTA	SOHP	69,678
VE3RUA	463	75	ONN	SOLP	69,450
VE7YU	436	79	BC	SOLP	68,888
VE3TG	443	75	ONE	SOLP	66,450
VE3TM	437	76	ONE	SOLP	66,424
VA1MM	394	74	MAR	SOHP	58,312
VE4VT (VE4EAR, Op)	362	80	MB	SOHP (A)	57,920
VE3RCN	355	76	ONS	SOLP	53,960
VA2CZ	330	79	QC	SOLP (A)	52,140
VE1OP	312	79	MAR	SOHP (A)	49,296
VE3DZ	338	72	ONS	SOHP	48,672
VE2EZD	289	80	QC	SOHP (A)	46,240
VO1HP	331	69	NL	SOHP	45,678
VE3EJ	293	73	ONS	SOLP	42,778
VE3EY	292	71	GTA	SOHP	41,464
CG2AWR (VE2AWR, Op)	284	72	QC	SOLP	40,896
VE5SDH	292	70	SK	SOLP	40,880
VE3TW	280	71	GTA	SOHP	39,760
VE3AYR	262	73	GTA	SOLP	38,252
VE2SSS	244	71	QC	SOLP	34,648
VE9HF	251	67	MAR	SOQRP	33,634
VE7NI	219	73	BC	SOQRP	31,974
VE3RDE	205	74	ONE	SOLP	30,340
VA2WA	228	65	QC	SOHP (A)	29,640
VE3HG	211	67	GTA	SOLP	28,274
VE3VN	211	64	ONE	SOLP	27,008
VE1AOE	207	65	MAR	SOLP	26,910
VO2RAC	206	63	NL	SOHP	25,956
VE3RX	174	74	ONN	SOLP	25,752
VE5GC	201	62	SK	SOLP	24,924
CG1RSM (VE1RSM, Op)	194	64	MAR	SOLP	24,832
VO1BQ	193	62	NL	SOHP	23,932
VA3EC	188	62	GTA	SOLP	23,312
VA2ES (VE2AXD, Op)	178	64	QC	SOHP	22,784
VE4XT	176	64	MB	SOLP	22,528
VE3RSA	180	57	GTA	SOHP	20,520
VE2DSB	166	61	QC	SOLP	20,252
VE7AX	155	63	BC	SOLP	19,530
VA7RN	149	60	BC	SOLP	17,880
VA2RAC (VE2ZT, Op)	148	58	QC	SOLP	17,168
CF7JC	123	58	BC	SOLP (A)	14,268
VE8EV	123	56	NT	SOHP (A)	13,776
VE6VS	121	56	AB	SOLP	13,552
VA7EU	125	54	BC	SOLP	13,500
VE3SST	115	56	GTA	SOLP	12,880
VE3XD	89	47	ONS	SOLP	8,366
VE2QV	80	46	QC	SOLP	7,360
VE7IO	58	49	BC	SOHP (A)	5,684
CG5AAD	75	34	SK	SOLP	4,692
CF7MM	57	37	BC	SOHP	4,218
VE2GHI	51	34	QC	SOLP	3,468
VA3FN	47	33	ONS	SOLP	3,102
VE7BGP	29	22	BC	SOLP	1,276
VE3CQH	16	16	ONS	SOQRP	512
VA2LGQ	3	4	QC	SOLP	24
VY1JA	3	2	NT	SOQRP	12
VE2GT	2	2	QC	SOLP (A)	8

CQ WORLDWIDE DX CONTEST, CW

Call	QSO	Countries	Zones	Category	Score
VE3EJ	5,754	601	159	MULTI-ONE	10,696,240
VY2TT (K6LA, Op)	6,232	400	103	SO HP ALL	7,522,365
VE2IM (VE3DZ Op)	5,653	425	116	SO HP ALL	7,292,139
VA2WA	4,101	502	132	SA HP ALL	6,261,384
XL3T (VE3AT Op)	4,598	398	114	SO HP ALL	5,538,816
VE2BWL	2,947	383	105	MULTI-ONE	3,248,616
VE3YAA	2,998	382	107	MULTI-TWO	3,082,656
VE5MX	2,177	319	106	SA HP ALL	2,139,025
VE9AA	2,448	253	85	SO HP ALL	1,924,572
VE7ACN/7	2,208	252	102	SA HP ALL	1,769,646
VE7GL	2,170	278	111	MULTI-ONE	1,760,614
VA3DF	1,392	381	108	SA LP ALL	1,732,038
VE9ML	1,571	352	93	MULTI-ONE LP	1,668,750
VE3VN	1,707	299	97	SO LP ALL	1,650,132
VE3NNT	1,553	316	91	SA HP ALL	1,590,963
VA7ST	1,967	153	74	SO HP ALL	922,301
VE7NY	1,632	164	81	SO HP ALL	802,130
VE3PN	1,189	232	81	SO HP ALL	798,463
VE3VEE	1,502	151	39	SA HP 20M	732,070
VE3UTT	595	347	99	SA HP ALL	714,938
VE7VR	1,595	141	70	SO HP ALL	684,695
VE6BBP	1,494	130	78	SO HP ALL	677,040
VE9HF	1,883	118	31	SA HP 20M	675,417
VE3MGY	1,268	201	68	SA LP ALL	670,886
VE7KW	1,599	137	72	SO HP ALL	664,202
VA2CZ	821	259	82	SA LP ALL	654,379
VE2FK	1,402	147	45	SA HP ALL	621,696
VE7XF	736	222	105	SA HP ALL	594,159
VE3JM	1,049	169	62	SO HP ALL	588,819
VA7KO	959	196	94	SA HP ALL	587,250
VO2AC	934	198	61	SA LP ALL	557,886
VE7FO	1,247	126	76	MULTI-MULTI	495,708
VE3KP	871	180	65	SO HP ALL	463,785
VE6WZ	1,230	122	35	SA HP 40M	432,221
VE3AQ	869	170	61	SO LP ALL	428,967
VE2FWW	1,212	123	33	SO HP 20M	425,568
VA1MM	864	160	55	SO HP ALL	415,380
VE5ZX	706	199	78	SA HP ALL	414,392
VE1OP	592	218	80	SA HP ALL	391,274
CF3FF	781	162	62	SA LP ALL	380,800
VA7DZ	1,011	119	61	MULTI-ONE LP	358,200
VE2ZT	601	172	62	SO LP ALL	338,364
VE3GFN	660	154	58	SA LP ALL	319,060
VO1BQ	756	129	37	SO HP ALL	288,342
VE1RSM	647	143	44	SO LP ALL	274,329
VE6WQ	868	104	33	SA HP 40M	269,342
VE5SF	773	109	43	SA LP ALL	249,888
VA3DX	325	217	91	SA HP ALL	241,472
VE3VY	505	149	57	SO LP ALL	236,900
VE7JKZ	544	117	71	SO HP ALL	232,368
VE3XB	1,148	75	19	SO HP 80M	232,086
VA3EC	462	141	54	SA LP ALL	231,855
VE5RAC (VE5SDH, Op)	728	98	57	SO LP ALL	231,260
VE3TW	482	168	58	SO HP ALL	230,520
VE9OA	450	155	51	SA LP ALL	223,510
VE3RSA	408	153	53	SO LP ALL	216,506
VE3PJ	414	163	66	SA LP ALL	215,718
VA7MG	472	126	73	SO HP ALL	204,572
VE1JBC	419	146	48	SO HP ALL	200,596
VE3TM	454	137	49	SO LP ALL	198,648
VA7CRZ	452	113	61	SA LP ALL	185,484
VE3OTL	589	139	58	SO LP ALL	180,255
VE6LB	436	126	67	SA HP ALL	179,490
VE3JAQ	534	110	54	SA LP ALL	175,808
VE3ZI	759	72	17	SO HP 160M	142,400
VA3SB	324	132	36	SO LP ALL	140,952
VE3LC	327	118	42	SO LP ALL	129,920
VA2SG	502	83	30	SO LP ALL	128,481
VE2DSB	368	114	39	SO LP ALL	123,624
VE7WO	639	50	41	SO LP ALL	122,304
VE6EX	724	50	37	SO QRP ALL	117,189
VA2ES (VE2AXO, Op)	334	124	47	SO HP ALL	114,570
VE7AX	328	103	57	SA HP ALL	114,240
VE7IO	454	63	58	SA HP ALL	107,811
VA3WNO	312	102	49	SA HP ALL	99,207
VE6KC	217	97	47	SA LP ALL	79,488
VE3AYR	269	108	47	SO LP ALL	78,275
VE3CWU	236	99	42	SA LP ALL	77,973
VE3CV	199	124	53	SA LP ALL	77,880
VO2NS	264	105	41	SA LP ALL	77,818
VE3XD	270	82	31	SA LP ALL	70,851
VA3MW	214	101	38	SA HP ALL	66,303
VO1HP	385	54	14	SO HP 160M	60,384
VA6AM	272	65	39	SA LP ALL	59,384
VE5UF	263	68	37	SA HP ALL	59,010
VE7FE	187	85	61	SO HP ALL	56,064
VE3JDF	167	93	47	SA HP ALL	53,200
CF3IK	167	76	39	SO LP ALL	47,265
VE1ANU	248	64	17	SO HP 40M	47,223
VE7CA	198	60	42	SO LP ALL	46,512
VE1ZAC	199	94	36	SO HP ALL	45,630
VA2RC	192	72	30	SA HP ALL	44,676
VE7UW	233	55	45	SO LP ALL	43,900
VE4VT	197	67	21	SA HP 40M	41,712
VE4EA	176	69	34	SA HP ALL	41,406
VE3RCN	199	62	33	SO LP ALL	40,565
VA3SY	406	38	17	SO HP 15M	39,820
VE4GV	172	72	35	SA HP ALL	38,520
VE3XT	220	57	30	SA QRP ALL	38,280
VE3JI	113	99	41	SA LP ALL	37,940
VE2HLS	186	58	17	SO LP 20M	35,175
VE3TG	175	57	16	SO LP 15M	34,821
VE3XAT	113	84	44	SA LP ALL	33,408
VA7ADI	445	31	38	SO HP ALL	32,568
VE3VSM	165	54	33	SA LP ALL	31,929
VA3FN	157	59	33	SO LP ALL	31,924
VE7RG	157	48	38	SO HP ALL	31,562
VE2QV	146	60	28	SO LP ALL	30,184
VE3YT	110	62	26	SA HP ALL	25,432
VE7CC	385	21	12	SA HP 160M	25,146
VE6RAC	150	47	36	SO HP ALL	24,817
VE7BC	127	43	33	SA HP ALL	24,472
VE2EBK	104	68	26	SA HP ALL	22,936
CF7JC	171	34	30	SA LP ALL	22,720
VE6UM	217	31	17	SO LP ALL	21,792
VA7DXC	160	35	32	SA LP ALL	21,373
VE3SST	101	56	33	SO LP ALL	19,847
VE7AHT	129	43	24	SA LP ALL	19,363
VE2ESU	112	44	29	SA HP ALL	19,199
VA7RN	197	22	24	SO LP ALL	18,400
VE3DQN	98	54	29	SO QRP ALL	16,932
CF7MM	97	39	35	SO LP ALL	16,058
XO1X (W1VE, Op)	172	19	16	SA HP ALL	15,610
VE1DT	103	45	12	SO HP 40M	14,706
VA3XDU (VA3DBT, Op)	93	40	27	SO LP ALL	14,271
VE3KQN	136	34	18	SO QRP ALL	14,196
VA7VJ	118	35	18	SA LP 20M	13,462
VE7BGP	105	35	32	SO LP ALL	13,333
VA3PM	122	65	30	SA HP ALL	13,110
VE3OSZ	137	32	12	SO LP 40M	12,848
VA7XB	87	41	14	SA HP 20M	12,540
VE7SZ	107	27	21	SA HP ALL	11,952
VE3FJ	75	39	20	SO LP ALL	10,325
VE3KPV	100	29	19	SO LP ALL	10,128
VE2VIA	136	36	21	SO HP ALL	9,462
VO1BB	100	51	17	SA HP ALL	9,452
VE6NS	87	24	20	SO QRP ALL	8,052
VE3SD	82	34	19	SO QRP ALL	7,791
VE3MDX	93	35	20	SO LP ALL	7,370
VE7XT	148	15	12	SA HP 160M	6,993
PT7BL/VE3	73	33	21	SA LP ALL	6,804
VE3HG	42	37	19	SA QRP ALL	6,104
VE2IR	75	25	11	SO LP 80M	5,940
VE7MR	45	29	14	SO LP 15M	4,128
VE3QN	47	43	19	SA LP ALL	3,968
VE3PVI	68	17	18	SA LP ALL	3,535
VE3FAS	49	19	10	SO HP 160M	2,320
VE3BXG	61	8	10	SO HP ALL	2,142
VE2AWW	42	24	8	SO LP 160M	2,048
VE3WZ	25	19	14	SO QRP ALL	1,881
VA3RKM	27	15	13	SO LP ALL	1,568
VE3EEJ	25	19	10	SO HP ALL	1,537
VA3RJ	20	17	9	SO QRP 20M	1,300
VE3CUS	21	16	12	SA LP ALL	1,064
VE3CEB	92	6	6	SO LP ALL	840
VE3ADQ	33	11	9	SO LP 80M	660
CF2CZ (VA2CZ, Op)	14	9	8	SA QRP 20M	629
VE3SKX	13	12	4	SA LP 20M	576
VE3BR	15	14	5	SO LP 160M	437
VE2JCW	16	6	6	SO LP ALL	276
VA3DCF	12	6	7	SO LP ALL	273
VE3SB	14	7	7	SO LP ALL	266
VE9VIC	23	19	10	SO LP ALL	203
VE4DXR	12	10	10	SA HP ALL	200
VA7FMR	14	4	5	SO LP 20M	90
VA3SK	5	4	4	SO LP 160M	72
VE5DLD	5	4	4	SO QRP ALL	72
VA2LGQ	7	2	2	SO LP 160M	48
VE2GT	1	1	1	SA LP 40M	4

ARRL SWEEPSTAKES, SSB

Call	QSO	Mult	Section	Class	Score
VE6SV (VE4GV, Op)	1,533	82	AB	SOHP (A)	251,412
VE4VT (VE4EAR, Op)	1,326	81	MB	SOHP (A)	214,812
VE3CX	1,221	81	ONN	SOHP (A)	197,802
CG6AO (VE6RC, Op)	1,228	80	AB	MOHP	196,480
VA7RR	1,166	82	BC	SOLP	191,224
VE5SF	772	80	SK	SOLP	123,520
VE3YT	722	77	ONS	SOHP	111,188
VE7SZ	685	77	BC	SOHP	105,490
VA3DF	607	82	ONS	SOLP (A)	99,548
VE3RX	593	79	ONN	SOHP	93,694
VE5ZX	545	77	SK	SOLP (A)	83,930
VE3TW	548	71	GTA	SOHP	77,816
VA2CZ	421	78	QC	MOLP	65,676
VE3MGY	445	73	ONS	MOLP	64,970
VE9OA	432	74	MAR	SOLP	63,936
VE3WRL	456	69	ONE	SOLP	62,928
VY1AAA (VE1RM, Op)	397	78	NT	SOHP	61,932
VE4ET	393	78	MB	SOHP	61,308
VA3TIC	394	77	ONE	SOHP (A)	60,676
VE3KTB	373	81	ONS	SOHP (A)	60,426
VA7ST	361	75	BC	SOHP	54,150
VE6EX	371	69	AB	SOQRP	51,198
VE3SD	292	74	ONE	SOLP	43,216
VE3RUA	273	78	ONN	SOLP (A)	42,588
VE3BR	271	75	GTA	SOHP	40,650
VO1KVT	263	71	NL	SOHP	37,346
VA3PC	198	72	ONS	SOHP (A)	28,512
VE2HIT	197	64	QC	SOLP	25,216
VA3KVI	181	69	ONS	SOLP (A)	24,978
VE4EV	178	66	MB	SOLP	23,496
VE3TM	170	63	ONE	SOLP (A)	21,420
VE7KW	157	68	BC	SOHP (A)	21,352
VA3NW (VE3RVZ, VA3NW, Op)	154	68	ONE	MOLP	20,944
VE4XT	137	68	MB	SOHP (A)	18,632
VE3HG	145	62	GTA	SOQRP	17,980
VE3UZ VE3GYL, VE3UZ, Op)	142	63	ONS	MOLP	17,892
VE3SST	138	64	GTA	SOLP	17,664
VE3HOR	155	55	ONS	MOLP	17,050
VE3SV	136	60	ONS	SOLP (A)	16,320
VE3MXJ	131	61	ONN	SOLP (A)	15,982
VE3MH	137	57	ONS	SOHP	15,618
VA3TTB	133	58	GTA	SOLP	15,428
VE3RCN	124	61	ONS	SOLP	15,128
VE2TSM	140	53	QC	SOHP	14,840
VE3LGD (VE5LD, Op)	111	64	ONE	SOLP (A)	14,208
VE2CUR	124	54	QC	MOHP	13,392
CH2AC (VE3FU, Op)	131	51	NL	SOLP (A)	13,362
CG4VJR	119	54	MB	SOLP	12,852
CF7XNL	108	56	BC	SOHP	12,096
VE2GT	113	52	QC	SOHP	11,752
VE9MWA (VE9FM, VE9MWA, Op)	118	49	MAR	MOLP	11,564
VE3EJ	99	58	ONS	SOHP	11,484
VE7NA	108	52	BC	MOLP	11,232
VO2RAC (VO2NS, Op)	115	48	NL	SOHP (A)	11,040
VE1AOE	110	50	MAR	SOLP	11,000
VE3PQ	99	52	ONS	SOLP	10,296
VE5SKI	104	48	SK	SOLP	9,984
CG3LON	82	55	ONS	MOLP	9,020
VE9UNB	100	43	MAR	School Club	8,600
VE7CKZ	87	48	BC	SOLP	8,352
VE6CSX	88	44	AB	SOLP (A)	7,744
VE6RAC	81	47	AB	SOHP	7,614
VE3HED	58	55	ONE	SOHP (A)	6,380
VE3SCN	72	42	ONE	SOLP (A)	6,048
VE7PT	73	40	BC	SOLP	5,840
VA4CQ	73	40	MB	SOLP	5,840
VA2QR	56	46	QC	SOHP (A)	5,152
CG5AAD	70	38	SK	SOLP	5,081
VA3QWW	57	43	ONE	SOLP	4,902
VE5DLC	58	36	SK	SOLP	4,176
VE3RR	56	36	ONE	SOLP	4,032
VE5GC	55	34	SK	SOLP	3,740
VE3NIS	51	36	ONS	SOLP	3,672
VE3TU	47	32	ONS	SOLP	3,008
VA3FV	55	26	ONE	SOHP	2,860
VE3PYJ	49	26	GTA	SOLP	2,548
VE4AHW	42	29	MB	SOLP	2,436
VE3VN	48	25	ONE	SOLP	2,400
VE6FT	44	25	AB	SOHP	2,200
VE5DLD	39	23	SK	SOQRP	1,794
VE3BM	33	27	ONS	SOLP (A)	1,782
VE6FRD	34	24	AB	SOHP	1,632
VA2HKR	28	24	QC	SOLP (A)	1,344
VO1BQ	34	18	NL	SOHP	1,224
VE7DB	30	20	BC	MOLP	1,200
VE5MX	28	18	SK	SOLP	1,008
VE3QEE	23	19	ONS	SOLP	874
VA3MYC	23	19	ONE	SOQRP	874
VA3EEB	25	15	ONS	SOLP	750
VE7BEF	22	17	BC	SOHP	748
VE3PJ	19	12	ONE	SOLP (A)	456
VA7XZZ	16	14	BC	SOLP	448
VE2QV	11	9	QC	SOHP	198
VE3VSM	8	8	ONS	SOHP	128
VA3ASE	7	6	GTA	SOLP	84
VA2BN	8	5	QC	SOLP	80
VE3AYR	4	4	GTA	SOLP	32
VE7KCY	4	4	BC	SOLP	32
VA3BAH	3	3	ONE	SOLP	18

WAE DX CONTEST, RTTY

Call	QSO	QTC	Mult	QTC	Score
VE3CX	SOHP	791	314	451	389,988
VE7CC	SOHP	801	398	175	388,448
VE2FK	SOHP	544	190	766	248,900
VA2ES (VE2AXO)	SOHP	408	250	398	201,500
VE2BVV	SOLP	441	226	292	165,568
VE3RZ	SOHP	279	249	204	120,267
VA2RAC (VE2ZT)	SOLP	380	208	158	111,904
VE2NMB	SOHP	302	190	138	83,600
VA7ST	SOHP	313	217	58	80,507
VE6TK	SOHP	290	186	113	74,958
VE7IO	SOHP	298	172	94	67,424
VE3BR	SOLP	282	181	88	66,970
VE3TM	SOLP	255	185	100	65,675
VA3LR	SOLP	260	192	75	64,320
VE2EBK	SOHP	203	152	197	60,800
VA1XH	SOHP	201	154	130	50,974
VA2QR	SOLP	151	126	89	30,240
VE3TW	SOHP	152	136	69	30,056
VE7BC	SOHP	178	102	29	21,114
VE2DSB	SOHP	156	124	0	19,344
VO1BQ	SOLP	96	101	89	18,685
VE3RCN	SOLP	111	112	0	12,432
VE3XAT	SOLP	71	97	0	6,887
CF7XNL	SOLP	50	54	0	2,700
VE3DZ	SOLP	42	42	0	1,764
VY0ERC (VE1RUS VE3KTB, Op)	MOHP	24	48	0	1,152
VE2QV	SOLP	33	33	0	1,089
VE3EEJ	SOHP	28	36	0	1,008
VE6QO	SOLP	17	22	0	374
VE7AB	SOLP	18	18	0	324
VO2AC	SOLP	9	15	0	135

OK/OM DX CONTEST, CW

Call	QSO	Mult	Category	Score
VE3NNT	92	75	SOABHP	20,700
VE9ML	58	52	SOABLP	9,048
VE3NNT	59	47	SO20HP	8,319
VE2BWL	42	34	SO20HP	4,284
VE9OA	38	34	SOABLP	3,876
VE3FJ	320	29	SOABHP	2,784
VE3NNT	26	22	SO40HP	1,716
VE3VN	15	15	SOABLP	675
VA3EC	15	14	SO20LP	630
VA2WA	16	13	SOABHP	624
VE3NNT	7	6	SO80LP	126
VA3FN	1	1	SO40LP	3

LZ DX CONTEST

Call	QSO	Mult	Category	Score
VE9HF	335	35	SOSB20 Mixed	39,900
VE2FK	205	41	SOABHP CW	31,037
VE2BWL	127	48	SOABHP CW	29,232
VE3NNT	153	41	SOAB HP CW	27,224
VE3FJ	135	37	SOAB HP CW	19,795
VE3KP	85	35	SOAB HP CW	10,640
VE1RSM	65	24	SOABLP CW	7,176
VA3EC	48	21	SOABLP CW	3,213
VA2WA	44	190	SOAB HP CW	2,508
VE9OA	36	13	SOABLP	1,573

ARRL 160-METER CONTEST

Call	QSO	Mult	Section	Class	Score
VE3EJ	1,642	133	ONS	SOHP (A)	533,729
VE3DZ	1,164	119	ONS	SOHP	313,803
VE3CX	1,220	109	ONN	SOHP	280,348
VE3PN	937	108	ONE	SOHP	232,524
VO1HP	624	99	NL	SOHP	193,347
VE3MGY	991	93	ONS	SOLP (A)	189,906
VE6WQ	934	87	AB	SOHP (A)	171,912
VE3NZ	910	83	GTA	SOHP (A)	154,546
VE6BBP	853	88	AB	SOHP	152,504
VA2WA	606	99	QC	SOHP (A)	141,372
VE7NY (VE7CC, VE7NY, Op)	731	87	BC	MO HP	136,329
VE2OJ	810	81	QC	MO HP	135,108
VE5UF	703	83	SK	SOHP	118,441
VE3VN	605	90	ONE	SOLP	117,540
VE9HF	549	91	MAR	SOHP (A)	114,933
VE3XL	716	75	ONE	SOLP	110,325
VE3KP	597	82	ONE	SOHP	101,598
CF3FF	641	74	GTA	SOLP (A)	95,534
VE3NE	578	75	GTA	SOLP (A)	88,275
VE2BWL	445	82	QC	SOHP (A)	78,146
VA2CZ	164	51	QC	SOLP (A)	17,799
VE9CB	142	54	MAR	SOHP	15,660
VA3RKM	166	39	ONE	SOLP	13,065
VE3VGI	88	58	ONN	SOHP (A)	12,470
VE3FJ	145	42	ONS	SOHP	12,432
VE3DS	101	51	GTA	SOLP (A)	11,220
VE3JI	121	44	GTA	SOLP (A)	10,780
VE6TL	99	50	AB	SOHP (A)	10,350
VA3MW	94	50	ONE	SOHP	10,150
VE2JCW	148	32	QC	SOLP	9,568
VE6BF	116	40	AB	SOLP	9,121
VE3MV	120	38	GTA	SOLP (A)	9,120
VE3CWU	102	39	GTA	SOLP (A)	8,073
VE5SF	102	36	SK	SOLP	7,344
VE6KC	74	42	AB	SOHP (A)	6,594
VE7VV	97	28	BC	SOQRP	5,516
VE6TN	64	39	AB	SOLP	5,109
VE3SS	64	32	ONS	SOHP (A)	4,096
VE3SMA	72	26	GTA	SOLP	3,744
VE6AX	48	31	AB	SOLP (A)	3,255
VE3DQN	56	27	ONE	SOQRP	3,024
VA7GI	49	29	BC	SOLP	2,929
VE6LB	43	27	AB	SOHP (A)	2,889
VA3FN	39	25	ONS	SOLP	1,950
VE3IDS	35	21	ONS	SOQRP	1,470
VE3XT	31	16	ONN	SOQRP	992
VA3TIC	22	16	ONE	SOLP	704
VE2GT	20	13	QC	SOLP (A)	520
VE6EX	19	10	AB	SOQRP	380
VE3MDX	15	12	GTA	SOLP	360
VA3DCF	14	12	ONE	SOLP	336
VE7BGP	20	8	BC	SOLP	320
VE5MX	15	10	SK	SOLP	300
VE6NS	3	2	AB	SOLP	12

ARRL 10-METER CONTEST

Call	QSO	Mult	Section	Class	Score
VE5UF	106	25	SK	SOHPCW	10,600
VE3PN	83	31	ONE	SOHPCW	9,920
VE5GC	107	22	SK	SOLPCW	8,976
VA3DF	74	32	ONS	SOLP MIX (A)	8,640
VE6BBP	86	24	AB	SOHPCW (A)	8,256
VE5MX	94	23	SK	SOHP MIX (A)	8,234
VE7XF	109	16	BC	SOHPCW (A)	6,912
VE2FWW	68	25	QC	SOHPCW	6,300
VE3EJ	63	25	ONS	SOHPCW	6,000
VE1OP	61	16	MAR	SOHPCW (A)	3,904
VE6WQ	55	16	AB	SOHPCW	3,520
VA3DX	42	18	ONS	SOHPCW (A)	2,880
VE6TL	47	17	AB	SOLP MIX (A)	2,686
CF7MM	62	11	BC	SOLPCW	2,596
VE3PJ	32	16	ONE	SOLP MIX (A)	1,728
VE3CX	27	16	ONN	SOHPCW (A)	1,664
VE5VA	29	13	SK	SOLPCW	1,508
VE9AA	27	13	MAR	SOHPCW	1,404
VE4TV	28	12	MB	SOLPCW	1,344
VE3DZ	29	11	ONS	SOHPCW	1,276
VE4MR	18	11	MB	SOLPCW	792
VE4EA	18	12	MB	SOLP MIX (A)	792
VE7SGW	21	7	BC	SOLP MIX	532
VA3EC	17	7	GTA	SOLPCW	476
VE3ZY	14	9	ONE	SOLPCW	468
VE7JKZ	22	4	BC	SOHPCW	352
VE3FJ	13	6	ONS	SOHPCW	312
VE3VY	13	7	ONE	SOLPCW (A)	280
VE3RCN	12	4	ONS	SOLP MIX	168
VA3RJ	7	4	GTA	SOQRPCW	112
VE9CB	6	5	MAR	MO HP	110
VO1HP	7	4	NL	SOHPCW (A)	96
VA3RKM	11	2	ONE	SOLP MIX	76
VE6SH	5	4	AB	SOLP MIX	64
VA7ST	4	4	BC	SOHPCW	64
VE3TM	7	2	ONE	SOLP MIX	52
VE3AYR	6	2	GTA	SOLPCW	48
VA3TIC	5	3	ONE	SOHP MIX	30
VA2LGQ	2	2	QC	SOLPCW	16
VE7BGP	3	1	BC	SOLPCW	12
VE3CBK	2	1	ONE	SOQRPCW	8
VA3FN	1	1	ONS	SOLPCW	4
VE2NCG	1	1	QC	SOLP PH	2

OK DX RTTY CONTEST

Call	QSO	DXCC	OK Mult	Category	Score
VE3CX	184	16	4	SOABHP	6460
VE3KTB	89	22	6	SOABHP	6104
VE2NMB	149	32	8	SOABHP	13760
VE2FK	41	9	2	SOABHP	1562
VE2BVV	277	55	14	SOABLP	42780
VE3PJ	41	10	1	SOABLP	1210
VA7ST	62	8		SOABLP	544
VE2QV	30	6	1	SOABLP	350
VA1XH	65	16	6	SOSB40	3630

CROATIAN CW CONTEST

Call	QSO	Mult	Class	Score
VE9AA	286	85	SOABHP	81,260
VE2BWL	212	70	SOABHP	46,690
VE1OP	198	53	SOABHP	26,871
VE2FK	155	40	SOABHP	18,800
VE9OA	72	28	SOABLP	7,028
VE3FJ	84	25	SOAB20HP	4,900
VE3KP	66	19	SOABHP	2,689
VE3DZ	36	130	SOAB20HP	1,079
VE3TW	28	16	SOABHP	1,024

STEW PERRY TOPBAND CHALLENGE

Call	QSO	Best DX (km)	Category	Score
VE3MGY	567	8494	SOLP	3,730
VE3VSM	331	6935	SOLP	1,996
VE3VN	178	7005	SOQRP	1,940
VE3PN	329	8032	SOHP	1,931
VE3KP	260	8220	SOHP	1,346
VA3EC	167	8304	SOLP	913
VE1/K7SJ	103	6770	SOLP	891
VE7ACN	141	7834	SOHP	773
VE3YT	205	8163	SOHP	681
VE7XF	122	7958	SOHP	665
VA7EU	87	6250	SOLP	603
VE3CV	108	3678	SOLP	575
VE3DZ	72	3745	SOHP	333
VE3EJ	49	3673	SOLP	268
VA3ST	22	8304	SOHP	233
VE6LB	38	3330	SOHP	172
VE6EX	16	1749	SOQRP	142
VE7JKZ	36	4309	SOHP	139
VE6TK	32	3200	SOHP	117
VE3SV	22	2914	SOLP	76
VE3VHB	22	3644	SOHP	73
VE9AA	10	1197	SOLP	38
VO2RAC	1	1603	SOLP	6

RAC 25th Anniversary Challenge Coins
https://wp.rac.ca/25th-anniversary-coin/

CONTEST CALENDAR FOR NOVEMBER, DECEMBER AND EARLY JANUARY 2019

Contest Name	Start	End	Web Address
Ukrainian DX Contest	1200Z, Nov 3	1200Z, Nov 4	http://urdxc.org/rules.php?english
ARRL Sweepstakes Contest, CW	2100Z, Nov 3	0300Z, Nov 5	http://www.arrl.org/sweepstakes
WAE DX Contest, RTTY	0000Z, Nov 10	2359Z, Nov 11	http://www.darc.de/der-club/referate/referat-conteste/worked-all-europe-dx-contest/en/
JIDX Phone Contest	0700Z, Nov 10	1300Z, Nov 11	http://www.jidx.org/jidxrule-e.html
OK/OM DX Contest, CW	1200Z, Nov 10	1200Z, Nov 11	http://okomdx.crk.cz/index.php?page=english
LZ DX Contest	1200Z, Nov 17	1200Z, Nov 18	http://lzdx.bfra.org/rulesen.html
ARRL Sweepstakes Contest, SSB	2100Z, Nov 17	0300Z, Nov 19	http://www.arrl.org/sweepstakes
CQ Worldwide DX Contest, CW	0000Z, Nov 24	2400Z, Nov 25	http://www.cqww.com/rules.htm
ARRL 160-Meter Contest	2200Z, Nov 30	1600Z, Dec 2	http://www.arrl.org/160-meter
Ten-Meter RTTY Contest	0000Z, Dec 2	2400Z, Dec 2	http://www.rttycontesting.com/ten-meter-rtty-contest/rules/
ARRL 10-Meter Contest	0000Z, Dec 8	2359Z, Dec 9	http://www.arrl.org/10-meter
OK DX RTTY Contest	0000Z, Dec 15	2400Z, Dec 15	http://okrtty.crk.cz/index.php?page=english
Croatian CW Contest	0000Z, Dec 15	2400Z, Dec 15	https://www.9acw.org/
RAEM Contest	0000Z, Dec 23	1159Z, Dec 23	http://raem.srr.ru/en/main/
DARC Christmas Contest	0830Z, Dec 26	1059Z, Dec 26	http://www.darc.de/?id=820
RAC Winter Contest	0000Z, Dec 29	2359Z, Dec 29	http://wp.rac.ca/rac-canada-winter-contest-rules/
Stew Perry Topband Challenge	1500Z, Dec 29	1500Z, Dec 30	http://www.kkn.net/stew/
SARTG New Year RTTY Contest	0800Z, Jan 1	1100Z, Jan 1	http://www.sartg.com/contest/nyrules.htm
ARRL RTTY Roundup	1800Z, Jan 5	2400Z, Jan 6	http://www.arrl.org/rtty-roundup
North American QSO Party, CW	1800Z, Jan 12	0600Z, Jan 13	http://www.ncjweb.com/NAQP-Rules.pdf

Note: In the above chart an * indicates Local Time. For more contest information check out these sites: http://www.hornucopia.com/contestcal/; http://www.contesting.com; http://www.sk3bg.se/contest/; http://www.arrl.org/contests/; http://www.arrl.org/contests/calendar.html; http://www.arrl.org/dxcc; http://www.cq-amateur-radio.com/cq_contests/index_cq_contests.html. The "Contest Calendar" is presented as a *guide only*. RAC and TCA do not necessarily endorse or support any of the contests or the accuracy of the information.
Bands: The 30, 17 and 12m bands are never used in any contest.

"Rescue on the Rock" – continued from page 50

As always during exercises like these there are many lessons learned from things that are tested that should work but do not. Now identified, work is underway to resolve those issues.

For the Communications Team the exercise was held on the Saturday only. The Ground Search and Rescue team also spent Sunday at seminars, training sessions and various qualification events. A huge amount of work went into the exercise and this article does not even begin to do it justice. It was a very good learning experience for all involved.

From an Amateur Radio perspective we validated our standard operating procedures (SOP) with Ground Search and Rescue as well as CASARA. We successfully used the new BC Winlink forms, CECA members were exposed to a multi-role EOC and net control station, and we validated our SOPs with Emergency Management British Columbia.

It was fun to watch the new CECA members as in the middle of the day you could see them asking themselves "what have I gotten myself into?". CECA's slogan is: "Amateur Radio is a Hobby – Emergency Communication is a Commitment". The new members saw that commitment in action.

On a final note, all "passengers" in the helicopter were located and rescued even though some had wandered away from the crash site. Several days later the aircraft frame was removed from the bush and returned to its home. All the "evacuees" were returned to their homes! All in all a good weekend for all involved.

If you have never organized a simulated emergency test go to https://wp.rac.ca/simulated-emergency-test/. This site has a lot of information that will get you going.

I have been am Amateur since 1999 and currently hold Advanced and Basic With Honours Qualficiations.

Since 2008, I have held the position of Amateur Radio Coordinator for the City of Nanaimo and the southern half of the Regional District of Nanaimo. I also serve as the Regional Emergency Radio Representative, Vancouver Island Region, for Emergency Management British Columbia. I have also worked in law enforcement and other emergency services since 1964.

SECTION NEWS THE RAC FIELD ORGANIZATION FORUM

BRITISH COLUMBIA / YUKON:
SM Acting Bill Gipps VE7XS
A/SM Ron McFadyen, VY1RM
A/SM Neil King, VA7DX
STM Al Ross, VE7WJ
SEC Acting Al Munnik VA7MP
SEC Terry Maher, VYIAK (Yukon)
OBM Bill Foster, VE7WWW
OOC: Dennis Wight, VE7IJJ
ACC: Karla Wakefield, VA7KJW
CEC: Gursimran Gill, VA7GUR
Website: www.va7mpg.ca

MAY-JUNE SM REPORT:

If you have an item of interest to include in this section, please send it to bill.gipps@gmail.com and to the TCA Editor at tcamag@yahoo.ca.

Public Service Honour Roll
July:
VE7XLH: 48; VE7GN: 342; VE7WJ: 46; VA7MPG: 75; VE7SJT: 11; and VA7ET: 14.
August:
VE7XLH: 29; VA7MPG: 59 ; VE7GN:423 ; VE7WJ: 31; VA7SJT: 105; and VE7ET: 9.

ALBERTA:

SM: Garry Jacobs, VE6CIA
SEC: Brian Davies, VE6CKC
STM: Don Momen, VE6JY
OO: Don Momen, VE6JY
Web: http://wp.rac.ca/ares-alberta-yellowknife-nwt/

JULY-AUGUST SM REPORT:

Peace River and Area
Sean Smith, VE6SAR

The Mackenzie Regional Radio Club (MRRC) has just finished installing their new repeater VE6AAF in Berwyn, Alberta. It's a long-range VHF repeater that covers many of the communities in the Peace River area that were not previously covered. It is also our new UHF linking hub linking the VE6AAA repeater and the VE6PRR repeater which is linked to the PCARC system via VE6OL. The frequency is 146.79 – CTCSS 100.0 Hz. Its first public service use was on September 16 in support of the Terry Fox Run in Grimshaw, Alberta. The MRRC has been providing support to the Annual Terry Fox run for over 20 years.

Fort McMurray and Area
Al, VE6FTM

We have been very quiet for a while, but project momentum is beginning to pick up. We are happy to welcome our latest beaconer to the 60 metre beacon project.

It was awesome to see Ernest, VE6EC, beaconing from Spruce Grove, and being heard by all the other stations in the province. Thank you Ernest, for your beacon and your continued support of the project.

MESSAGE FROM THE RAC COMMUNITY SERVICES OFFICER

Welcome to a special issue of *The Canadian Amateur* magazine on the topic of Amateur Radio and Emergency Communications. We are pleased to bring it to you as part of RAC's 25th Anniversary in 2018.

Emergency Communications in Canada is unique to our country and operates in much the same way that Provincial Governments work with municipalities. Provinces provide support, financial and otherwise, but operation control comes from the municipalities.

In Emergency Communications, RAC provides the support but operational control rests with the non-governmental organizations (NGOs) and other groups that ARES and other EmComm organizations have as customers.

Being so large geographically, Canada brings many challenges in the delivery of emergency communication services. RAC overcomes many of these challenges by subscribing to the Incident Command system so that operators can work anywhere in Canada and be familiar with the procedures. RAC decentralized in order to give full autonomy to various groups across Canada.

RAC also provides standardized training through its Certified Emergency Coordinator (CEC) program, Section support through our Section Managers and their appointees and provides ongoing opportunities to share "best practices" in TCA magazine. For example, in this special issue, you will read articles from old friends that are not new to TCA and also from some new contributors.

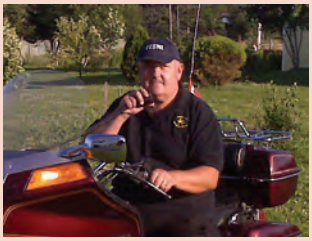
RAC President Glenn MacDonell, VE3XRA, provides a report on the inaugural meeting of NGOs involved in emergency management which was held in Ottawa on Wednesday, September 12.

Ron Thompson, VE8RT, writes about the significant challenges involved in updating Emergency Communications and Public Service Amateur Radio in Canada's North. It is a very interesting read.

From Alberta, Vince d'Eon, VE6LK, reflects on the experiences of Amateurs who responded to the High River Alberta floods five years ago. Also from Alberta, JT (Mitch) Mitchell, VE6OH, provides some "Recommendations for an Emergency Operations Centre".

From British Columbia, an old friend who is no stranger to emergency communications, Paul Giffin, VA7MPG, offers his extensive experience in "Musings of an Emergency Coordinator" and "Rescue on the Rock".

From Ontario, John deLagran, VE3VL, writes an interesting account of the historic Peterborough Flood of 2004.



CFSO Doug Mercer, VO1DM
Email: vo1dm@rac.ca
(see page 4 for contact info)

Rick MacMillan, VE9MTB, describes how the International Repeater Group serves Radio Amateurs and the public in the Maritimes and beyond.

Bj Madsen, VE5FX, describes how the Emergency Measures Organization (EMO) of the town of Tisdale, Saskatchewan and the surrounding community entirely fund and maintain the local Amateur Radio repeater and its autopatch facility.

Guy Richard, VE2XTD/VE2QG, shares his experiences with the recent G7 Summit in Charlevoix, Quebec. There are also three articles about the 1998 Ice Storm that affected Ontario, Quebec and the Maritimes.

I would like to sincerely thank all of our contributors and I hope that you enjoy each and every well written article.

Doug Mercer, VO1DM
Community Services Officer

Cold Lake and Area
Garry, VE6FGN

Cold Lake Amateur Radio Society has had a busy yet fun summer. Events we supported include: support to the Run for Ronald McDonald House; the ARRL Field Day; the Canada Day run; and the Cold Lake International Airshow. Upcoming events include support to: Hearts for Healthcare, Ride for Refuge and Shake your Tush.

The Airshow is our largest event and we'd like to gratefully acknowledge the tremendous support we receive from Amateurs all across the Province. We had approximately 65 persons responding to Net Control on four nets.

Our efforts were well received by the Airshow committee and we've been invited back for the next show in 2020. If you're interested in supporting, please contact us through our Facebook page. We have free camping, great deals on hotel rooms, and really work hard to ensure our Amateur volunteers learn a lot and have a ball! We cannot do this without your help so please consider joining us!

We get a great deal in return from supporting our community and there is a tremendous training for potential ARES deployments, goodwill from those we support, and all while having loads of fun. Please consider conducting local community support – bet you'll never regret it!

Red Deer and Area
Garry, VE6FGN

Those of us who made it to the Cold Lake Airshow from Red Deer enjoyed the hospitality and camaraderie for the entire weekend. It was a positive experience. Following that, several of us enjoyed doing communications for the Rocky Mountain House Airshow. Troy, VA6TNA, made all the arrangements between the Airshow Committee and the Amateurs who took part and did a great job of it. Thank you to all who participated.

John, VE6SJA, ran the station at the Red Deer County Emergency Operations Centre (EOC) for Field Day this year. Good job John.

Thanks to Jim, VE6JRR, for being the temporary Section Traffic Manager for Alberta, and also to Don, VE6JY, for taking on the job going forward.

Thank you to all ECs who submitted reports this time around and to everyone who attended and contributed to the meeting.

– SM Garry, VE6CIA

SASKATCHEWAN:

Acting SM: Dave Scarfe, VE5UO

JULY-AUGUST SM REPORT:

The Saskatoon Amateur Radio Club provided Communication support at the Nutrien Fireworks Festival on August 31 and September 1 to keep the hot zone area safe and secure.

Thank you to VE5TLC, VA5RJF, VE5DAB, VA5DAK, VA5KAS, VA5RAP, VE5NAT, VE5DHE, VE5RS and VE5GA for their participation to contribute to a successful event.

– Acting SM Dave, VE5UO

MANITOBA:

SM: Jan Schippers, VE4JS
STM: Jan Schippers, VE4JS
SEC: Vacant
DECs: Jeff Dovyak, VE4MBQ (Capital Region and CanWarn);
Gord Snarr, VE4GLS (South-East Central Region / South-West Region);
Wayne Warren, VE4WR (North Region and Special Projects);
Vacant (North-Eastern Region);
Vacant (North-West Region).
ECs: Ron Wlliscroft, VE4QE (Selkirk and District); Bill Boskwick, VE4BOZ (RM of Grey, RM of Dufferin & Town of Carman); Jason Coombe, VE4JYC, (Brokenhead ARES); Grant Delaney, VA4GD (LGD of Pinawa and surrounding municipalities).
Web: http://wp.rac.ca/ares-manitoba/

JULY-AUGUST SM REPORT:

Summer is over and I hope everyone enjoyed it. I know I did. July brought the annual Hamfest at the International Pease Gardens. I did not attend but from what I heard it was enjoyable event. The end of the summer brings to a close our severe weather participation for CANWARN. Now it is time to do antenna work.

Winnipeg ARES
Jeff Dovyak, VE4MBQ

Almost 90 volunteers were involved with the Amateur Radio operation at the 2018 Manitoba Marathon on Sunday, June 18! We had 80 certified Amateurs and five non-operators.

Our 2018 volunteers were:

VA4s: CAT, DON, RWT, CQD and RAD.

VE4s: PH, PEH, BOY, DAE, SGM, DTF, TSY, CEL, SBS, BHW, WDZ, TW, MHZ, GLS, JDH, KON, GCV, GS, MMD, JAL, WX, TTH, DBV, GAG, HK, BAW, VB, NQ, DJS, RIC, CEM, ANF, LIT, JBL, HQ, AAO, HAY, AJO, GIS, GZ, UK, KIZ, MWH, KAZ, SIG, EH, HAZ, STS, NJR, GWN, YYL, ACX, CDM, ESX, NCH, JNF, WTF, MAB, EAR, QV, MMG, SYM, TRO, LDI, DWG, MMW, GKS, SE, XYL, EBG, VID, JS, AFL and MBQ.

Other participants included: VE6LOT; Rhonda Dovyak, Jay Lubiansky ,Clorisce Lameroux, Gail Lameroux and Betty Pettapiece.

Without our dedicated volunteers, all the technology and supporting organizations, which are of great assistance, would not add up to what we have been able to deliver year after year.

Our supporting organizations include: Winnipeg ARC, Winnipeg ARES, South-Central ARES, Pathfinders ARC and the Manitoba Repeater Society.

Forty-six long-serving Marathon volunteers were recognized during the Chairman's Reception on June 16. Of that number, 13 were Amateur Radio operators.

The Amateurs recognized during the Chairman's Reception were: VE4ACX, VE4EAR, VE4HK, VE4NQ, VE4HQ, VE4DWG, VE4AJO, VE4SE, VE4XYL, VE4GLS, VE4MHZ, VE4HAY and VE4MBQ.

Subsequent to that Reception, long-serving volunteers each received a nice letter from Mayor Brian Bowman.

Once the 2018 ARES After-Action Report is finalized it will likely be posted on both the Winnipeg ARC and Winnipeg ARES websites. Volunteer registration for 2019 will likely begin in December or January.

Our June meeting featured a debrief of both the Royal Canadian Air Force (RCAF) Run and the 2018 Manitoba Marathon. A number of the concerns expressed for the Marathon will be documented in the After-Action Report. We received a very nice letter from LCol Collins on behalf of RCAF Commander LGen Meinzinger with regard to what we do for the RCAF Run.

We had a good turnout for our mid-August meeting, but unfortunately our scheduled speaker was not able to attend. We received an order of Winnipeg ARES golf shirts just before our August meeting; these are for ARES members only and are available from Susan, VE4SYM, for $40 each.

– Jan Schippers, VE4JS

Traffic Totals
July: 13
August: 3

ONTARIO NORTH:

SM: Allan (Al) Boyd, VE3AJB
ve3ajb@vianet.ca
STM: Patrick (Pat) Dopson, VE3HZQ
dopsonp@vianet.ca
SEC: Stiig Larsen VE3LBX
slarsen@vianet.ca
OBM: Paul Caccamo, VA3PC
va3pc@ciinet.org
Web: http://ontario.racares.ca

JULY-AUGUST SM REPORT:

Amethyst District

Atikokan

In April, Warren Paulson, VE3FYN, met with the Town of Atikokan Acting Chief Administrative Officer (CAO) Jason Young and Fire Chief/CEMC Graham Warburton. Previously, my interaction with the Town regarding ARES had been through the now retired Fire Chief Garth Dyck. The purpose of the meeting was to enlighten them on ARES' current relationship with the Town which includes:

1) An Amateur VHF/UHF/HF station at Town Hall for emergency communications.

2) An Amateur club station at the Atikokan Airport, which may also be used for emergency communications.

In the end, they expressed their continued support for our efforts, and committed to supplying us with some needed additional equipment. A key piece of equipment the Town agreed to fund was a computer interface for the HF radio at Town Hall, which will allow for Winlink email communications from that station.

In other efforts, we have initiated weekly nets on our local repeater to get several new (and new to Atikokan) local Amateurs on the air.

Killarney District

Manitoulin Island and North Shore

On July 1, members of the Manitoulin ARC Inc., led by Igor Slakva, VE3ZF, participated in the RAC Canada Day Contest from the Gore Bay Manitoulin airport site.

On July 15, over 100 Amateurs from Sault Ste. Marie to Toronto gathered in Little Current on Manitoulin Island for a picnic and to help the Manitoulin Amateur Radio Club celebrate their 30th anniversary. A great time was had by all.

On Wednesday, August 1, ARES volunteers from the Manitoulin, Elliot Lake and Sudbury Amateur Radio clubs assisted the local Lions club and the Town of NEMI with the performance of the OPP precision motorcycle team the "Golden Helmets".

The volunteers were: Al, VE3AJB; DEC Jim VE3LJM; Lorraine, VE3LMJ as NTC and scribe; Lou, VE3NDY; Jeff, VE3JFN; Martin, VA3MFC; Mike, VE3MKN; John, VE3BB; Patric, VE3HZQ; Rod, VA3RP (EC Elliot Lake); Earl VE3AB; and Wilf, VA3WFO.

For the volunteers who had to travel to the Island, this was an all-day event and their expertise and assistance was greatly appreciated.

On Sunday, August 5, ARES volunteers assisted the local Lions club with the 51st annual Haweaters Parade in Little Current. The volunteers were: Al, VE3AJB; Jim, VE3LJM (DEC); Lorraine, VE3LMJ; Lou, VE3LDY; Jeff, VE3JFN; George, VE3GMD; Mike, VE3MKN; Martha, VE3FVT: Mike, VE3UKI; Martin, VA3MFC.

Sudbury

This summer a handful of Sudbury ARES members were involved in a few activities and were asked to participate in a couple of events by the Greater Sudbury Emergency Management.

On June 5, we were asked to take part in a tabletop exercise named "Exercise Deep Water" simulating a tailings dam breach on one of Vale's dams. We were asked to send a message and test voice communications to the Provincial EOC from our radio room in the EOC. Prior to the exercise our CEMC had requested for an ARES presence at the PEOC station and confirmation had been given that the station would be open and monitoring linked repeaters and HF frequencies.

The following ARES members attended our station to participate: Wayne, VE3THN; Thelma, VE3WIP; and EC Alan, VA3AJV. We started up the equipment and had the Winlink station tested and ready to send before we received the official go-ahead to send their message.

At 11:15 am we were requested to send a test message to the Duty Officer. The message was sent directly to the Duty Officer's email at the PEOC via our Winlink station. It worked well with the message being received and acknowledged minutes later. VE3EMO doesn't have Winlink capabilities. We didn't use repeater linking and we don't rely on it because we train for more likely situations such as Internet failure.

Next, we tried HF voice frequencies as given by the ARES operator in a previous confirmation email. Several attempts were made on 3.742 MHz and 7.153 MHz (Comsont net frequency) before the net with no reply. We also tried the published RAC emergency HF frequencies for 80m and 40m with no luck. We checked into the Comsont Net once the NCS started, as this was one of the frequencies given to us. The net control from the USA heard us fine as did a few operators around Southern Ontario. The NCS and other VE3s even tried to call the PEOC VE3EMO station, getting no response. It is a good thing we can send email and forms directly through Winlink!

Our HF station is performing well and we knew we were being heard so we are not sure what is going on with the PEOC Amateur station.

A small group of ARES members gathered at EC Alan's home on the Saturday of Field Day weekend to test both our newly-built NVIS antenna and our new dipole, which was purchased recently, and to set up some radios and have some leisurely fun getting on the air a bit. Thanks to Thelma, Real and Wayne for coming out!

It was a great opportunity to see how to put up the NVIS antenna and what is involved. It is a two- or three-person job! During the initial setup the top centre pin that connects two of the elements broke off. We needed to fix the problem and it was noticed that we had to strengthen the connection. Off to my garage we went and after about an hour we had a small bolt and jumper installed and were ready to connect the wire elements and erect the antenna. I set up my HF rig inside my camper on battery power and checked signals with the NVIS for the first time. The antenna was hearing very well but we seemed to have trouble with some contacts likely due to the mass congestion and noise levels on the bands. Those contacted gave good signal reports, so it seems to be performing well!

Off to the backyard we went and threw a rope up to a high branch of a tree and hoisted the G5RV-type dipole. Wayne worked from the gazebo on the back deck with his rig and the dipole seemed to perform very well. Contacts were made into the USA and Southern Ontario.

My goal was to set up some radios, do some testing and practice with equipment and have some fun with no pressure of a contest! I must say it worked out fine! The true purpose of Field Day in my opinion.

On July 24, we were asked to give a presentation at an Emergency Management children's summer camp to discuss and demo what ARES can do and what Amateur Radio is and the many activities you can do with radio. The group of 31 aged 9 to 12 year olds seemed interested and had some good questions for us!

Réal, VE3ZDK and EC Alan set up two of our field kits with laptops and explained the equipment using D-Rats. They were impressed with the chat and message over radio and couldn't believe you could send messages without Wi-Fi!
A huge thanks to Réal for bringing the kits and giving his time to help!

– Allan Boyd, VE3AJB

DECs Reporting:
VA3s: PC
VE3s: LJM
ECs reporting:
VA3s: AJV, SPT and RP
VE3s: EGC, LJM, OTL and MXJ

ONTARIO – GREATER TORONTO AREA:

SM: Rick Harrison, VA3NV
SEC: Rick Harrison, VA3NV

JULY-AUGUST SM REPORT:

GTA West –
DEC Kevin Andrews, VA3KRA

See Halton and Peel Region reports below.

Toronto –
DEC Malcolm Kendall, VE3BGD

See Toronto report below.

Halton Region

Burlington ARES –
EC Kevin Andrews, VA3KRA

CANWARN: Halton CANWARN wasbactivated on a Severe Thunderstorm warning at 18:33 hours on July 16. The warning was cancelled at 19:17 hours and the net stood down.

Another activation occurred on July 26 at 16:08 hours for a severe thunderstorm warning. The net remained active until 17:08 hours.

A severe thunderstorm watch was issued at 13:15 hours on August 9. As Halton CANWARN generally only activates on warnings no net was started. The situation was monitored by CANWARN coordinator Mark, VA3FLC, and email updates were sent to all ARES ECs in Halton and Hamilton areas until the watch ended at 20:57 hours.

On Sunday, July 1, members from the Burlington, Hamilton and South Halton ARES groups assisted with communications for the CGS Law Canada Day 5K Run/1K Kids Run in downtown Burlington. DMR simplex was used for communications and it performed well. Thanks to Gary, VE3TTO, Stan, VA3SBB, Joan, VE3JNX, Norm, VE3ZKO, Mark, VA3FLC, Derek, VE3DDL and Kevin, VA3KRA, for helping out.

On July 13/14 members from Burlington and South Halton ARES installed and operated the Public Address system and talkin station for the Ontario Hamfest in Milton. They also disassembled these systems at the conclusion of the Hamfest. Thanks to George, VE3OGP, Peter, VA3PRE, Colin, VE3MSC and Kevin, VA3KRA.

On Wednesday, July 25, the Burlington EC attended a Halton Region Emergency Communications Team (HRECT) meeting.

On Thursday, August 2, Burlington EC Kevin Andrews, VA3KRA, attended a Region of Halton D-LAN disaster software response training seminar.

On Saturday, August 18, the Burlington, South Halton and Hamilton ARES teams assisted with communications for the first annual GEMLI #489 Golden Rescue Run and Walk. This event raised funds for the rescue and ongoing support of golden retrievers. Thanks to Gary, VE3TTO, Joan, VE3JNX, Stan, VA3SBB, Rod, VE3ISO, Peter, VA3PRE, George, VE3OGP and Kevin, VA3KRA, for their participation.

On Thursday, July 12 and Thursday, August 23, the Burlington EC attended the Burlington ARC Board of Directors meetings and provided them with an update on ARES activities.

South Halton ARES (Oakville/Milton) –
EC George Davis, VE3OGP

The South Halton ARES meeting was held on the July 15. There was a debrief of 2018 Field Day activities and a report was delivered related to the information table the group operated at the Ontario Hamfest in Milton on Saturday, July 13.

The SHARES EC George Davis, VE3OGP, attended the July 25 Halton Emergency Communications Team (HRECT) meeting.

On Thursday, August 2, EC George Davis, VE3OGP, attended a Region of Halton D-LAN disaster software response training seminar.

The monthly meeting was held on August 19 and topics of discussion included: approval and preliminary plans for a power trailer to replace the one currently being used; planning for the fall Simulated Emergency Test; participation in this year's Milton Santa Claus Parade; and the design and purchase of South Halton ARES ball caps.

The group assisted Burlington ARES with a public service event on August 18.

The weekly SHARES net continues to be well attended.

Peel Region

Brampton/Caledon ARES
EC Richard Upfield, VA3RMU

In July there were four weekly nets with 44 stations checking in; three formal traffic messages were passed and four Ontario Section Bulletins were read by VA3BGD/VA3RMU. Four weekly Winlink nets took place and a total of 27 stations checked in.

Five weekly nets were conducted in August and 43 stations participated and 5 RAC Ontario section bulletins were read by VA3BGD and/or VA3RMU; total time for all nets was 189 minutes.

Five weekly Winlink nets sessions had a total of 42 stations checking in. The group holds a weekly breakfast session.

Toronto

Toronto ARES East (Scarborough) – EC Henry Blais, VE3HJL

The Toronto East EC runs Winlink stations on 3.600 MHz; 3.611.500 MHz and 7.108 MHz 24 hours a day, 365 days a year. Winlink packet is VE3HJL-10 on 145.010 MHz, no tone. A new 60-foot tower is being installed in August that should increase range of some of the above stations.

DECs reporting: VA3KRA.
ECs reporting: VE3OGP, VA3RMU, VE3XBH and VE3HJL.

OBS reporting:
July:
Halton Region: VE3JUZ 7; VA3KRA 1;
Peel Region: VA3RMU 4.
August:
Halton Region: VE3JUZ 7; VA3KRA 1;
Peel Region: VA3RMU 5.

Number of Registered ARES members in Section: 220

ONTARIO EAST:

SM: Michael Hickey, VE3IPC
Email: ve3ipc@gmail.com
SEC: Michael Hickey, VE3IPC
STM: Vacant
OBM: Paul Caccamo, VA3PC, va3pc@ciinet.org
Web: http://wp.rac.ca/ares/

JULY-AUGUST SM REPORT:

With Halloween and summer now behind us, we still have a chance to give all our antennas, coaxes and supports systems a good going over before the big white stuff comes in and the bitter cold comes knocking on the door, hi.

I would be interested in knowing if anyone out there uses HF for Winlink 2000 email traffic and the like at 300 baud. Someone just

brought this to my attention and he uses this when the local Winlink Internet gateway in Ottawa is offline. A great idea for getting important EmComm messages outside of the affected area. Let me know if you have or do use this mode for email messages. I would like to hear from you.

Barrie Crampton, VE3BSB, the Group Coordinator and President of the Lanark North Leeds (LNL)-ARES Inc., has decided to step down from both these position after decades of service going back to the 1998 Ice Storm. Thank you Barrie for all of your years of volunteer services. We wish you the very best and hope you enjoy the time to do the things you like to do best.

The new Group Coordinator for LNL-ARES will be Allan, VA3KAI. Thanks Allan for stepping up to this important leadership position. Best wishes to you and to your group.

ARES EmComm group reports:

Submitted by RCW-ARES Group Coordinator Bob, VE3YX

The Renfrew East (RCE)-ARES Group Coordinator Bob, VE3YX, reports that the Sunday Ontario ARES net has had to change frequency again this time from 7.081 MHz to 7.120 MHz as of September 16. This is due to the users of FT8CALL that have moved up in frequency and have now moved into the 7.081 area.

Submitted by MS Bike 2018 – Amateur Radio Comms Organizer Nicole, VE3GIQ

The MS Bike Tour 2018 was held on August 18 and 19 and approximately 566 riders (slightly up from last year) and 15 Amateur Radio operators participated. Amateurs have assisted in this event since 2015.

For the second year in a row Nicole, VE3GIQ, Treasurer of the Ottawa Valley Mobile Radio Club organized the communications for the MS Society Fundraiser. Seven Amateurs from the Seaway Valley Amateur Radio Club (SVARC) and eight from the Ottawa Valley Mobile Radio Club (OVMRC) participated. In recent times, this is the fourth year running that Amateurs support this event.

On August 18 and 19, 566 cyclists rode from Metcalfe, Ontario to the NAV Centre in Cornwall, stayed overnight and most rode back to Metcalfe on Sunday. Amateurs staffed these end points along with five intermediate rest stops. For a complete report please see the Public Service / ARES column on page 53.

Submitted by Ottawa ARES AEC Mike, VE3FFK

The Ottawa ARES / EMRG Group reports that the monthly repeater test went ahead on July 4, with no problems, except for the low turnout as happens in the summer. Once again Dave, VE3KMV, coordinated Jean, VE2OCQ, and Mike, VE3FFK, through the tests.

The tests which were held on August 1 went well, with a high turnout of check-ins, and all repeaters checked out fine. Dave, VE3KMV, reported that Peter, VE2BJZ, Johnny, VE3EIE, Tim, VE3TXB, Len, VE3HL, Arthur, VA3BIT, Jean, VE2OCQ, Roger, VE3NPO, Sandy, VE3AAC, Frank, VE2KOI, and Stuart, VE3SMF, took part in rotating through the repeaters. This was a considerable increase over the previous month's participation.

The MS Bike Ride from Metcalfe to Cornwall was held on August 18 and 19. Nicole, VE3GIQ, was assisted by the following Amateurs from the Ottawa end of the event: Ernie, VE3EJJ; John, VA3JYK; Frank, VE2KOI; Norm, VE3LC; Dave, VA3NIE; Tim, VE3TXB; and Dave, VE3ZZU.

The following Amateurs from the Seaway Valley ARC participated at the Cornwall end: GC Earle, VE3IMP; Art, VE3AIH; Suzan, VE3EXN; Doug, VE3HTR; Hal, VE3HWG; Larry, VA3RSQ; and Hermanna, VE3UNV.

For a complete report please see the Public Service / ARES column on page 53.

Submitted by Peterborough ARES Interim GC John, VE3VL

The Peterborough ARES group members conducted a special radio station setup and test of the Peterborough County and City Paramedics emergency trailer unit on August 21.

The trailer's "quad band" radio connected to the tripod mast antennas running off the trailer's generator for power and all worked well with radio contacts from across Peterborough County and beyond.

Attending on site were:
Bob, VE3IEL; John, VA3NW; Bob, VE3RVZ; John, VE3VL; Nina, VE3IRK; and Rick, VE3IQZ. Monitoring and checking in from outside the county was Mark, VE3LJQ.

Many thanks to the above mentioned Amateur Radios for providing support with this operation.

– 73, Michael Hickey, VE3IPC

Districts Reporting:
Eastern Ontario and Severn ECs (GCs) or Assistants reporting:
VE3FFK, VE3VL, VE3YX and MS Bike Ride organizer VE3GIQ.
OBS reporting: VE3IQZ and VE3KII for "ComsOnt" daily morning net 40m 7.153 –.

RAC FIELD ORGANIZATION REPORTS

National Traffic System (NTS) Net Reports

Net (Manager)	Sessions	QNI	QTC
July 2018:			
APSN (VE6JRR)	31	1583	30
ARES	10	116	1
Aurora (VE7GBO)	31	2210	13
BCEN (VE7XLH)	31	190	23
BCYTN (VE7WJ)	31	418	37
CECA (VE7GBK)	5	118	17
MEPN (VE4JS)	31	537	5
MMWXN (VA4GD)	31	703	2
MRS (VE4HK)	9	286	0
MSMN (VE4ALF)	22	610	0
August 2018:			
APSN (VE6JRR)	31	1608	33
ARES	7	105	1
Aurora (VE7GBO)	31	2081	24
BCEN (VE7XLH)	31	233	16
BCYTN (VE7WJ)	31	233	32
CECA (VE7GBK)	4	98	14
MEPN (VE4JS)	31	510	1
MMWXN (VA4GD)	31	615	0
MRS (VE4HK)	9	292	0
MSMN (VE4ALF)	23	588	0

MARITIMES:

SM: David (Dave) Hull, VE1HUL
Email: ve1hul@rac.ca

JULY-AUGUST SM REPORT:

It has been a busy summer for Maritime Amateurs from the monthly Exercise Handshake to activating lighthouses on the air and just about everything in between.

Exercise Handshake

Exercise Handshake is a radio exercise in the Maritimes which is held on the last Tuesday of the month beginning at 1900 (Atlantic time). Amateur Radio operators associated with Emergency Management Office (EMO), ARES, CANWARN and the Red Cross, as well as all other Amateur Radio operators, are encouraged to participate.

You can find Exercise Handshake on the MAVCOM Repeater system across Nova Scotia and Prince Edward Island as well as IRLP Reflector 9014 and EchoLink via VE1ZX-L node 100853. Exercise Handshake is also on HF at 3.675 MHz.

Ledwidge Lookoff Rally

Scott McNutt, VE1CHL, reports that the Halifax Amateur Radio Club (HARC), with help from members of the Truro Amateur Radio Club (TARC), provided communications support for this CARS sanctioned performance rally. The support included the use of HARC's mobile repeater to provide excellent coverage for the heavily wooded area near Tennecape in central Nova Scotia. Those taking part included:

VE1ALW, VE1BMF, VE1CHL, VE1GFA, VE1JHF, VE1PYE and VE1SCE.

BikeMaine 2018

Although not entering into Canada, the event will run right along the border of New Brunswick and Maine.

The International Repeater Group (IRG) is pleased to help support this event by making available the use of the IRG system Northwest and West Zones repeaters for the Amateur Radio operators in the support team during the event.

EmComm Net

The International Repeater Group (IRG) has an Emergency Communications net every Thursday night at 2100 hours.

The net is to promote and practise good emergency communications for Amateur Radio operators, and to test the operation of the repeater system. It will be a structured net rather than a social net, but all are welcome to listen or participate.

Maritime Lighthouse Amateur Radio Group

This is a group of Amateur Radio operators who enjoy taking part in the fun activity of operating at lighthouses. The goal is direct communication radio to radio, without the usage of Digital, EchoLink, internet (VoIP), etc. They use the call signs VY2PLH for Prince Edward Island and VE9NLH for New Brunswick.

The following lighthouses were activated over the summer: July 13-14-15 Port Bickerton, Nova Scotia; August 17-18-19 ILLW Point Prim PEI; and September 14-15-16 Cape Enrage, NB.

That's it for now. As always if anyone has anything to submit please send it to me at ve1hul@rac.ca

COMING EVENTS

THE HAMFEST AND FLEAMARKET CALENDAR

The following events are listed by date. Some dates and details are tentative. For more Hamfests and Fleamarkets please go to: https://secure.eton.ca/rac/events/upcoming.php

42nd York Region Hamfest
Sponsor: York Region Amateur Radio Club
Date: Saturday, November 3.
Time: Vendors 6:30 am; Public 7:30 am to a covered indoor area with free coffee and tea. Breakfast available on site. Doors open to sales area at 9 am.
Place: Markham, ON; Markham Fairgrounds, 10801 McCowan Road.
Description: Vendors galore, plus a separate hall for admissions. Wide aisles for scooters and wheelchairs. Exhibits and demonstrations. Lots of parking. Great door prizes. Grand Prizes. DXCC, WAS & VUCC Card Checking. Amateur Radio Examinations (register with Hamfest Coordinator prior to Hamfest to ensure we bring enough exams.)
Cost: Public $8; Table rentals: $27 each.
Talkin: VE3YRA 145.350 MHz(-) T: 103.5 Hz and VE3YRC 147.225 MHz (+) T: 103.5 Hz
Info: Contact yrarc.hamfest@gmail.com
Web: http://yrarc.org

Maple Ridge Swap Meet
Sponsor: Maple Ridge Amateur Radio Club
Date: Sunday, November 4.
Time: Vendors 7:30 am; Public 9 am. Open for pancake breakfast at 8 am to 9 am.
Place: Pitt Meadows, BC; 12460 Harris Road, one block south of the Lougheed Highway in the old REC Building.
Description: Ham Radio & computer Swapmeet. The largest in the Fraser Valley. Great prices and lots of stuff. The concession will remain open during the event.
Cost: Tables $20 includes one entry and chance to win a radio. Entry $5 includes chance to win a radio.
Talkin: 146.800 -600 + Tone 156.7
Info: Nick 604-465-9476, by email at ve7te@mrarc.net.
Web: http://www.mrarc.net

Calgary Amateur Community Fleamarket
Sponsor: Multi-club event
Date: Saturday, November 10.
Time: Vendors 8 am; Public 9 am.
Place: Calgary, AB; 1320 Abbeydale Drive SE; Far east end of Memorial Drive.
Description: Calgary and Area amateur radio flea market. Free coffee and donuts/ muffins. There will be door prizes!
Cost: Public $5; Table rentals $10.
Talkin: VE6RYC 146.85/25 110.9 ENC/DEC
Info: Contact Jerry, VE6TL, to reserve tables at fleamarket@yycbuilders.org. For general information contact Joel, VE6EI, ve6ei@rac.ca.
Web: http://yycbuilders.org/default.aspx

NPARC Big Event Hamfest and Electronics Fleamarket
Sponsor: Niagara Peninsula Amateur Radio Club, Inc. (NPARC)
Date: Saturday, February 2.
Time: Vendors: 7 am; Public 9 am.
Place: St. Catharines, ON; Merritton Community Centre, 7 Park Avenue, St. Catharines, L2P 1P9.
Description: Snack Bar w/ Coffee and Soft Drinks. 50/50 Draw and Door Prizes.
Cost: Public $7 admission. Children 12 and under Free. Vendor Tables $13 plus $7 admission.
Talkin: 147.240 +107.2
Info: Contact: bigevent@nparc.on.ca
Web: http://www.nparc.on.ca/

VE3CJ Memorial Spring Fleamarket
Sponsor: Burlington Amateur Radio Club
Date: Saturday, February 16.
Time: Vendors 7 am; Public 8:30 am.
Place: Burlington, ON; Compass Point Bible Church, 1500 Kerns Road. Burlington, Ontario, L7P 3A7.
Description: General vendor market. This is a new location that provides lots of parking and easy level access with no stairs to navigate. As always free coffee and a place for eyeball QSOs.
Cost: Public $8; Tables $15; Admission $8 per Vendor and Helpers.
Talkin: VE3RSB 147.210 Mhz Tone 131.8
Info: Contact rodemi@cogeco.ca.
Web: https://www.barc.ca/spring-flea-market.

The RAC 25th Anniversary Challenge Coins are a good way for clubs to honour a member for an important contribution. They are also excellent birthday and Christmas presents. For more information visit: https://wp.rac.ca/25th-anniversary-coin/

Please let us know if your club has an upcoming event: tcamag@yahoo.ca

RAC CANADA WINTER CONTEST / CONCOURS D'HIVER DU CANADA RAC 2018

Radioworld

contest club ONTARIO

Alfa Radio Ltd.

Saskatchewan Contest Club

RAC affiliated MISSISSAUGA amateur radio club VE3MIS

MCC Maritime Contest Club

In December each year, Radio Amateurs of Canada (RAC) sponsors the Canada Winter Contest. Amateurs all over the world are invited to participate.

Contest Period: 0000 UTC to 2359 UTC December 29, 2018. Next year the contest will be held on December 28, 2019.

Bands and Modes: 160, 80, 40, 20, 15, 10, 6 and 2 metres, CW and phone (SSB, FM, AM, etc.)

Suggested frequencies: CW – 25 kHz up from the band edge and for SSB – 1850, 3775, 7075, 7225, 14175, 21250, 28500 kHz. Check for CW activity on the half-hour.

Exchange: Stations in Canada send RS(T) and province or territory. VEØs and stations outside Canada send RS(T) and a serial number.

QSOs: Contacts with stations in Canada or VEØs are worth 10 points. Contacts with stations outside Canada are worth 2 points. Contacts with RAC official stations are worth 20 points. RAC official stations are: VA2RAC, VA3RAC, VE1RAC, VE4RAC, VE5RAC, VE6RAC, VE7RAC, VE8RAC, VE9RAC, VO1RAC, VO2RAC, VY0RAC, VY1RAC and VY2RAC. You may work any station once on each of the two modes, on each of the eight contest bands.

It is **prohibited** to make CW contacts in the conventional phone sub-bands and phone contacts in the conventional CW sub-bands. Contacts or soliciting QSOs through a repeater during the contest period is not allowed.

Multipliers: Thirteen in total, Canada's 10 provinces and three territories. Each multiplier may be counted once on each mode on each of the eight contest bands. The multipliers, with their postal abbreviations and prefixes are: Nova Scotia [NS] (VE1, VA1, CY9, CYØ); Quebec [QC] (VE2, VA2); Ontario [ON] (VE3, VA3); Manitoba [MB] (VE4, VA4); Saskatchewan [SK] (VE5, VA5); Alberta [AB] (VE6, VA6); British Columbia [BC] (VE7, VA7); Northwest Territories [NT] (VE8); New Brunswick [NB] (VE9); Newfoundland and Labrador [NL] (VO1, VO2); Nunavut [NU] (VYØ); Yukon [YT] (VY1); and Prince Edward Island [PE] (VY2). Certain special Canadian prefixes in use at the time of the contest may also apply; however there may be no more than 13 multipliers on each band/mode. Please use the multiplier abbreviations, in square brackets, noted above.

Final Score: The total QSO from all bands multiplied by the total number of multipliers from all bands.

Categories: The following nine categories are eligible for plaques or certificates as detailed in the Awards section of the rules.

- Single Operator All Bands High Power (>100 watts) – **Radioworld**
- Single Operator All Bands Low Power (max. 100 watts output) – **Contest Club Ontario**

En décembre de chaque année, Radio Amateurs du Canada (RAC) parraine le Concours d'hiver du Canada. Les amateurs du monde entier sont invités à participer.

Durée du concours : 0000 UTC à 2359 UTC le 29 décembre 2018. L'année prochaine, le concours aura lieu le 28 décembre 2019.

Bandes et modes d'émission : 160, 80, 40, 20, 15, 10, 6 et 2 mètres, en CW et/ou en phonie (BLU, FM, AM, etc.).

Fréquences suggérées : CW – 25 kHz au dessus de la limite inférieure de la bande. BLU – 1850, 3775, 7075, 7225, 14175, 21250 et 28500 kHz. Vérifiez aux demi-heures pour l'activité en CW.

Échange : Les stations au Canada envoient un rapport RS(T) ainsi que leur province ou territoire. Les stations VEØ et les stations à l'extérieur du Canada envoient un rapport RS(T) ainsi qu'un numéro séquentiel.

Les QSO : Les contacts avec des stations au Canada ou des stations VEØ valent 10 points. Les contacts avec des stations à l'extérieur du Canada valent 2 points. Les contacts avec des stations officielles de RAC valent 20 points. Les stations officielles de RAC sont : VA2RAC, VA3RAC, VE1RAC, VE4RAC, VE5RAC, VE6RAC, VE7RAC, VE8RAC, VE9RAC, VO1RAC, VO2RAC, VY0RAC, VY1RAC et VY2RAC. Vous pouvez contacter une station une fois dans chacun des modes, sur chacune des huit bandes du concours.

Il est **défendu** de faire des contacts en CW sur les parties des bandes normalement réservées à la phonie, et vice versa. Il est aussi défendu de faire ou de solliciter des contacts via un répéteur pendant le concours.

Multiplicateurs : Treize au total, les 10 provinces canadiennes et les trois territoires. Chaque multiplicateur peut-être compté une fois pour chaque mode sur chacune des huit bandes du concours. Les multiplicateurs, avec leur abbréviation postale et leur(s) préfixe(s), sont : Nouvelle-Écosse [NS] (VE1, VA1, CY9, CYØ); Québec [QC] (VE2, VA2); Ontario [ON] (VE3, VA3); Manitoba [MB] (VE4, VA4); Saskatchewan [SK] (VE5, VA5); Alberta [AB] (VE6, VA6); Colombie-Britannique [BC] (VE7, VA7); Territoires du Nord-Ouest [NT] (VE8); Nouveau-Brunswick [NB] (VE9); Terre-Neuve et Labrador [NL] (VO1, VO2); Nunavut [NU] (VYØ); Yukon [YT] (VY1); Ile-du-Prince-Edouard [PE] (VY2). Certains préfixes canadiens spéciaux en usage pendant le concours peuvent aussi s'appliquer; cependant, il ne peut y avoir plus de 13 multiplicateurs pour chaque bande/mode. Veuillez s'il-vous-plaît utiliser l'abbréviation du multiplicateur, entre crochets, telle que notée ci-haut.

Pointage final : Le total des des QSO obtenus sur toutes les bandes, multiplié par le nombre total de multiplicateurs obtenus sur toutes les bandes.

Catégories : Les neuf catégories suivantes sont éligibles pour des plaques ou des certificats, tel que détaillé dans la section Prix des règlements du concours.

- Single Operator QRP (max. 5 watt output) All Bands & Single Band ** – **Radioworld**
- Single Operator All Bands CW only, any authorized power – **Gary Bartlett VE1RGB Memorial by the Maritime Contest Club**
- Single Operator All Bands PH only, any authorized power – **Saskatchewan Contest Club**
- Single Operator Single Band, any authorized power *** – **Radioworld**
- Multi-Operator Single Transmitter High Power (>100 watts) * – **Alfa Radio**
- Multi-Operator Single Transmitter Low Power (max. 100 watts output) * – **Tony Allsop VE3FTA Memorial by the Mississauga ARC**
- Multi-Operator Multi-Transmitter, any authorized power – **Radioworld**

For the Canada Winter Contest a special trophy is awarded for the highest Single Operator (no power classification) Foreign Entrant – **Russ Coleston VK4XA Memorial by Alan Goodacre, VE3HX**.

Special thanks to our sponsors for their support of the RAC contests.

Category notes:

1) The contents of a log that is submitted for a specific category must reflect that category. In the event of a conflict between the actual content of the log and the stated category in the Cabrillo header or contained in other elements of the entry material, the actual contents of the log will be used to determine the category of entry where possible. In the event this cannot be determined or in the event where a log does not identify the entry category, the entry will be classified into the Multi-Operator, Multi-Transmitter, any authorized power category.

Any entrant who wants to enter a specific category (i.e. Single band entry) but who also worked additional contacts outside that category **may** submit those additional contacts in a **separate** check log file. Do not include them in the main entered category log file.

2) Where the categories have a power class and the submitted log does not clearly identify the power class entered, then the log will be treated as if the highest power class for that category was entered.

3) Single operators who receive assistance from a DX spotting system, including Skimmer and similar technologies or any type of Packet Cluster network during the contest must classify themselves as Multi-Single ops.

4) * In the Multi-Single category only one transmitter and one band are permitted during the same time period (defined as 10 minutes). Exception: One, and only one, other band may be used during any 10-minute period, if and only if the station worked is a new multiplier. In other words the Multi-Single Transmitter class allows a second station to “hunt” and work multipliers only on a single separate band during any 10-minute period.

5) Multi-Multi category stations may operate on several bands simultaneously.

6) For all multi transmitter categories, all transceivers, transmitters and receivers operated by the multi station participants/entrants must be within a single 500-metre diameter circle and the antennas must be physically connected by RF transmission lines to the transceivers, transmitters and/or receivers.

- Opérateur unique, toutes bandes, haute puissance (>100 watts) – **Radioworld**
- Opérateur unique, toutes bandes, basse puissance (max. 100 watts à la sortie) – **Contest Club Ontario**
- Opérateur unique QRP (max. 5 watts à la sortie), toutes bandes et bande unique ** – **Radioworld**
- Opérateur unique, toutes bandes, CW seulment, toute puissance autorisée – **Trophée mémorial Gary Bartlett VE1RGB par le Maritime Contest Club**
- Opérateur unique, toutes bandes, phonie seulement, toute puissance autorisée – **Saskatchewan Contest Club**
- Opérateur unique, bande unique, toute puissance autorisée *** **– Radioworld**
- Opérateurs multiples, émetteur unique, haute puissance (>100 watts) * – **Alfa Radio**
- Opérateurs multiples, émetteur unique, basse puissance (max. 100 watts à la sortie) * – **Trophée mémorial Tony Allsop VE3FTA par le CRA Mississauga**
- Opérateurs multiples, émetteurs multiples, toute puissance autorisée – **Radioworld**

Pour le concours d’hiver du Canada, un trophée spécial est décerné au participant étranger (opérateur unique, sans classe de puissance) ayant obtenu le plus haut score – **le trophée mémorial Russ Coleston VK4XA par Alan Goodacre, VE3HX**.

Nous tenons à remercier nos commanditaires pour leur appui aux concours de RAC.

Notes sur les catégories :

1) Le contenu d’un journal de bord soummis dans une catégorie spécifique doit refléter cette catégorie. Dans le cas d’un conflit entre le contenu réel d’un journal de bord et la catégorie inscrite dans l’entête Cabrillo ou contenue dans d’autres éléments de la soummission, le contenu réel du journal sera utilisé pour déterminer la catégorie de l’inscription. Dans le cas où celle-ci ne peut être déterminée, ou si le journal de bord n’identifie pas la catégorie de l’inscription, celle-ci sera classée dans la catégorie opérateurs multiples, émetteurs multiples, toute puissance autorisée.

Tout participant désirant s’inscrire dans une catégorie spécifique (par exemple bande unique), mais ayant aussi établi des contacts additionels hors de cette catégorie **peut** soumettre ces contacts additionnels dans un journal de bord **séparé**. Ne les incluez pas dans le journal de la catégorie principale dans laquelle vous participez.

2) Dans le cas où les catégories ont des classes de puissance et que le journal soummis ne l’identifie pas clairement, celui-ci sera traité comme si la classe de puissance la plus élevée pour cette catégorie a été inscrite.

3) Des opérateurs uniques qui opèrent “Assisted” ou reçoivent de l’aide d’un système de repérage DX, comme Skimmer et des technologies similaires, tout type de système de repérage sur Internet ou n’importe quel type de réseau « Packet Cluster » pendant la période du concours, devront s’inscrire dans la catégorie opérateurs multiples, émetteur unique.

4) * Dans la catégorie opérateurs multiples, émetteur unique, un seul émetteur et une seule bande sont permis durant la même période de temps (définie comme étant 10 minutes). Une exception est cependant tolérée : une seule autre bande peut-être utilisée pendant cette période de 10 minutes, seulement si la station

7) Operators in either the Multi-Multi or Multi-Single categories should note that a distributed contest station is permitted in the RAC contests, however such operations are not eligible for awards. A distributed station is defined as a station which does not have all transceivers, transmitters and/or receivers operated by station operators/participants/entrants located within a single 500-metre diameter circle of each other. Distributed Multi-Multi operations must identify such operations as part of their Cabrillo form log submission or summary sheet document.

8) ** Although there is only one QRP category, which qualifies for a plaque or certificate, it is intended that the published results would show All Bands or the Single Band of operation. To facilitate this break out of the listings, your entry should indicate the band(s) or mode(s) operated.

9) *** Although there is only one Single Operator Single Band category that qualifies for a certificate or award, it is intended that the published results would show High Power or Low Power. To facilitate this break out of the listings, your entry should indicate the power class you used.

10) Operators who have participated in any multi-operator category entries may not contact the station they have participated in if they were to operate as part of another entry in the same contest. In addition, guest operators at any station regardless of entry category may not claim contacts with the station host owner or host station mobile call for points or multipliers.

Awards: Plaques will be awarded to the top-scoring entrants in each category, as noted above in the category list. Special thanks to our sponsors for their ongoing support! Certificates will be awarded to the top-scoring entrant in the categories described below.

- Canadian provinces or territories
- Continental US call districts, W0 through W9 as well as Alaska and Hawaii. US Commonwealths, Territories and Possessions such as Puerto Rico, US Virgin Islands, etc will be treated as equivalent to a DXCC country
- DXCC country, excluding Canada and the US.

To facilitate the proper allocation of certificates, all US stations should indicate their actual US call district based on their actual address, as provided in the Cabrillo header, if different than indicated by their call prefix. DX stations should indicate the actual country of operation if different than indicated by their call prefix by indicating the country as part of the portable call sign designator.

RAC stations will compete and be considered the same as any other entrant for eligibility to plaques and certificates.

Results: Will be published in *The Canadian Amateur* magazine published by the Radio Amateurs of Canada. The results will also be published on the RAC website at:
http://wp.rac.ca/contesting-results/

Entries: All entries (electronic or paper logs) must be postmarked or electronically submitted by **January 31, 2019**. Electronic entries will be confirmed by return email. Send email entries to:
canadawinter@rac.ca

Send paper entries to:

Radio Amateurs of Canada
720 Belfast Road, Suite 217
Ottawa, Ontario, Canada K1G 0Z5

We will be publishing a list of logs received and the categories entered on the RAC website during and/or after the submission period after the cut off date to assist in correcting any entry categorizations.

contactée est un nouveau multiplicateur. En d'autres mots, la classe opérateurs multiples, émetteur unique permet à une seconde station de « chasser » et contacter des multiplicateurs sur une seule autre bande dans une période de 10 minutes.

5) Les stations participant dans la catégorie opérateurs multiples, émetteurs multiples peuvent opérer sur plusieurs bandes en même temps.

6) Pour les transmetteurs toutes catégories, tous les transcepteurs, émetteurs et recepteurs opérés par des participants/débutants de stations multiples doivent être situés à l'intérieur d'un cercle de 500 mètres de diamètre et les antennes doivent être physiquement connectées aux transcepteurs, transmetteurs et/ou récepteurs par des lignes de transmissions RF.

7) Les opérateurs dans les catégories multi-multi ou multi-unique doivent prendre note qu'une station à concours partagés est autorisée dans les concours de RAC, mais que ses opérations ne peuvent donner lieu à des prix ou récompenses. Une station considérées « à concours partagés » est une station qui ne détient pas tous les transcepteurs, émetteurs et/ou récepteurs opérés dans une seule station par les participants/débutants localisée dans un cercle de 500 mètres de diamètre. Les opérations multi-multi partagés doivent être identifier dans le « Journal de bord Cabrillo » ou dans un page sommaire du document.

8) ** Même s'il n'y a qu'une seule catégorie QRP qui soit éligible pour une plaque ou un certificat, il est prévu que que les résultats publiés afficheront soit toutes bandes, soit la bande unique d'opération. Afin de faciliter la publication des résultats, votre entrée devrait indiquer le (les) bande(s) ou mode(s) opérés.

9) *** Même s'il n'y a qu'une seule catégorie opérateur unique, bande unique, qui soit éligible pour une plaque ou un certificat, il est prévu que les résultats publiés afficheront soit haute puissance, soit basse puissance. Afin de faciliter la publication des résultats, votre entrée devrait indiquer la classe de puissance utilisée.

10) Des opérateurs ayant participé à quelconque entrée dans la catégorie opérateurs multiples ne peuvent pas contacter la station à laquelle ils ont participé s'ils devaient opérer en tant que membre d'une autre entrée lors du même concours. De plus, des opérateurs invités d'une station, peu importe la catégorie, ne peuvent pas revendiquer de contacts avec le propriétaire de la station hôte ou avec l'indicatif d'appel mobile de la station hôte pour des points ou des multiplicateurs.

Prix : Des plaques seront remises aux participants ayant obtenu le plus haut score dans chaque catégorie, telle que notée ci-haut dans la liste des catégories. Nous tenons à remercier nos commanditaires pur leur support continu! Des certificats seront attribués au participant ayant obtenu le meilleur score dans les catégories décrites ci-dessous.

- Provinces et territoires canadiens
- Districts d'appels des États-Unis continentaux, W0 à W9, et aussi pour l'Alaska et Hawaii. Les Commonwealths américains, territoires et possessions tels que Porto Rico, les iles Vierges américaines, etc, seront considérés comme étant équivalent à un pays DXCC; et
- Pays DXCC, excluant le Canada et les État-Unis.

Afin de faciliter l'attribution des certificats, toutes les stations américaines participantes devraient indiquer leur réel district d'appel américain basé sur leur addresse réelle, telle que fournie dans l'entête Cabrillo, s'il diffère de celui indiqué par le préfixe de leur indicatif. Les stations DX devraient indiquer leur réel pays d'opération s'il diffère de celui indiqué par le préfixe de leur indicatif.

Paper mail entries must contain a summary sheet showing score calculation, a dupe sheet listing calls worked on each mode on each band, a multiplier check sheet and log sheets. Logsheets must show time, band, mode, call of station worked, exchanges sent and received and claimed for each QSO. New multipliers must be clearly marked in the log.

Contest entry forms are also available on the RAC website at:

http://wp.rac.ca/contesting-results/

Any entry with 100 or more contacts should be submitted in digital format. The preferred electronic format is the RAC Cabrillo format. The files must be submitted in plain ASCII/ Text format.

While the contest committee prefers Cabrillo formatted submissions, we will continue to accept electronic logs from older versions of contest software, but your file must be in ASCII/Text format and have all the required information. However ".adi" files are not acceptable.

Given there are several free programs that support the RAC contests and generate an acceptable Cabrillo entry, we encourage you to seek out one of these programs.

The RAC Cabrillo format is described and its detailed layout is shown on the RAC website at: **http://wp.rac.ca/contesting-results/**

Electronic logs that do not have a complete Cabrillo header should provide a summary sheet with the same information as shown for the paper log entries. The standard summary sheet provided by the typical logging program is generally acceptable, but you should confirm that it contains the same information as shown for paper log entries.

A properly filled out Cabrillo header section will be a sufficient substitute for a summary sheet for logs submitted in that format. Please ensure that you review the header for accuracy and that it is completely fill out. Name your file with your Call Sign and the file extension.LOG (e.g., yourcall.LOG). If you email your log, please send the file(s) as **attachments**.

Do not paste the log file into the text of your message as there may be issues with the formatting making it difficult to properly extract the log. Large files may be zipped if necessary.

If you need help with preparing or emailing your log or have any other questions, please contact Sam Ferris, VE5SF: ve5sf@rac.ca.

For the previous year's contest results, visit the RAC website at **http://wp.rac.ca/ contesting-results/** in the Contest section.

Les stations officielles RAC compétitionneront et seront considérées comme étant pareilles à tout autre participant en ce qui concerne l'éligibilité aux plaques et certificats.

Résultats : Ils seront publiés dans la revue *The Canadian Amateur*, publiée par Radio Amateurs du Canada. Il seront aussi publiés sur le site web de RAC au :

http ://wp.rac.ca/contesting-results/

Soummission des inscriptions : Toute inscription (électronique ou papier) doit porter un cachet de la poste, ou être soummise par courriel, pour le **31 janvier 2019**. Les soummissions électroniques seront confirmées par courriel. Envoyez vos inscriptions par courriel à : **canadawinter@rac.ca**

Envoyez vos inscriptions papier à :

Radio Amateurs du Canada
720 ch. Belfast, suite 217
Ottawa, Ontario, Canada K1G 0Z5

Nous publierons une liste de journaux de bord reçus avec leur catégorie sur le site web de RAC pendant et/ou après la période de soummission et après la date limite afin d'aider à corriger toute erreur de catégorisation des inscriptions.

Les inscriptions papier envoyées par courrier doivent contenir une feuille sommaire démontrant le calcul des points, une feuille indiquant les indicatifs contactés dans chaque mode sur chacune des bandes (dupe sheet), une feuille indiquant les multiplicateurs utilisés et le journal de bord. Le journal doit montrer l'heure, la bande, le mode, l'indicatif de la station contactée, les rapports échangés et les revendiqués pour chaque QSO. Les nouveaux multiplicateurs doivent être clairement indiqués dans le journal.

Des formulaires d'inscription sonts aussi disponibles sur le site web de RAC au : http://wp.rac.ca/contesting-results/

Toute inscription contenant plus de 100 contacts devrait être soummise sous forme numérique. Le format électronique préféré est le format Cabrillo RAC.
Les fichiers doivent êtres soummis en format text/ASCII.

Bien que le commité du concours préfère les soummissions en format Cabrillo, nous continuerons à accepter vos journaux de bord électroniques générés par des versions antérieurs de logiciels de concours, mais votre fichier doit être en format text/ASCII et contenir toutes les informations requises. Par contre, les fichiers ".adi" ne sont pas acceptables. Comme il existe plusieurs logiciels gratuits supportant le concours RAC et pouvant générer un fichier Cabrillo acceptable, nous vous encourageons à en utiliser un.

Le format Cabrillo RAC est décrit et sa disposition est illustrée en détail sur le site web de RAC au : **http://wp.rac.ca/contesting-results/**

Les journaux de bord soummis sous forme numérique mais ne possédant pas d'entête Cabrillo complète devraient fournir une feuille sommaire avec les mêmes informations que pour les soummissions papier. La feuille sommaire standard fournie par les logiciels courants est généralement acceptable, mais vous devriez confirmer qu'elle contienne les mêmes informations que pour le les soummissions papier.

Une entête Cabrillo correctement remplie se substitueras à une feuille sommaire pour les journaux soummis dans ce format. Veuillez s'il-vous-plaît vous assurer que vous vérifiiez l'exactitude de l'entête et qu'elle soit complètement remplie.Nommez votre fichier avec votre indicatif et l'extension de fichier .LOG (par exemple votreindicatif. LOG). Si vous envoyez votre journal de bord par courriel, veuillez inclure le(s) fichier(s) **en pièce(s) jointe(s)**. Ne copiez pas le fichier dans le texte de votre message, étant donné qu'il pourrait y avoir des problèmes avec la mise en page, rendant la tâche d'extraire votre journal plus difficile. Les gros fichiers peuvent être compressés en format .ZIP si nécessaire.

Si vous avez besoin d'aide avec la préparation ou l'envoi de votre journal par courriel ou avez d'autres questions, veuillez contacter Sam Ferris, VE5SF: ve5sf@rac.ca.

Pour les résultats des éditions précédentes du concours, visitez le site web de RAC (**http://wp.rac.ca/contesting-results/**), dans la section concours.

RAC OFFERS BOTH BASIC QUALIFICATION STUDY GUIDES

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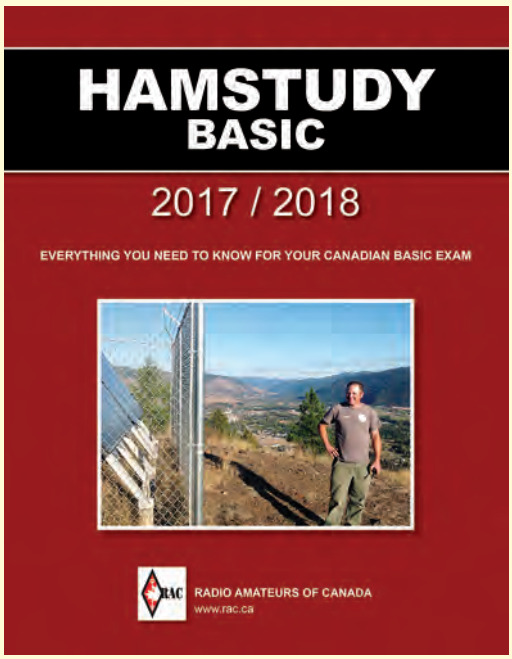
Hamstudy Basic 2017/2018 is the third edition of a study guide that is published by RAC. The content mirrors the subscription-based self-study course offered at http://www.hamstudy.com. This is the perfect reference for new Radio Amateur enthusiasts. It provides everything needed to qualify for the Basic Exam.



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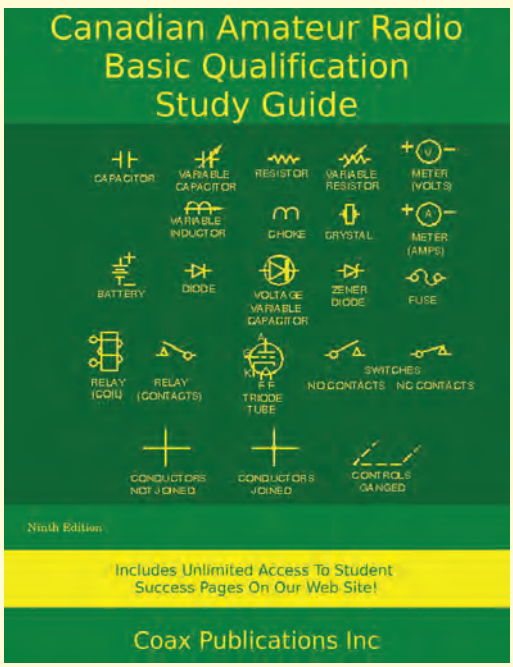

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Please see the ad on page 13 for more information.

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*Specifications subject to change without notice

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- ◊ Channel Capacity: 4000ch
- ◊ Channel Spacing: 25KHz(Analog)/12.5KHz(Digital/Analog)
- ◊ Operating Voltage: DC7.4V
- ◊ Frequency Stability: ±2.5ppm
- ◊ Temperature range: -20~+55 (Operating)/+5~+40?(Charging)
- ◊ Dimensions(WxHxD): 59x118x40mm
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- ◊ Power Output: 5W/2.5W/1W/0.2W
- ◊ Modulation(Digital): K60FXD/7K60FXE
- ◊ Modulation(Analog):16K0F3E/11K0F3E

central
Radioworld

8, 711 48th Ave., S.E., Calgary, AB. T2G4X2
Phone 403-239-1400 email: sales@radioworldcentral.ca
www.radioworldcentral.ca