



NEWS FOR AND BY BARS MEMBERS



DECEMBER 2019

From the President’s Desk

from the President of BARS, Andy Wallace, KA1GTT

Hello, everyone. We are closing on the year and this will be my last notes until 2020!

I would like you to think back to the time you first had interest in ham radio. Who got you involved? What did you see (equipment) or heard (QSOs) that fascinated you? How easy – or difficult – was it for you to get into this wonderful hobby? And then, what kept your interest and motivation to stick with it?

Your Board has met several times to brainstorm how we can capture some of the people who are newly licensed. Anyone who gets a ham license and already has a cadre of friendly people in a club leading him or her down the path of enjoyment is blessed. What is tragic is someone who attends a VE session, passes, and then buys some kind of radio and is frustrated with the results of trying to do things alone. The term Elmer is passe and we like to use the word “mentor” instead. BARS is full of mentors! It really is.

So the Board’s idea was to enlist a volunteer to reach out to newly licensed hams and send out a mailing. We have to do this via U.S. Mail, because licensing lists do not show email addresses. It turns out that this database is available through the ARRL to Club presidents. Tom, K1TW, told us that other Eastern MA clubs have independently decided to do this sort of outreach. Tom and I have looked at these lists over the past several months and the complete list for Eastern MA is well under 50 licensees/month. This is disappointing when you want to see growth in the hobby, but it also makes our outreach a smaller task.

We have come up with the design of a postcard for mailing. It will look like a QSL but has a greeting on the reverse explaining why it was sent. A postcard appealed to us because it looks less like “junk mail” and postage is less. And having it look like a QSL will capture a new ham’s attention. See the pictures below for what your team has come up with.

The back text reads “Welcome to ham radio! Your name appeared on the latest FCC roster as a newly licensed amateur radio operator. When starting any new hobby, it helps to connect with people who can mentor you and help build your enjoyment. You will have more fun and know more of what you can do by being in a club! Please check out our club at www.w1hh.org. You can also explore other ham clubs in the area by visiting: www.arrl.org/find-a-club Greetings from everyone at the Billerica Amateur Radio Society!”

We are having a trial run of cards printed, and will sort out the decision process about which locations will be in our “area of coverage”. Our first volunteer for sending out cards will be John Fisher, KC1FTJ. I hope you’ll agree with us that our message sends a positive “join A club” statement, allowing the person to find the club that appeals to them. That may not necessarily be BARS but hopefully our goodwill can bear fruit in new membership too.



Figure 1: front



Figure 2: back

Andy, KA1GTT
President, BARS

Next BARS meeting: Wednesday December 4 at 7:00 PM “Emergency Communications”

Our next meeting will showcase Terry Stader, KA8SCP, who will talk about Emergency Communications in Eastern Massachusetts. Many of you follow this topic and even volunteer for emergency comm drills. Past presentations about EmComm have been great attractions and I hope the turnout for Terry’s talk will gather a crowd.

Terry is the MEMA Region 1 RACES Officer, as well as the EMA ARES District Coordinator for Region 1 RACES. Does that sound like alphabet soup to you? Then come and learn what each organization does!

If you want to explore ahead of time, the EMA RACES site is at <https://ema.ar1l.org/races/> and the EMA ARES site is: <http://www.ar1l.org/ares>

A Message From the Editor

from Marla Wallace, WA1GSF

Hello, everyone! I’ve been railroaded – er, appointed – your newsletter editor. I hope to serve as editor of the BARS newsletter in a manner you all find satisfactory. I’ve never served in this capacity, so if I get off to a rocky start, please forgive my “growing pains”. You may notice some formatting differences between the November issue and this one. If so, feel free to tell me about them and if you have a preference either way. Most of the time, the discrepancy will have been an error on my part, not a decision to change.

I’ve been a ham since 1966 and was a member of Chelmsford Amateur Radio Association (CARA) until its dissolution. As a member of the Honeywell 1200 Radio Club, I helped to put WIDC/R on the air by designing and constructing the original control logic for the repeater. WIHH was my father and Andy, KA1GTT, your president, is my younger, smarter brother (he’s twisting my arm as I wrote that, hi, hi).

I have other commitments on most Wednesday nights, so you probably won’t be seeing me at meetings and I rarely check into the net, but I’m a regular at Stellio’s on Saturday morning. So feel free to buttonhole me there.

If you have material to submit to the newsletter, sending it to me in email at the address in the masthead (wa1gsf@comcast.net) is best. You can send your submission as plain text or as a Word document file as an attachment or simply include the text in the body of the email. I will have to format it and merge it with other material, anyway, so there’s no need to make it pretty. I’m going to try to set the deadline for submitting material to the 21st of the month. That will give me time to assemble the newsletter and

have it reviewed so that it can be issued on the weekend before the meeting.

Speaking of content, we have two excellent feature articles in this month’s edition: Part One of a report on one ham’s visit to the historic Marconi Beach site on Cape Cod and a description of a DXpedition to Little Diomed Island, deep in the frozen northland. A big thanks to both authors for their contribution!

In other news, Massachusetts has passed a new distracted driving law. You may be wondering if it will affect how we hams operate while driving. The short answer is it won’t!

Feature Article: One Ham’s Pilgrimage to Cape Cod - Part I: The Marconi Beach Historic Site

By Guy DeMartinis, AC1BJ

Guglielmo Marconi is considered the inventor of radio [1] and is a foundational figure partly responsible for the rapid development of communications technology during the 20th century. Marconi was a co-recipient of the 1909 Nobel Prize in Physics for his efforts in “Wireless Telegraphy” and has been referred to as “the Father of Radio” [2] and more recently by Raboy as “The Man Who Networked the World” [3]. Although one could argue that the credit for the concept of wireless communication should fall to Nikola Tesla [2, 4] it was clearly the combination of Marconi’s technical and business skills that propelled the commercialization of realizable and reliable radio technology [2, 3]. Marconi’s impact upon modern society is universal with traces of his original pioneering work still present close by on Cape Cod.

In this sequence of two short articles I would like to present information on two locations of interest on Cape Cod that every local amateur radio operator should consider visiting. In this article, Part I, I will present a short overview of Marconi Beach located in South Wellfleet Cape Cod, the location of the first trans-Atlantic communication between the U.S. and Europe. The photographs presented in this article were acquired during a stay at Cape Cod, with my family, this past August (2019). In Part II I will present an overview of the Chatham Marconi Maritime Center which is now the site of an excellent museum, the Marconi-RCA Wireless Museum, celebrating the Marconi legacy which also includes an operational amateur radio station (WA1WCC).

Marconi had originally planned to use a station built at South Wellfleet, Cape Cod as the site for the first trans-Atlantic wireless communication [3]. The idea was to setup a station on Cape Cod to communicate with a station being built at Poldhu which is a small coastal area in Cornwall, England. However on September 17, 1901 a strong squall struck Poldhu and demolished the twenty-two antenna towers, each of which was two-hundred feet tall, leaving only “a pile of splintered timber and a tangle of wires” [3, pg. 165]. In order to avoid costly delays Marconi decided to raise two smaller 160 foot tall antenna towers which

would, unfortunately, limit his reach across the Atlantic. It was the destruction of the Poldhu station, and required rapid sub-optimal rebuilding of the antenna, that led Marconi to use his site in Newfoundland for the first trans-Atlantic wireless communication. Newfoundland was nearly 900 miles closer to Poldhu than the Cape Cod site and increased his odds of achieving his “Great Thing” before the competition caught up with him [3]. It is interesting to note that, on November 25, 1901 the twenty-two antenna towers of the Wellfleet Cape Cod station were blown down by a storm as well and Marconi later rebuilt the station to include four towers. The first trans-Atlantic communication was achieved on December 12, 1901 between Poldhu, England and St. John’s, Newfoundland consisting of the Morse code letter “S”. Fortunately for the U.S. Marconi did return to his station on Cape Cod to demonstrate the first trans-Atlantic wireless communication between the United States and England on January 19, 1903.

One merely has to travel Route 6 East round the elbow of Cape Cod through Eastham and up into South Wellfleet until Marconi Beach Road appears on your right. As you drive down Marconi Beach Road bear to the left onto Marconi Station Road. Approaching the parking area along Marconi Station Road one will pass by a visitor center that should be briefly explored prior to parking further down near the location of the Marconi Historic Site. As you enter the visitor center a modern bust of Marconi greets you along with a plaque noting the significance of the location (Figures 1 and 2).



Figure 1. Marconi Bust Located within Entrance to Marconi Historic Site Visitor Center.



Figure 2. Centennial Commemoration Plaque Located in Entrance to Marconi Site Visitor Center

Once within the visitor center a scale model of the Wellfleet station (circa 1901) may be found (Figure 3) along with a scale mockup of a Marconi-era transceiver (Figure 4). To learn more details about the design and operation of Wellfleet station a concise description is provided by Lohr in [5] and may be found online. Among the interesting facets of the Wellfleet station described in [5] as well as [3] includes the fact that the 20,000 volt spark-gap transmitter was so loud that it could be heard up to 4 miles away!

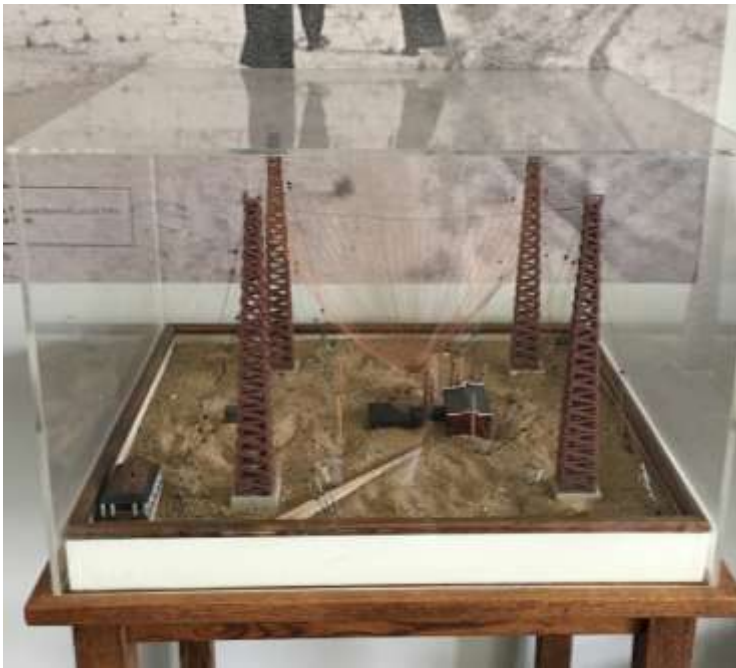


Figure 3. Scale Model of Marconi's Wellfleet Station

would likely be underwater if it was still present today. Unfortunately the Marconi station buildings were demolished long ago.



Figure 4. 1/6 Scale Mockup of a Marconi Wireless Transceiver

Following the brief stop at the Marconi Site Visitor Center I suggest driving down to the main parking area of the Marconi station site. The National Park Service information board will indicate you are at the correct location and any relevant recent information will be posted (Figure 5). Figure 6 is a photograph taken looking from the information board towards the area marking the primary location of the Marconi Station Historic Site. The sea has claimed most of the station artifacts over the past 116 years so the actual location of Marconi's primary facility



Figure 5. National Seashore Marconi Station Site Information Board



Figure 6. Marconi Historic Site - View from National Seashore Bulletin Board toward Center of Site



Figure 7. View of Marconi Beach from Cliff in Vicinity of Marconi Historic Site

The ruins of a base and timbers from one of the four 210 foot tall towers may be observed by following the path down from the Marconi main site observation area a small distance (Figure 8). Other tower ruins have been claimed by the sea. An informational bulletin is also located nearby (Figure 9) where it is noted that wireless operators on Cape Cod were among a small group to receive the distress signals sent by the Titanic on its fateful voyage and played a pivotal role in the RMS Carpathia rushing to the aid of the Titanic.



Figure 8. Ruins of a Base to One of the Four 210 Foot Tall Antenna Towers



Figure 9. Informational Bulletin Marconi Beach Historic Site

To gain some perspective as to the size of the towers Raboy provides the following description in [3, pg. 216]: “The South Wellfleet station, blown down in November 1901, had been completely rebuilt, modelled after the one at Glace Bay. Fifteen carloads of Oregon pine were shipped by rail to South Wellfleet.

Four wooden towers were raised 210 feet high, in a two-hundred-foot square; each barn-red tower was twenty feet square at the base and eight feet square at the top, and was set in a four-foot-thick bed of concrete. The corner posts were twelve-by-twelve timbers and the towers were guyed by twelve one-inch steel cables per tower, anchored in twelve-by-twelve timbers buried under ten feet of sand.”

Not far from the ruins is a plaque commemorating the first U.S. trans-Atlantic wireless communication with England (Figure 10). The communication was made between President Teddy Roosevelt and Edward VII King of England.



Figure 10. Plaque at Marconi Historic Site Commemorating First US Trans-Atlantic Wireless Communication

Following a visit to the Marconi Beach Historic Site one should proceed over to the Salt Pond Visitor Center located nearby. In the rear of the museum, and easily missed during a casual visit, is a small exhibit dedicated to the Wellfleet station. This exhibit includes a sample of inked tape used to receive messages sent using international Morse code (Figure 11) as well as glass insulators and “dead eye” insulators likely made of Lignum Vitae a wood often used for various purposes on sailing ships [5, pg. 2] (Figure 12).

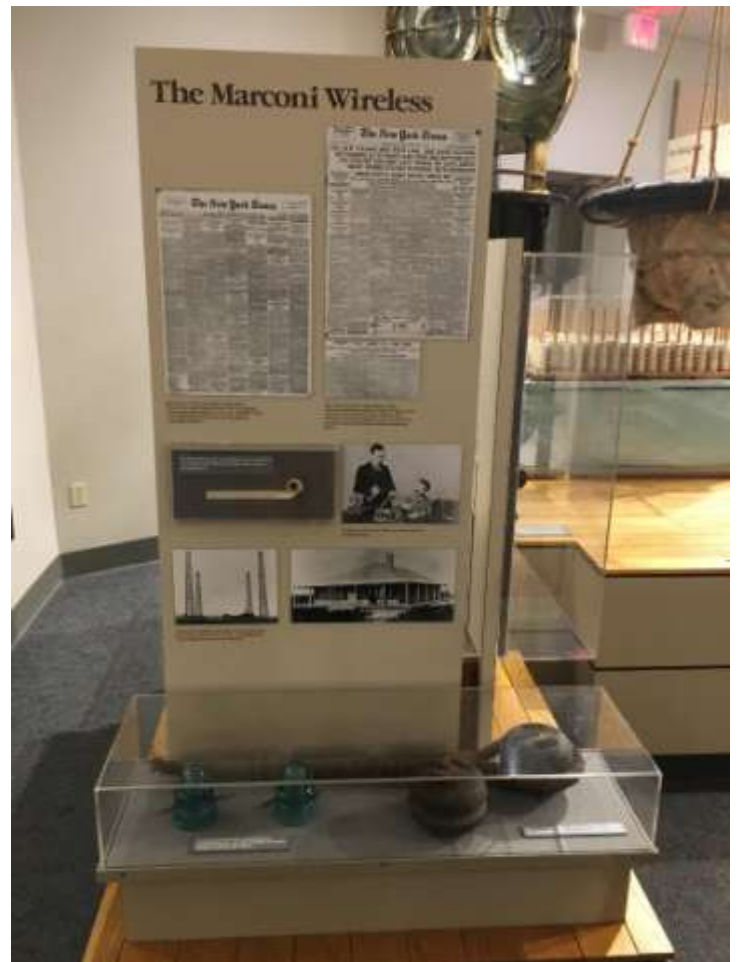


Figure 11. Marconi Wellfleet Station Exhibit Located at Cape Cod Salt Pond Visitor Center Museum



Figure 12. Emphasis upon Glass Insulators (Left) and “Dead Eyes” (Right) Used to Insulate Sections of Guy Wires

The birth of worldwide wireless communication has its roots firmly planted in the sands of South Wellfleet Cape Cod at Marconi Beach. For Massachusetts amateur radio operators a short visit to the site where wireless communication took a quantum leap forward is well worth the trip. The Marconi station at South Wellfleet ceased operation in 1917 and a new modern facility was built in Chatham Massachusetts. Part II of this article will summarize my recent visit to the Chatham Marconi Maritime Center [6] which celebrated the 100th anniversary of the establishment of RCA Corporation in November 2019.

References:

- [1] https://en.wikipedia.org/wiki/Guglielmo_Marconi
 [2] <https://www.history.com/topics/inventions/guglielmo-marconi>
 [3] Marc Raboy, "Marconi – The Man Who Networked the World", Oxford University Press, 2016
 [4] W. Bernard Carlson, "Tesla – Inventor of the Electric Age", Princeton University Press, 2013
 [5] E.P. Lohr, "A Technical History of Marconi's South Wellfleet Wireless Station, 1901-1922", Society of Wireless Pioneers, California Historical Radio Society.
 [6] <https://www.chathammarconi.org/planyourvisit>
 73,
 Guy DeMartinis, AC1BJ
 Email: ac1bj@arrl.net
 Hamshack Hotline Phone: 4995

Feature Article: The Magic of Radio

By Scott Ginsburg, K1OA

Many of us got into Amateur Radio because we considered the ability to hear or make contacts with distant stations to be magic. Even after many years of being a ham, I still consider radio magic. Although we've amassed a large body of radio science since those first spark gap wireless contacts, there's still much to learn, especially in the area of radio propagation.

Those of you who read QST may recall the September 2019 cover story, "Bridging Worlds, A DXpedition to Little Diomede", written by Cezar Trifu, VE3LYC. Cezar is an Islands on the Air (IOTA) enthusiast who has activated numerous IOTA island groups all over the world. The article chronicles Cezar's March 2019 operation from Little Diomede island, Alaska, in the Bering Strait, only 2.2 miles from Big Diomede Island which is in Russian territory. Residing at latitude 65.7522N longitude 168.9243W, Little Diomede Island is roughly 2.8 square miles in size and surrounded almost completely by steep cliffs that drop to the ocean.



Figure 1 - Little Diomede Island Sits in the Bering Strait, 3700 mi from Boston

One side of the island has a small flat area where Little Diomede village is located with a population of 60. It's here that Cezar set up his station, an Icom IC-7000, KPA-500 500W amplifier and multi-band vertical antenna. As you can see from Figure 2, the village faces the Bering Strait on one side, and looks directly into a massive 40 degree sloping hill on the other, up to a plateau around 1600 feet ASL. Unfortunately, the direction to North America is through that hill!

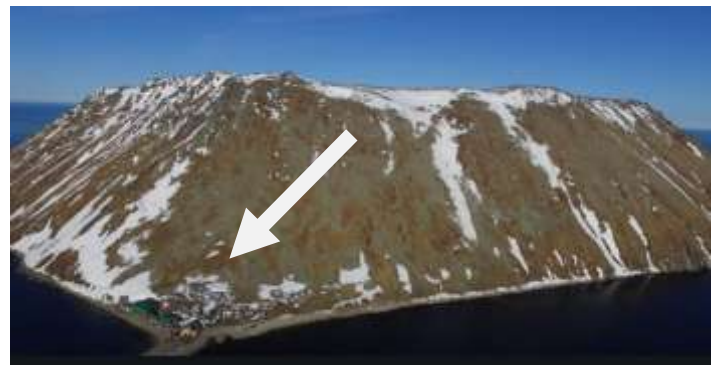


Figure 2 - Little Diomede Village

Prior to Cezar's DXpedition, only 11% of IOTA participants had confirmed contacts with Little Diomede Island, known by IOTA designator NA-150, and of those 11% only 8% were by North American stations, making it extremely rare from our part of the world. Looking at the topography of the island, one can see that the signal direction looking into the massive hill is not favorable to those directions over a roughly 120 degree field of view.

Figure 4 shows the headings to various parts of the world from Cezar's station location.



Figure 3 – Little Diomed Village Covered in Snow

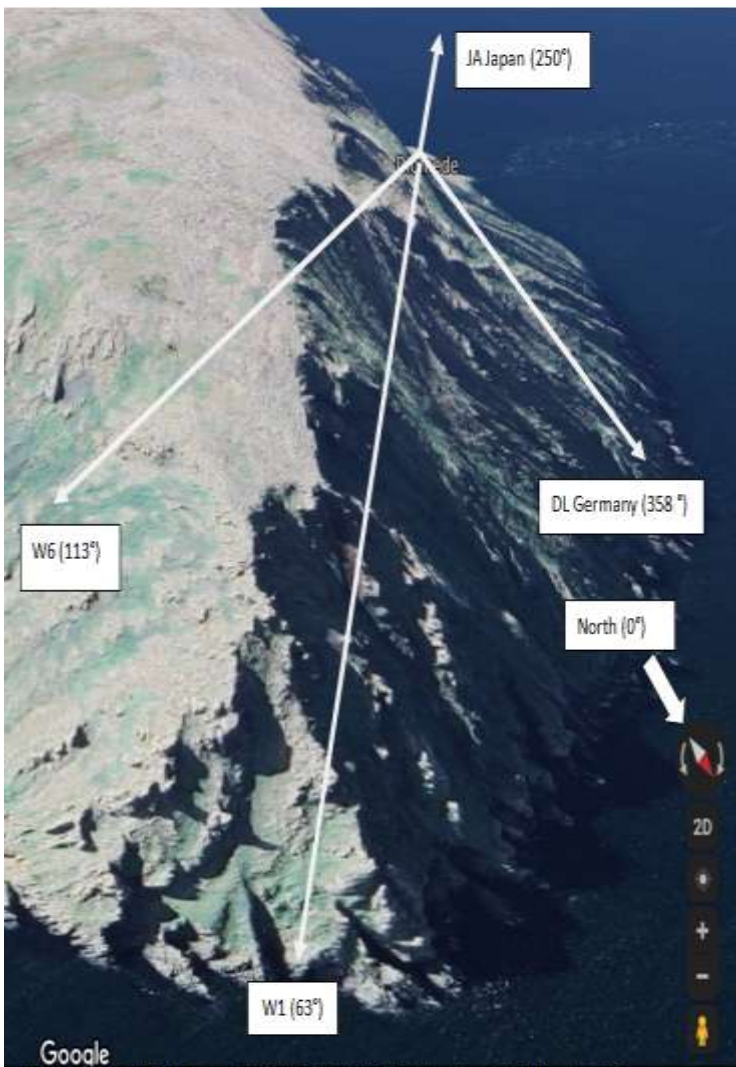


Figure 4 - Headings From NA-150

Arriving on March 19, and knowing that he faced great odds against working North American stations, Cezar planned to travel around the hill to the Northeast side, using sleds, where he would spend a few days concentrating on North America. Unfortunately, the ice pack melted a few weeks prior to his arrival.

While operating from the village, Cezar made very few North American contacts. I spent hours listening for his signals on 20 and 30 meters. Using publicly available VOACAP (Voice of America Coverage Analysis Program) propagation prediction software I generated a model that showed 20 meters around 2200Z (6 PM local time) was my best bet (see Figure 5). My VOACAP model calculated a 2F1 path on 20 meters, or 2 hops via the Ionosphere F1 layer, with a transmit signal takeoff angle of around 6°. Cezar was using a vertical antenna, good for low angle takeoff. On my end of the circuit, I was using an 8 element Log Periodic antenna at 60 feet and 600W output power.

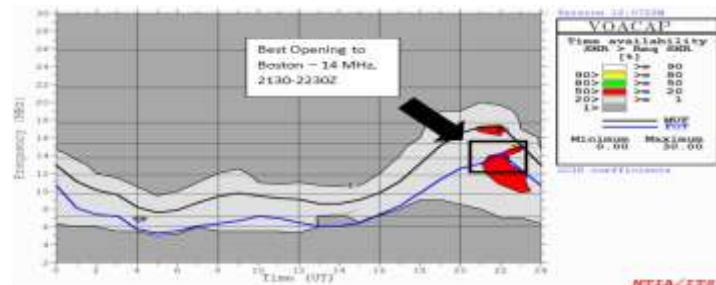


Figure 5 - VOACAP Time Availability Plot from NA-150 to Boston

Cezar decided to attempt a climb of the ice covered hill on March 24, hoping to reach the top and a clear shot in all directions. Lacking proper climbing gear, he and his helper aborted the climb after a short distance. All of this was reported via the IOTA Chasers mailing list, where we were monitoring his activity and plans, and watching as Asian and European stations were reporting successful contacts with him.

Then on March 25, magic happened. At 2202Z he was spotted working CW on 14.040 MHz, and I put him in the log at 2205Z – bingo! His signal was not strong, S1 to S2, but he was very workable. I listened for another half hour while he worked more North American stations, including a couple of fellow New England IOTA chasers. The solar K index, which is a measure of disturbances in the earth’s magnetic field that affects skywave propagation, was 0 at the time, having recently been 1 or 2. The K ranges from 0-9, 0 being the quietest conditions, and 5+ indicating a solar storm. It is highly likely those quiet conditions contributed to his audible signal on 20 meters.

Cezar ended the DXpedition with 2667 total contacts and the following continental breakdown:

Continent	Percentage of Total
Europe	59%
Asia	38%
North America	2%
Oceania	1%
Africa	<1%

His North American contacts, totaling just over 50, were spread out from the east coast to the west coast. It’s no surprise looking at Figure 4 that his percentages were very high for Europe and

Asia. Those continents benefited from an unobstructed field of view. So how did I do it? How was there a reliable circuit path from NA-150 to Boston on 20 meters given the topographic challenges of Little Diomede? Even if enough RF energy was able to escape his vertical at a takeoff angle matching the 40° ice covered slope, this angle of incidence would imply many more hops than the 2F1 predicted by VOACAP at an angle of 6°, resulting in potentially very high signal attenuation. How could a signal launching at 40° reach the east coast? Long path propagation, where the signal travels in the direction opposite to the short path, would have been a 21,000 mile jog from NA-150 to Boston, highly unlikely. What scattering of RF energy from his antenna caused just the right amount of reflections to occur? Is it possible that some energy reflected off Big Diomed Island to his east and hit the ionosphere at just the right angle to support a 2F1 circuit to Boston? If you've got a theory I would love to hear it!



Figure 6 - Another View of Little Diomed Village Staring Into the Hill



Figure 7 - VE3LYC/KL7 QSL Card

Massachusetts has a new distracted driver law

By Tim Miranda (from the PART-of-Westford email reflector) and Marla Wallace

Here's what you need to know about the new cell phone law.

The new hands-free rules will take effect in late February 2020, but violations will be handled with warnings through March 31, 2020.

Under the new law, you basically cannot touch their cell phone while driving, except in true emergency. You can touch it once to activate hands free mode. You cannot look at material on your phone, except at navigation maps, but then only on a mounted phone without touching it. You can hold and touch your phone if you are fully off the public travel path.

The law will mean behavior changes for most of us, but I believe that most of us are ready to make the changes. It is time we all start driving more safely by renouncing cell phone contact.

Here are the exact new rules specified in Section 9 of the bill:

- No operator of a motor vehicle shall hold a mobile electronic device.
- No operator of a motor vehicle shall use a mobile electronic device unless the device is being used in hands-free mode.
- No operator of a motor vehicle shall read or view text, images or video displayed on a mobile electronic device; provided, however, that an operator may view a map generated by a navigation system or application on a mobile electronic device that is mounted on or affixed to a vehicle's windshield, dashboard or center console in a manner that does not impede the operation of the motor vehicle.
- For the purposes of this section, an operator shall not be considered to be operating a motor vehicle if the vehicle is stationary and not located in a part of the public way intended for travel by a motor vehicle or bicycle.

Hands-free mode is defined in Section 1 of the bill as "operation of a mobile electronic device by which a user engages in a voice communication or receives audio without touching or holding the device; provided, however, that a mobile electronic device may require a single tap or swipe to activate, deactivate or initiate the hands-free mode feature.

The new rules apply to all mobile electronic devices, including not only to phones, but also to laptops, personal digital assistants, pagers, etc.

The emergency exceptions are narrowly drawn and include only use to report that

- the vehicle was disabled;
- medical attention or assistance was required;
- police intervention, fire department or other emergency services were necessary for the personal safety of the operator or a passenger or to otherwise ensure the safety of the public; or
- a disabled vehicle or an accident was present on a roadway.

For the first offence, a \$100 fine will be imposed. For the second offence, a \$250 fine and the driver will be required to attend a safety course. For subsequent offences, a \$500 fine, attending a safety course and an insurance surcharge will be imposed.

The new law becomes effective February 26, 2020. Drivers will receive a warning for violations until March 31; afterwards, the penalties stated above will be levied.

To see if this law is expected to affect amateur radio mobile operation in Massachusetts, please refer to the excellent article on the subject at:
<https://ema.arrl.org/2019/11/21/impact-on-amateur-radio-from-distracted-driving-bill/>

BARS Holiday Party - Yankee Swap Rules

January Yankee Swap - Jim N1HTS

As most of you know we have a Yankee swap at our January meeting at a restaurant. Andy will go over the meal details at the December meeting.

The rules for the Yankee swap will be in the January newsletter but I wanted to get the info out on the type of gift allowed. This year it should be a new gift between \$15-\$18 and wrapped. No re-gifting and no boat anchors from the basement allowed. There are lots of sales before the end of December so no excuses.

BARS December Suggestions - Get-on-the-air Events

BARS is a “get-on-the-air” (GOTA) club. We encourage members to participate in the varied events on HF and VHF. Here are some popular suggestions for this month:

Date	Event
December 6-8	ARRL 160-Meter Contest http://www.arrl.org/160-meter
December 14-15	ARRL 10-Meter Contest http://www.arrl.org/10-meter
December 22	ARRL Rookie Roundup, CW http://www.arrl.org/rookie-roundup
December 28	RAC Winter Contest https://wp.rac.ca/rac-canada-winter-contest-rules-2019/
January 1	Straight Key Night (SKN) http://www.arrl.org/straight-key-night
January 4-5	ARRL RTTY Roundup http://www.arrl.org/rtty-roundup
January 4-5	ARRL Kids Day http://www.arrl.org/kids-day
January 11-12	North American QSO Party, CW http://www.ncjweb.com/NAQP-Rules.pdf

Details on each contest above and more events can be found every week on the WA7BNM contest calendar at :
<https://www.contestcalendar.com/weeklycont.php?mode=custom&week=current>

Secretary's Reports

from Scott Ginsburg, K1OA, Secretary

BARS General Meeting, 6-Nov-2019

Andy, KA1GTT called the meeting to order at 7:00 PM with 20 members present.

A vote was held on the slate for new club officers for 2020 with the following members being voted in the affirmative:

- President: Andy Wallace, KA1GTT
- Vice President: Kayla Creamer, W2IRY
- Treasurer: Bruce Anderson, W1LUS
- Secretary: Scott Ginsburg, K1OA
- Board Member: Henry Christie, WA1VAB
- Board Member: Mike Raisbeck, K1TWF

Jim Idelson, K1IR gave a talk on tower safety. Jim did an extensive analysis of Amateur Radio tower incidents and compared the data to the commercial tower industry and concluded that our hobby has a serious safety problem. Jim outlined a number of steps that can be taken to improve tower safety including equipment upgrades and climbing process changes. The video of his talk can be found at:

<https://blog.thedrivenelement.com/2019/11/amateur-radio-tower-safety-presentation-for-the-billerica-ars/>

KA1GTT closed the meeting at 9:00 PM.

BARS Board of Directors Meeting, 25-Nov-2019

Members present: KA1GTT, W2IRY, W1LUS, WA1VAB, K1TWF, K1OA

Decisions made:

1. KA1GTT, Andy designed and purchased 250 postcards with a welcome message to newly licensed hams that will be used to recruit newcomers to BARS. KC1FTJ, John will start sending these out once the Board decides on towns to be targeted and the list of new hams is generated. A vote will need to be made on reimbursing John for postage costs.
2. W1LUS, Bruce will be sending out PayPal invoices for membership renewals.

BARS Membership

Bruce, W1LUS, our BARS Treasurer reports that as of December 2019 we have 89 total members.

2019 BARS Member Dues

The BARS Board has changed the policy on member dues. A \$15 annual BARS membership now runs from January 1 and expires on December 31st. Any renewal or new membership made after September 1 will be valid until December 31 of the next year. Memberships allow us to

- Pay our bills;
- maintain our great web page;
- fund field day;
- and bring the membership a great variety of informative meetings and speakers.

Treasurers Report

from Bruce Anderson, W1LUS, Treasurer

December 2019 Treasurers Report

Reminder 2020 Dues are due starting January first. So far 16 members have renewed for 2020.

You can pay your 2020 dues at any BARS meeting with cash or check. You can also renew online with your credit card at the BARS website W1HH.ORG.

I will be using PayPal to send out reminders in Early December."

In November we had seven members renew their membership plus one new member for \$120 income. Donations were \$31. PayPal fees were \$2.96. We now have \$308.60 in the Bank, \$271.72 in our PayPal account for a total of \$580.32

Our current membership is 51 paid and 38 one year free members including the two new members from the November VE session.

BARS Needs You!!!

We are looking for a few good hams to act as net control on the regularly scheduled Wednesday night nets! All it takes is one night a month; if you are interested contact Chris, KC1IUK. Also, the club needs volunteers for light tasks of ~ 1 hour a month. Are you able to pitch in? Contact Andy, KA1GTT

Wednesday Night Net

Join us on the Billerica Repeater for the weekly BARS net (except on 1st Wednesday of Month which is club meeting night)

Repeater info:

147.12 MHz

+600 kHz (normal) offset

Encode CTCSS 103.5 Hz

Club Meetings

First Wednesday of the month at 7:00PM at Chelmsford Bible Church, 128 Gorham St., Chelmsford MA

Park in back and enter by rear door

[Chelmsford Bible Church Hall, 128 Gorham St, Rear Door, Chelmsford MA 01824-3220](#) ([map](#))

VE Sessions

VE sessions are held every month on the 2nd Thursday at 7:00 PM at Chelmsford Bible Church, 128 Gorham St., Chelmsford MA. Park in back and enter by rear door. [Chelmsford Bible Church Hall, 128 Gorham St, Rear Door, Chelmsford MA 01824-3220](#) ([map](#))

At the November 14th BARS VE exam session three people showed up for testing. David Schirpke passed the Technician and General exams and is now KC1MGL Michael Schirpke passed the Technician, General and Extra exams and is now AC1IO. Phillip Johns, KC1KKM upgraded to Extra. Be sure to say hello if you hear one of them on the air.

The VE's at the session were Bruce W1LUS, Gary W1GFF, Donald W1DM (ex KA1MAP), Guy AC1BJ, Peter N1ALO and Antonio KB1KDS. The next VE session will be on December 12.

Bruce Anderson

Club Breakfast every Saturday

On Saturday mornings around 8:15AM, we also meet weekly for a casual, social breakfast at Stelio's restaurant.

[Stelio's Family Restaurant, Billerica, MA](#) ([map](#))

Future Meetings:

1/8/20: BARS Holiday Party (shifted a week from normal meeting night as 1/1 is Wednesday).

2/5: Mike, K1TWF, recap of ARRL Board Meeting.

3/4: TBD.

BARS Leadership Team

President: Andy Wallace, KA1GTT

Vice President: Kayla Creamer, W2IRY

Treasurer: Bruce Anderson, W1LUS

Secretary: Scott Ginsburg, K1OA

Net Coordinator: Chris Lobdell, KC1IUK

Newsletter Editor: Marla Wallace, WA1GSF

BoD: Mike Raisbeck, K1TWF

BoD: Henry Christle, WA1VAB

Ex Officio: Tom Walsh