Riding the County Lion
Dave – KE3VV

The County Lion and the Big Green Dragon had a terrific holiday season – the Dragon wore his red Santa hat and kept the fireplace going, and the County Lion was festooned with glitter (Yes, I wondered a bit about that too – but he is, after all, a "metro" Lion). So Merry Happy Fantastic Mobile New Year to all.

As promised when we last rode the County Lion, this month I will address another burning question raised by the ever-present Concerned County Hunter (emails - we get emails): "How can MARAC have a Net Control Award when it doesn't have a Net?" The easy answer is that the MARAC Board of Directors has maintained a firm policy of not sponsoring or endorsing any county hunting nets. The MARAC Award Rules (the Board-adopted policy on awards) provides: "MARAC has no Net Operations and does not endorse or control any Net Operation. All contacts made on a net must meet the contact criteria required for the MARAC award for which those contacts are used." Of course, this means that contacts made on 10-10 nets, 3905 Century Club nets, and other nets can be used for MARAC awards, but MARAC has no say in how those nets operate. As long as there is some exchange of information between stations, the contact qualifies for MARAC awards.

It is almost painful to point out that a "MARAC net" is not the same thing as a "county hunting" net. Put another way, just because someone operates a net as county hunting net does not mean it is affiliated with or run by MARAC any more than it is endorsed by or connected to CQ magazine, which sponsors the First Time Worked All USA Counties Award. But those are really the "easy" answers (based only on logic and common sense), and the complete answer is much more interesting… so with apologies to Gary, our esteemed MARAC Historian, I will delve into the reasons behind the reasons.

Contents

The "hands off" tradition that keeps MARAC separate from county hunting nets is deeply rooted in MARAC history. As explained by WA0WOB (MARAC co-founder Johann "Skip" Skaptason, who became a silent Key in 2011), "When we established the goal and criteria for MARAC in 1970, we all agreed that we would steer away from any attempt to manage or in any way interfere with the operation of the county hunting nets. That was left up to the independent group running the ICHN [Independent County Hunters Net]." The founders also agreed that MARAC would never sponsor or operate a net… a resolve that has been maintained to this day.

While awards for ham radio achievements go back as far as the 1930's with the IARU "Worked All Continents," ARRL WAS, and CQ Magazine's WAZ and Prefix awards, the serious pursuit of working all USA counties didn't really take hold until the "re-birth" of ham radio after WWII. During the 1950's the "Certificate Hunters Club," (CHC) was founded to assist amateurs working for these awards and other challenges, including working counties.

In the 1950's (when I got my first FCC license) and into the Sixties, most county hunting was limited to contacts between fixed stations (and most QSL cards did not even include the county!). There were (and still are) counties with no fixed ham radio operations, so working mobile and portable stations was (and still is) a "must" for working all USA counties. The 4,000 members of CHC represented more than 175 DX countries and pursued many awards, and in the USA, many CHC chapters promoted county hunting. The emerging availability of mobile ham gear, including surplus and home brew rigs, made the "impossible dream" working all USA counties seem reachable. One of the earliest CHC nets on 3943 kHz was a hotbed of county hunting activity, as was the CHC Flying Hams Club Service Net on 14340 kHz. Three YL's: Flossie "Tillie" Curington (K0RGU), Valerie Campbell (K2KQC), and Orma Donkle (W9BJH) hosted the net along with Clifton "Clif" Evans (K6BX), the founder of the CHC. This net was mostly fixed SSB stations, but the occasional mobile check-in was given priority.

One source of information on the emerging pursuit of all USA counties was a newsletter published briefly by Bing (W0GV, who was easily recognized by his habit of calling everyone "Good Buddy," a phrase otherwise rare on the ham bands). County hunting was also a focal topic in CQ Magazine. When Clif Evans joined CQ, the USA-CA awards were created and the first 26 applications for USA-CA 500 were numbered 1A through 1Z. The first USA-CA 1000 awardee was K4AI in 1962. As more and more activity occupied the CHC nets, the inevitable turf "discussions" emerged, focusing on objections to the increasing county hunting activity on 14340 kHz. In November 1966, that "schism" led to the creation of the "Independent County Hunters Net" (ICHN) on 14336 kHz, where it continues to operate most days every week. The founders of the ICHN were Bertha Eggert (WA4BMC), O. Frank Beyer (K8CIR), and WB2FVO (later K2NJ - a call more familiar to MARAC as belonging to Past President Bill Inkrote. The ICHN was still dominated by fixed stations, but the number of mobiles putting out counties increased each year. A 40 meter SSB net on 7225 kHz was also very successful in attracting mobile ops.

Within a year after Ed Hopper took over as USA-CA Custodian at CQ Magazine, the first USA-CA for all USA counties was awarded to Cliff Corne, Jr. (K9EAB), who finished them all on November 9, 1965, even though polio confined him to an iron lung. In 1969, the ICHN held its first "eye ball" QSO in Mountain Home, Arkansas. Out of the discussions held at this meeting and an ongoing need for a club to promote mobile county hunting awards, the Mobile Amateur Radio Awards Club, Inc. (MARAC) was formed in Kansas City in March, 1970, by Ella Koons (W0AYL), Jack Scroggin (W0SJE), Myron "Mike" Baustain (WA0KQQ), "Skip" Skaptason (WA0WOB), Cleo Mahoney (WA0SHE), Clyde

Stottlemyre (W0YLN), and Joe Bidnick (WA0PJX) – all now Silent Keys. Within a year, MARAC grew to over 100 members. The objectives of the club were to promote mobile operation, to provide incentives for county hunters who had earned the USA-CA award to remain active, to publish a newsletter, and to sponsor awards related to mobiling and county hunting – the same objectives that govern MARAC today.

Another county hunting pioneer was Bill Nash (W0OWY) founder of the B&B Shop and publisher of the County Hunter Handbook and special logbooks and directories. B&B created several awards, including the Five Star Award, and maintained a computer database for county hunters called PEACH. In the 1994 edition of the B&B Shop Handbook, the County Hunter History (edited by Arnie Bachmann – K9DCJ , the call sign that became the MARAC Club Station call sign after Arnie became a Silent Key) and Bob Dyson (K0AYO), shed some further light on the long-standing avoidance of entanglement in the ICHN net ops by MARAC. While the two groups joined forces to sponsor social events (the third annual ICHN convention in Kansas City, MO held in 1971, was also the first MARAC annual convention), MARAC and ICHN remained separate. According to Arnie and Bob, "MARAC fully supports the County Hunters Net without interfering with its operation or its independence. This is especially important since the net was formed in the first place as a revolt against the over-dominance of a club."

Sometimes the argument is made that MARAC avoids sponsoring nets so it doesn't have to regulate how the various nets operate. That is absolutely 100% true. There continues to be discussion about the role of MARAC in county hunting activities other than sponsoring awards and conventions and Mini's (regional "eye balls"). The idea of setting more consistent standards for net operations (rather than leaving that up to the independent ICHN county hunters) is tempting and even promoted by a few MARAC members (and non-members) who disagree with how some nets operate. But when the ramifications of "policing" net operations or trying to manage net schedules and net controls are discussed, the wisdom of the founders of MARAC always prevails. Even though ICHN operations are sometimes controversial, and on occasion contentious, the nets remain independent, and MARAC can focus on sponsoring awards and social gatherings.

George Santayana opined that, "Those who cannot remember the past are condemned to repeat it." The view from the President's Shack is that we should remember the history of MARAC and the wisdom of the leaders who preceded us. Best of New Year 73's from me and the County Lion (and the Big Green Dragon – whose flame doesn't seem to work so well when he is hung over). Dave - KE3VV

Dateline CW
Ed, KN4Y

If you are reading this newsletter. Dave has cancelled the Mayan prophecy of doom.

The weather is cold, the truck cab is warm and as I slowly turn off the main road I notice that Gator is already at the radio shack. I make a mental note to take down the outside Christmas lights as I park at the recycled railroad tie. I grab my package off the seat and hope Gator has turned up the heat. I open the door and go inside and Gator is laughing so hard tears are running down his eyes. He turns around in the chair, "Happy New Year Dude. I was checking out your new computer and I brought up the log check report for the CQ WPX contest. Were you drunk during the contest? You busted a lot of the exchanges." "Yes, I think that CQ is trying to discourage older hams from entering the contest. I hate when they take a QSO away for a penalty and that means the other station also looses a QSO, cannot just have half a QSO. I will have to try harder." Gator feignes a sad look. "What is in the package?"

I set the package on the table and remove a coffee maker, "That, Gator is a latte maker. It uses little containers filled with ground coffee, Now pay attention." I plug the coffee maker in and fill the reservoir with bottled water . I open the maker and put in a small container of coffee labeled dam strong, I put my Pennsylvania QSO party coffee mug under the spout, push the start button. After a few seconds of sizzling sounds I hand the mug to Gator. "Black ,hot and strong, coffee the way the creator designed; are you going to have a cup?" I had already put in another QSO party mug under the spout and pushed the button.

Gator is back at the computer, "I see you operated in the CQ DX contest, the Bulgarian LZ DX contest and the ARRL 160-meter contest. I thought you ran mobile on that weekend and worked the counties on the way to Polk County." "I did. I worked the counties down and back. I did the 160-meters QSO's on Friday night. Check if I got any new counties on 160-meters. Boy this coffee is great. Now maybe I'll not make so many contest exchange errors." Gator looks dubious.

"By the way Gator, while I was in Polk County I had an eye-ball QSO with Jim, W8FNW, and his wife Damaris, W4FNW." Gator fakes a surprise look, "You conversed with sidebanders?" "They also operate CW so don't get bent out of mode, I really enjoyed the visit and both said you were a cool person." Gator smiles all over himself like a deer caught in W0GXQ's headlights.

I hear the toot of the mail delivery woman; I go out in the cold and get the mail. "Wow Gator, looks like I got some certificates." "Not from CQ I bet." I open the envelopes," This is from the Hawaii QSO party. I am third in the W4 call area." Gator starts laughing, "You are in the K4 area." I ignore Gator, "I am second in the world in the 10-10 CW QSO party." "Who beat you?" It was N4PB and the only reason he beat is he is one of the greatest contest operators in the world." "Key Kissing is not the way to go." I ignore Gator.

We sip our coffee while Gator is on the computer, "I see you worked 29 States in the ARRL 10-meter contest, but alas only two new counties, but you got a rare 2 X 2 Call.
Gator's cell phone activates, "Got to move out Dude, they have found the carcass of Randolph the red nosed reindeer wedged in the top section of the South tower." He is gone like Christmas savings; the printer starts. I look at the list of county hunters heard in December on the mobile CW frequencies, I

read:K0F, K3MIC
.K7TM, K8QWY, K8ZZ, KB6UF, KC7YE, KN4Y, N0KY, N4JT, N5KIE, N9DM, N9JF, W0EAR, W0GXQ, WAHSA, W4SIG, W50P, W7FEN, 2WB8KZW, WC5D, WD4OIK, and WU3H.

I check the radio activity list for January and notice there are no State QSO parties, a fact that baffles me. There are however plenty of contests for the snowbound CW county hunter. Right off the get go is the ARRL straight key night and the always popular North American QSO party. If you like to receive and send numbers work the LZ Open Contest. If you need counties on 6-meters check out the ARRL VHF Contest. Operate in the CQ WW 160-meter contest and maybe pick up a few new counties. What is better that working a contest when the weather outside is awful and inside the shack is delightful. A short brandy and then nap time.

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New Members

MARAC Number	Callsign	Name
R4523	KC7QOP	Lee Shissler
R4524	NG9J	Kevin Waldroup

History Happens
Gary, K4EXT

History Happens continues to look at MARAC beginnings. The information presented comes primarily from old meeting minutes and newsletters.

A Special Meeting of MARAC was held at 7:45pm on April 9, 1970 ... location unknown. The purpose of the meeting was to meet with a professional artist to discuss and plan upcoming MARAC Awards. Members present included Skip, WA0WOB ... Jack, W0SJE ... Cleo, WA0SHE ... Clyde, W0YLN ... and Myron, WA0KQQ.

A regular meeting was scheduled to be held on May 9, 1970 at the Leavenworth, Kansas home of W0YLN ... however, I have no information or minutes for that meeting.

Note that several "on-air" meetings had been attempted with varying degrees of success. The first was held on March 23, 1970 at 0520Z on 3932 Khz. The nine check-ins discussed MARAC issues as well as mobile operation.

A call sign that surfaces quite regularly when reading old MARAC documents is WA0KQQ, belonging to Myron (Mike) Baustian of Leavenworth County, Kansas. WA0KQQ obtained CQ Magazine's USA-CA number 149 on 06/15/1976 ... was MARAC Charter Member number 5 ... and was one of the first members of the MARAC Board of Directors back in 1970. The WA0KQQ picture below is courtesy of Mike, NF0N.

MARAC 2013 ELECTIONS
ANNOUNCEMENT
Kent, KL1V

Nominations are currently open for the positions of Pacific Director and Northeast Director (3 year terms). Nominations will be open for 60 days, from January 5th through March 10th. Any current member of MARAC is eligible to run for office. For the District Director position you must live within the District, refer to the MARAC website.

If you are willing to serve MARAC in an elected position, please email your nomination to KR@GCI. NET or via regular mail. I must receive all nominations by March 10th.

MARAC VOTING INFORMATION

Remember, if you are a new member or are REJOINING following a lapse in membership, you are NOT eligible to submit nominations or vote in an election until the first day of the month following receipt of initial payment of dues and valid membership application to the Secretary of MARAC.

Those individuals maintaining uninterrupted membership status are not restricted from nominating or voting in the current month.

If you are unsure of your membership status, please go to the MARAC County Hunters Database web site http://marac.org/database and enter your call in Call Lookup to determine your MARAC Expiration Date.

MARAC 3rd QUARTER AWARD VOTING
October – December

Voting will be open from January 1st through January 31st for the best net control, mobile and team awards. The easiest way to place your vote is at the MARAC On-Line Ballot site http://marac.org/ elections/. All you will need to enter on the sign in page is your call sign and your MARAC key. If you have lost or do not know your key then enter your callsign and then click on the button below to request your key. The key will be emailed to your email address on record right away. You may also send me your vote via regular mail. However I must receive the ballot by the closing date of the voting window. Please include your callsign, MARAC membership and key numbers along with your choices for each class.

A vote for 1st choice is awarded 2 points and 2nd choice is awarded 1 point. Please do not vote for the same call for both choices. Of course any choices can be left blank.

Best Net Control SSB: 1st Choice_____   2nd Choice_____

Best Net Control CW: 1st Choice_____   2nd Choice_____

Best Mobile SSB: 1st Choice_____   2nd Choice_____

Best Mobile CW: 1st Choice_____   2nd Choice_____

Best Mobile Team: 1st Choice _____/_____
                         2nd Choice_____/_____

Your call sign:_____   **MARAC # or Election Key**_____

Kent Reinke
MARAC Election Coordinator
PO Box 215
Valdez, Alaska 99686-0215

Digital Happenings #5
(December 2012)
Matt, W0NAC

As I write this (the day after Christmas) I sincerely hope that everyone reading this article had a wonderful and Merry Christmas and that the New Year will bring you many more blessings than 2012. I also hope that more of you will reap the joys of digital county hunting by getting your base station set up for digital operations or, (gasp!), even getting more mobiles out there putting out counties using the digital modes!

In the first 4 articles of this series I discussed digital basics (article #1), how to tune and decode digital signals (article #2), how to adjust your setup for a clean, distortion free transmitted signal (article #3), and how to create and use macros (article #4). Again, you may find it useful to review these before going on. This month I will cover how to 'put out' counties mobile using digital modes.

HOW TO 'PUT OUT' COUNTIES USING DIGITAL MODES WHILE OPERATING MOBILE

Let me begin by re-stating something I said in Article #1 – "I understand that operating digital is not everyone's 'cup of tea.'" This goes double for mobile digital operations! Let's face it - operating mobile using digital modes is SLOW. County hunters have been trained to expect a series of "bang bang" contacts when using either SSB or CW. Completing 30 or 40 contacts during a 10 minute run is not at all unusual. Using current digital operating techniques, average contact rates run around 1/minute at best. Also, currently, it is neither practical nor safe for single operators to put out counties on the fly while using digital modes. After saying all this, one might ask why even try? Well, the answer for me is that operating digital is something new, challenging and fun! Also, in some cases, you can make contacts using digital modes that would never have been completed using SSB or CW. These benefits more than compensate for it being slow, but each operator must make their own trade-offs.

If one decides that they have the needed motivation to get into digital operations, I recommend that it be done one step at a time. You should start with a limited fixed station capability and concentrate on making casual contacts using PSK-31 or PSK-63. After getting comfortable doing this, one could start making casual contacts using some of the other digital modes like MFSK-16, OLIVIA, RTTY, and CONTESTIA. During these activities you can modify and perfect your macros and even create unique macro sets for use during various operations. Next, you might try following and working county hunter mobiles (operating digital) when they are spotted on the web. This may require still another set of macros in a macro file dedicated for this purpose. Until you are comfortable and proficient in fixed station digital operations I would not recommend that you try to set up a digital mobile station.

Assuming you believe that you are ready to 'take the plunge' and go mobile, there are 4 basic pieces of equipment you will need to install. These are a SSB transceiver, antenna (with tuner if needed), small computer (laptop/notebook), digital software program, and a suitable hardware interface. Naturally, if you have previously installed a SSB or CW rig in your vehicle, you only need to add on the last three items. There is a mind-boggling variety of hardware/software out there to choose from and most are viable choices. All I wish to do in this article is suggest that you think about your entire "system" when making your choices. The "system" includes you and your vehicle in addition to the equipment you intend to install.

Numerous books and magazine articles (CQ and QST) have been written on mobile installation. I will not try to duplicate these here. I will note that doing a full permanent installation may not be necessary, at least initially. I know of at least 2 folks who started operating digital mobile with their laptops simply lying on the passenger seat. Again, you can do your own installation using an incremental approach. Use some of that old fashioned 'ham ingenuity'! I can, however, show you a bit about our mobile system as an example. I don't recommend that you necessarily duplicate my setup, but only use it to help 'flesh out' your own ideas. What you use doesn't need to be anywhere near as elaborate as my setup.

Our mobile rig is installed in a 2008 Honda Civic Hybrid car (Photo 1). The main elements of the installation include a remoted ICOM-7000 transceiver (Photo 2), Sony 13" laptop on a RAM mobile mount/tray (Photo 3), Navigator US Interface (Photo 4), an Ameritron 500M linear amplifier with an LDG AT-1000 Pro automatic tuner (Photo 5), Kinetik 2400 Battery and 500 W Pure Sine-wave Inverter in the trunk (Photo 6), and a trailer hitch mounted 8' vertical antenna with 8 resonators for 80M/40M/30M/20M/17M/15M/12M/10M (Photo 7). We also have 2 CW paddles (one for the driver and one for the passenger) and a plethora of wiring and bonding straps. The laptop runs Windows 7 and has Delorme Street Atlas, Verizon Wireless Manager, MixW, Fldigi, Logger and Logger Map (plus many other programs) installed.

Photo 1

Photo 2

Photo 3   Photo 4

Photo 5   Photo 6

Photo 7

Assuming you are a single operator (team operation will be covered next month), one of the first things you will need to do is plan your route. As noted, I use Delorme Street Atlas for this purpose, but there are other navigation programs which will do this task, but be careful – some programs do not display county lines! Terry (WQ7A) has created a draw object for Street Atlas that displays all county names on the screen. There are 2 versions of this overlay available on the MARAC download site. These are titled "DeLormeCounties.txt" and "DeLormeCountiesCAP.txt" Use the following link to download them - http://www.marac.org/chdownloads .

When planning your route for digital operations, I recommend that you stop on county lines as much as possible. This is more efficient because you will have to stop to operate safely anyway. If the county line is wet or otherwise undesireable to park on, you will need to find a safe place to park for at least 30 minutes. If you have a final destination in mind, you will need to allot at least twice the total time to reach it if putting out counties using digital. Put another way, only plan about ½ the

miles or number of counties for any given day. If your final destination is many miles away and you have only a few days to get there, you may not be able to stop on every county line, but only a very few. This is a sure way to get very frustrated!

Before you leave you will also need to check out your macros and be ready to use them. You should plan on spotting yourself in most cases since there is no formal net as yet for helping digital mobiles. This will require wide-area internet coverage of some kind (some now use their smart phones for this purpose). You can also arrange in advance for a fixed station to follow your progress and spot you.

When putting out counties digitally, I recommend that you do so using at least 3 or 4 different modes on just one band (20M). 14074.0 KHz (+/- interference) true frequency is usually a good choice since it is above the 14070-14072 KHz range mostly used by casual PSK operators and is below the 14075 - 14077 KHz range mostly used by JT-65 operators. The four modes we use the most are PSK-63, RTTY, MFSK-16, and THROB-4 (in that order) all transmitted on 14074.0 KHz. Remember, to transmit on this true frequency, set your radio dial to 14.073.0 KHz and the offset on your waterfall to +1000 Hz. If you wish to keep things a bit more simple at first (and also save time), you can limit the modes you use to just one (PSK-63).

TYPICAL SEQUENCE OF EVENTS:

You have done all your homework and planning as outlined above. Now it is time to put out a county line using digital modes. The following is what a typical sequence of events might look like. It can be used as sort of a checklist. Regardless of what is said here, each individual must do what they are comfortable with, so modify it if you wish.

1) Navigate to and stop on the planned county line (or county stopping point).
2) Tune Xcvr dial to 14.0730 MHz and select USB.
3) Tune antenna (if needed) for acceptable SWR.
4) Check that Fldigi software is running and has the following settings:
       a. Configure/Operator:

      Only the Callsign: and QTH: items are critical to have correct since they are used as TAGS in your macros. Don't forget to "Save" before "Closing" this windows. Note: You will need to change the QTH: information each time you move to a new county/county line.
      b. Check that OpMode is set to the desired mode.
      c. Enter/Modify "Xcvr Freq" (if you want the "freq" box to indicate the true operating frequency).
      d. Set waterfall offset to ~ 1000 Hz (move up/down a bit to avoid interfering with other signals

if   present)

       e. Confirm that proper macro file is open and refresh your memory on what each macro does

5) When ready to go, switch to web spotting site and spot yourself (or have helper spot you).

6) Click on leftmost macro button (Or press the F-1 key) to transmit CQ

7) When another county hunter replies (usually with their call sign 3 times), double click on their call sign to get it into the buffer (it will show in the Fldigi "Call" box near the top of the screen if successful). Then, click on the 2nd (from the left) macro button (Or press the F-2 key). This will acknowledge their call and transmit a standard 599 report.

8) When the calling station acknowledges your 599 report and sends your 599 report back, click on the 3rd macro button from the left (Or press the F-3 key). This will acknowledge receipt of their report, BREAK, and then ask if others wish to call.

9) If another county hunter does call you, then go back to step 7) and repeat.

10) If no one else calls right away, go back to step 6) and repeat your CQ.

11) When you sense that all stations have completed their contacts with you, announce what you are going to do next. Options here include:

       a. Changing Mode (Don't forget to change spot also)

       b. Going on to next county line/county

       c. Quitting for the day.

12) Drive on to next county line/county.

Please note that the "canned" responses in your macro set are not always appropriate. You may need to respond to non-county hunter calls or questions by using the keyboard to manually type replies. To reply, toggle the transmitter to "ON" by pressing Function Key 12 (F-12) or clicking on the far right macro on the macro line. When finished typing, toggle your xcvr "OFF" by using the same button or key.

OTHER OPTIONS

For logging digital contacts I recommend logging on paper. However, Fldigi has a crude logging capability that some might wish to use. MixW (and other software) has a more capable logging system which can be used with your macros to automatically log contacts which can be later imported into Logger. I have not had time to use this capability yet, but Lloyd (NX4W) uses this method extensively. Please contact him if you need more information on automatic logging using MixW macros. I don't recommend using the near real time logging capability in Logger as I find it to be too awkward and slow to use, mainly because it requires constant screen switching (multi-tasking), but you may find it to your liking.

You can, of course, use digital modes other than the 4 suggested above. The new 5-Mode award allows using any of 33 approved modes. Of these 33 modes, 26 are considered to be digital modes (CW excluded). If sub-modes are included, one has nearly 100 mode/sub-mode combinations to choose from. However, a few of these modes are not very useful for putting out counties when mobile. For example, JT-65 contacts take 5-6 minutes to complete one short QSO which pretty much rules it out. Even so, there is still a wide variety of modes/sub-mode combinations that are just waiting for someone to try them out.

Putting out counties using digital modes at night is doable, but can be extremely challenging.

The lettering on some laptop keyboards are almost impossible to read in the dark. Night mobile operation is NOT for the faint hearted, but don't let me discourage you. If you do decide to try it, make sure you have a keyboard with high contrast lettering and lighting that allows you to read it.

To sum things up, putting out counties while mobile using digital modes is more difficult than either SSB or CW and the overall contact rate is much slower. However, if you are looking for new challenges and are willing to expand your horizons a bit, I strongly recommend that you give mobile digital a try. Since the early days of county hunting, mobile operators have been the "life blood" for achieving the various awards. The new digital awards are no different in that without the help of mobiles, they will be almost impossible to achieve. With more digital mobiles active, the new digital awards will become attainable.

DIGITAL ACTIVITIES IN DECEMBER

Last month I promised to give you the results of Sharon and my 2 day trip starting the day after Thanksgiving (26 November). The prime purpose of our trip was to get K2MF the WBOW in Hooker County, NE. However, along the way, we planned on putting out 11 county lines (22 total counties) using PSK-63, RTTY, and MFSK-16. We actually put out only a total of 6 county lines (12 total counties) using PSK-63, RTTY and MFSK-16. A summary of the results is given below:

W0NAC/N0LXJ DIGITAL CONTACTS IN CO/NE NOV 26/27 2012

CALL	NAME	PSK	RTTY	MFSK	TOTAL
NX4W	LLOYD	16	20	20	56
WB2ABD	PAUL	16	20	18	54
N8CIJ	DICK	12	12	12	36
WA4UNS	DOUG	12	12	12	36
K5WAF	BILL	8	12	8	28
K8QWY	ED	12	0	0	12
KA9JAC	BOB	4	4	4	12
N4JT	JIM	4	4	4	12
NA8W	DARL	4	4	4	12
W1OER	DON	0	4	4	8
W3DLM	DON	0	8	0	8
K7REL	TOM	4	0	0	4
K7TM	BOB	0	4	0	4
K8GWY	BILL	4	0	0	4
N1API	AL	0	4	0	4
NF0X	HARRY	4	0	0	4
OE5KE	ADOLF	0	4	0	4
VE3CPK		0	0	4	4
WD4OIN	JACK	0	4	0	4
TOTAL		100	116	90	306

This list is ordered by total number of contacts made with both of us. As you can see, Lloyd (NX4W) and Paul (WB2ABD) top the list followed closely by Dick (N8CIJ), Doug (WA4UNS) and Bill (K5WAF). We thank everyone on the list for their support.

During December I provided advice and support in varying degrees to VK4AAR (Alan), N1API (Al), and K0FG (Fred). I still stand ready to help anyone get started with digital ops. Just email me or call me on the phone. My email is w0nac@comcast.net and my phone number is 303-799-3658. Call any time.

Table 1 has been updated from last month. Again, if I have left anyone off the list you have my sincere apology! Just drop me a quick email and include your stats, if you know them, and I will be pleased to add you to the list. Conversely, if you are on the list and feel that you don't belong, please also drop me an email and I will remove you.

Logger will currently give you your status for the USA – Digital Award (Go to "View/Edit/Book/USA-Digital/All"), but for the 5-Mode Award, Logger only reports those counties which have been worked using all 5 different modes. You can see this by going to "View/Edit/Book/5-Mode/All". A fix is still in the works that will report on the status of 1, 2, 3, and 4 completed counties also, but it may be awhile before this is released. While waiting, the 1, 2, 3, and 4 completed county columns for the 5-Mode award will have to remain blank for most folk. Last month I manually computed the completed modes for 2 or 3 people for whom I have fairly recent databases, but couldn't do it for more (too much work!). However, if you have finished your USA-CA using any mode (or combination of modes), then your 1-Mode completed column number is, by definition, 3077! Here is the updated Table 1:

#	CALL	NAME	STATUS* (M,F,I)	USA - DIGITAL Counties (of 3077)	(1 MODE)	(2 MODES)	FIVE MODE COUNTIES (3 MODES)	(4 MODES)	(5 MODES)	LAST UPDATED
				Table 1 - Active Digital County Hunters Award Status						
1	AA8R	Randy	F	1000+	-	-	-	-	-	9/30/2012
2	AC0B	Cliff	F	205	-	-	-	-	-	12/10/2012
3	AD1C	Jim	F	-	-	-	-	-	-	
4	K0DEQ	Bill	F	-	-	-	-	-	-	
5	K0PVW	Rob	F	-	-	-	-	-	-	
6	K0WJ	Lou	F	-	-	-	-	-	-	
7	K4PBX	Jim	F	-	-	-	-	-	-	
8	K5GE	Gene	F	-	-	-	-	-	-	
9	K5SF	Dick	F	-	-	-	-	-	-	
10	K7REL	Tom	F	-	-	-	-	-	-	
11	K8QWY	Ed	F	-	-	-	-	-	-	
12	K8ZZ	Ed	F	-	-	-	-	-	-	
13	KC3X	Hollis	F	-	-	-	-	-	-	
14	KC6AWX	Bob	F	-	-	-	-	-	-	
15	KD5YUK	Billy	F	-	-	-	-	-	-	
16	KD7KST	Bill	M/F	1792	-	-	-	-	-	9/30/2012
17	KG5RJ	Gregory	F	-	-	-	-	-	-	
18	KM1C	Bill	F	-	-	-	-	-	-	
19	N0KV	Barry	M/F	-	-	-	-	-	-	
20	N0LXJ	Sharon	M/F	1309	3077	2209	1128	360	148	12/27/2012
21	N1API	Al	F	-	-	-	-	-	-	
22	N3HOO	Ed	F	-	-	-	-	-	-	
23	N4JT	Jim	F	572	3077	3058	575	99	55	10/30/2012
24	N5MLP	Ron	M/F	-	-	-	-	-	-	
25	N6PDB	Dennis	F	91	3077	2477	66	0	0	10/31/2012
26	N8CIJ	Dick	F	418	3077	2942	393	117	93	11/5/2012
27	N8HAM	Jim	I							
28	NA8W	Darl	F	428	2972	?	?	?	45	12/3/2012
29	NF0N	Mike	F	-	-	-	-	-	-	
30	NN9K	Pete	F	816	3077	859	78	1	0	3/23/2012
31	NT2A	Gene	F	-	-	-	-	-	-	
32	NU4C	Paul	F	-	-	-	-	-	-	
33	NW6S	Jim	F	-	-	-	-	-	-	
34	NX4W	Lloyd	M/F	1070	3077	1098	157	4	0	12/19/2011
35	W0NAC	Matt	M/F	1722	3077	2780	1842	854	247	12/27/2012
36	W0QE	Larry	F	-	-	-	-	-	-	
37	W4IHI	Gary	F	-	-	-	-	-	-	
38	W4SIG	Kerry	F							
39	W4YDY	Dave	F	-	-	-	-	-	-	
40	W6RK	Risto	F	-	-	-	-	-	-	
41	W6RLL	Joe	F	-	-	-	-	-	-	
42	W7IN	Larry	F	-	-	-	-	-	-	
43	W7QQ	Bill	M/F	-	-	-	-	-	-	
44	W9JR	Rich	F	90	3077	1674	44	0	0	10/31/2012
45	W9SUQ	Larry	F	-	-	-	-	-	-	
46	WA4UNS	Doug	F	-	-	-	-	-	-	
47	WA7JHQ	Sterling	F	-	-	-	-	-	-	
48	WB0M	Jeff	F	-	-	-	-	-	-	
49	WB2ABD	Paul	F	-	-	-	-	-	-	
50	WD4OIN	Jack	F	-	-	-	-	-	-	
51	WQ7A	Terry	F	-	-	-	-	-	-	
52	WY4D	Bennie	F	-	-	-	-	-	-	

Next month I plan on discussing "How to operate as a mobile OM/YL team using digital modes".
Possible topics for the coming months include –
"How to log your digital contacts in Logger"
"How to fine tune your Interface"
"Other Interesting digital modes (JT-65)"

So long again…...Please email me with your comments/suggestions at w0nac@comcast.net and don't
forget to send me your counties worked status on the USA – Digital and 5- Mode awards so I can
update the Digital County Hunter Status List again next month.
73's and we'll see you down the waterfall,
Matt – W0NAC

Last County Awards

THE FOLLOWING RECEIVED LAST COUNTY AWARDS FOR SEPTEMBER/OCTOBER
FOR MORE INFORMATION GO TO: *http://www.marac.org*

Email - Last County	Email - Last County	Email - Last County	Email - Last County
To Call	To Call	To Call	To Call
WY0A	AB7NK	N9QS	N9QS
WY0A	K7SEN	K0FG	N9QS
K0FG	KB0BA	N9JF	N9QS
W5QP	N0XYL	N9STL	N9QS
N9JF	N0XYL	W5QP	N9QS
W0NAC	N8OYY	WG9A	N9QS
N9JF	N0XYL	W3DYA	N9QS
W8FNW	N5MLP	WG9A	N4CD
KD4HXM	K7TM	KD4HXM	N2OCW
K8ZZ	K7TM	WA9DLB	N4AAT
KR6F	K7TM	N9STL	N9STL
KB7RUQ	AB7NK	K2HVN	AB4YZ
K2HVN	K7SEN	WG9A	N4CD
N5MLP	AB7NK	WG9A	N4CD
N5MLP	K7TM	KC4HW	WQ7A
AB7NK	N9QS	W4SIG	WY7ML
WV2B	N9QS	N4CD	WY7LL
N9QS	N0KV	N4JT	AB4YZ
N8OYY	K0FG	K0FG	N8OYY
N5MLP	WD4OIN	N9QS	WY7LL
N5MLP	WG9A	AA9JJ	W7FEN
N5MLP	K8ZZ	K1SO	W7FEN
K2HVN	N8KIE	K6PJ	KW1DX
N5MLP	N5KUC	W7FEN	KB0BA
K8QWY	K7TM	AA5TL	AF3X
K7SEN	W9XYL	K2HVN	AF3X
W4SIG	W4SIG	KD7KST	KB6UF
KC3X	KA4RRU	N9STL	W3CR
W5IL	N8HAM	WY7ML	KB6UF
WG9A	N5UZW	N8HAM	KB6UF
KC3X	K0FG	N9STL	WG9A
W5IL	N9JF	N8OYY	W8FNW
N2JNE	N9STL	N8OYY	WG9A
W4SIG	KW1DX	N8OYY	N3HOO
N2JNE	KW1DX	N5UZW	KE3VV

THE FOLLOWING RECEIVED LAST COUNTY AWARDS FOR SEPTEMBER/OCTOBER
FOR MORE INFORMATION GO TO: *http://www.marac.org*

Email - Last County	Email - Last County	Email - Last County	Email - Last County
To Call	**To Call**	**To Call**	**To Call**
N8KIE	N9JF	K2HVN	NT2A
WG9A	WQ7A	K8ZZ	W9MSE
KB0BA	K6PJ	KB6UF	WQ7A
KB6UF	N0KV	W0GXQ	N8KIE
WY7ML	KQ2M	W0GXQ	W9MSE
WY7LL	N0KV	W0NAC	W9MSE
N9QS	W4SIG	N0KV	W5QP
KM9X	N4CD	N0XYL	W5QP
KB9MGI	N4CD	N9QS	W9MSE
N9AC	K8ZZ	N9QS	W7FEN
WG9A	N9QS	W9MSE	N5MLP
N9STL	K1GQ	W0FP	
N4AAT	N0KV	KW1DX	
N4AAT	N4CD	KW1DX	
N5UZW	N4CD	N9QPQ	
N0LXJ	N4CD	AA9JJ	
N7ID	N4CD	W7FEN	
N7ID	N4CD	W9GUY	
N9QPQ	N4CD	K5GE	
AA9JJ	ND9M	K5GE	
N9QPQ	NU0Q	W4SIG	
WG9A	KM1C	N9QPQ	
W8TAX	W0GXQ	AA9JJ	
N8KIE	N4CD	N8KIE	
W4YDY	W3DYA	N9QS	
WG6X	K4ZGB	N5MLP	
N0KV	N4CD	AA9JJ	
AI5P	NY4N	N9QPQ	
W8FNW	N9QS	WQ7A	
N8KIE	W4CA	K2HVN	
VE9SX	N0KV	AA9JJ	
KC3X	N4CD	AA9JJ	
N7ID	N4CD	KB6UF	
N7ID	N4CD	N4CD	
NM2L	N9STL	N8KIE	

Awards

Awards Issued For December			
Call	**Date**	**Award**	**Number**
K4EXT	12/8/2012	USA-CW	# 132
K2MF	12/20/2012	USA-CA WAC 1st Time	#1233
K7REL	12/30/2012	BINGO IV	# 8

Roadrunner Issued For December				
Call	**Date**	**Count**	**Award**	**Number**
W9OP	12/31/2012	Last County Count 125	Last County Count 125	# 176
AI5P	12/31/2012	Last County Count 975	Last County Count 975	# 8
W5QP	12/31/2012	Last County Count 75	Last County Count 75	# 263
WD4OIN	12/31/2012	Last County Count 75	Last County Count 75	# 262
W0GXQ	12/31/2012	Last County Count 675	Last County Count 675	# 21
AA9JJ	12/31/2012	Last County Count 900	Last County Count 900	# 9

Birthdays

Roadrunner - Birthdays	
Call	Birthday Date
W5RJ	Jan - 01
RV1CC	Jan - 01
KX1A	Jan - 01
WJ8Y	Jan - 01
KN6ZB	Jan - 02
KQ8D	Jan - 03
N4IWY	Jan - 03
NT7R	Jan - 03
N8LG	Jan - 03
NX9H	Jan - 03
W2UJ	Jan - 03
K2PF	Jan - 03
WB5NFS	Jan - 03
KE4TTS	Jan - 04
WA7HYD	Jan - 04
WS7R	Jan - 04
KB1TH	Jan - 04
AJ1M	Jan - 05
KG7UU	Jan - 05
W6IUA	Jan - 05
WB6ALC	Jan - 05
N4PJX	Jan - 05
W2UDT	Jan - 05
KC0YQ	Jan - 05
W4QNW	Jan - 05
N2OCW	Jan - 06
KY0E	Jan - 06
KE1HZ	Jan - 06
NG3F	Jan - 06
AA5AH	Jan - 06
KL7IAA	Jan - 07
K9FZ	Jan - 07
N0DIA	Jan - 07
N0OSW	Jan - 08
KB8HW	Jan - 08
KE0AY	Jan - 08
KK6MR	Jan - 09

Roadrunner - Birthdays	
Call	Birthday Date
K8NQP	Jan - 09
N5EW	Jan - 09
KG5U	Jan - 09
W3DQT	Jan - 09
KK0L	Jan - 09
KB4UMO	Jan - 10
AB5ZS	Jan - 10
WA4EEZ	Jan - 11
KK5OX	Jan - 11
W6FG	Jan - 11
K4QFK	Jan - 11
WA2MCY	Jan - 11
W0BM	Jan - 11
WO0U	Jan - 12
W1EQ	Jan - 12
KE5TT	Jan - 12
KC0CL	Jan - 12
N9ATA	Jan - 12
AA7CP	Jan - 12
WM0N	Jan - 12
N8OR	Jan - 12
W0QE	Jan - 13
WB0VBW	Jan - 13
KD9OT	Jan - 13
WA9PZV	Jan - 13
K6RLR	Jan - 13
WD3P	Jan - 13
AA8NS	Jan - 14
W0QDL	Jan - 14
KE5AY	Jan - 14
NS4C	Jan - 14
KB9YVT	Jan - 14
K7MM	Jan - 14
N9NI	Jan - 15
W4CCT	Jan - 15
KO7X	Jan - 15
N8DMW	Jan - 15

Roadrunner - Birthdays	
Call	Birthday Date
K8PP	Jan - 15
W7MMQ	Jan - 15
K4YC	Jan - 15
WB0KSW	Jan - 16
K4YL	Jan - 16
KK7GN	Jan - 16
W5WEE	Jan - 17
W2BED	Jan - 17
K4RK	Jan - 17
N7JV	Jan - 17
KG5J	Jan - 18
WN8M	Jan - 18
WA3EOL	Jan - 18
W9QR	Jan - 18
WA4STO	Jan - 19
KA0CYB	Jan - 19
K9QM	Jan - 19
NO0U	Jan - 19
K3JI	Jan - 19
K4SHA	Jan - 19
KN4Y	Jan - 20
WO7HI	Jan - 20
KF2O	Jan - 20
K1BV	Jan - 20
NB9P	Jan - 21
AA6MR	Jan - 21
KC9ACL	Jan - 21
AB4KL	Jan - 21
W1KI	Jan - 21
W5THA	Jan - 22
N8ZP	Jan - 22
KF5DE	Jan - 22
KB6ABC	Jan - 22
AL7HS	Jan - 22
N4JRY	Jan - 22
N6OL	Jan - 22
KG5VA	Jan - 22

Roadrunner - Birthdays

Call	Birthday Date
K4EXT	Jan - 23
N8YP	Jan - 23
KB0MHH	Jan - 23
K5DRF	Jan - 23
KC5UO	Jan - 23
WA0EVO	Jan - 23
WD3K	Jan - 24
KD4ON	Jan - 24
W9XYL	Jan - 24
W7ABC	Jan - 24
K2LFG	Jan - 24
KG3P	Jan - 25
N7PIB	Jan - 25
W0RRY	Jan - 25
W8DH	Jan - 25
N3CRH	Jan - 25
WB8ROC	Jan - 26
K1ER	Jan - 26
K0GEN	Jan - 26
WG9K	Jan - 26
N4GOA	Jan - 26
N9WNN	Jan - 26
K5IS	Jan - 26
K0KG	Jan - 26
N0RX	Jan - 26
G3UAS	Jan - 27
KC9A	Jan - 27
WA7NB	Jan - 28
NG9V	Jan - 28
W5VPV	Jan - 28
KU7F	Jan - 29
KF9YL	Jan - 29
K6PDQ	Jan - 30
W0RAA	Jan - 30
AA7GS	Jan - 30
N4JRG	Jan - 30
K6EW	Jan - 30

Roadrunner - Birthdays

Call	Birthday Date
W3TOM	Jan - 31
N0WA	Jan - 31
KF7ZN	Jan - 31
KX2W	Jan - 31
KM4QM	Jan - 31

MARAC Logger

Mark, KM6HB

I began my county hunting career in 1998. I was not using any type of computer logging in those days. I had acquired some materials from the B&B shop and kept track of it all manually.

Later I upgraded to the DX4WIN logging program. Of course it took several months before I could input all my prior QSO's. It took considerably more time to cleanse my new electronic log of manual input errors.

DX4WIN does a fair job of keeping track of counties for you. It can break down by band and mode. It can also break out counties by state. It is not friendly when you work county lines as it takes the same call sign worked at the same time and mode as a dupe. This requires another manual entry to change the time in order to log both county lines. It also doesn't like it when it comes to tracking stations operating in Hawaii or Alaska. It requires logging them as /KH6 or /KL7. (Unless the station has an assigned Hawaii or Alaska call sign.)The programs earlier versions also had a habit if you had previously logged a mobile stateside and they later were logged in KH6 or KL7, it would relog all the prior stateside QSO's as either as one of those states. This would wipe out all prior stateside QSO's and county information and relist them as KH6 or KL7. That was fun fixing..

In 2011 I attended the west coast ARRL convention when it was in Southern California . I stopped by a county hunting presentation by Walt K1DFO. He had MARAC Logger up on a power point and my interest was peaked.

It is difficult although not impossible to track the numerous awards offered by MARAC without a program like MARAC Logger. I finally stepped up and purchased the program through MARAC. I thought the $20.00 fee was a bargain.

Once I got the program up and running (which by the way took very little effort.) I was simply overwhelmed at the options and tracking this program provides. I learned very quickly that I qualified or was very close to numerous MARAC awards that I was not intentionally working towards. The point and click environment and the ease in which you can edit and search for information is awesome.

Leo, WY7LL makes a statement in a county hunting video he produced. He said that one of the mistakes new county hunters make is not working everybody they can. Using MARAC Logger I now understand this. If I had known my "needs" and worked everyone I could of earlier in my career, I would of no doubt qualified for Bingo already and would probably have attained Master Gold by now.

So if you are new to county hunting or have resisted obtaining MARAC Logger, please consider doing so. It will make your county hunting career so much easier. MARAC Logger kinda has a limited market but if the flood gates were opened and county hunting really caught fire in the Ham world this program could easily be worth a whole lot more then $ 20.00. Its features and search powers are a bargain. Support is easy and quick as are the frequent updates.

A "Big Ben alarm" sounds when a county you need is running.This a nice feature as are the drop down

boxes that tells you what a particular station or mobile is good for in relation to your award criteria.

You are able to log into either the W5UGD or W6RK cluster through the program which allows you to operate within the MARAC program easily rather then switching back and forth between different programs or screens.

Importing your current log data from a different logging program can be done with an ADIF file. Logger has a data clean up function that helps you correct any data issues to make your data compatible with Logger. The program also has a very nice and colorful county map feature as well as an extensive help file. But the real benefit to me of MARAC Logger is that you are able to instantly know what your personal standings are on any MARAC award.

My only regret is that I didn't obtain the program years ago. If you have been on the fence about Logger or are new to county hunting, for the minimal cost (Which requires current MARAC membership to receive updates.) makes this a low risk investment to improve your enjoyment in county hunting.

73, Mark KM6HB

Did You Know?

Deadwood was honored in True West magazine's "Best of the West" contest again for 2013. This time, Deadwood was honored with the "Best Town for Historic Entertainment" award. Thanks to the Deadwood Alive Board, Deadwood Historic Preservation, Deadwood Alive Gunslingers and the cast of the Trial of Jack McCall for their hard work and historical integrity!

The Best of the West awards will be in the January 2013 edition of True West magazine, which has a circulation of more than 200,000, plus newsstand sales.

Calendar

~ January 2013 ~

Sun	Mon	Tue	Wed	Thu	Fri	Sat
ONLY START DATE SHOWN		**1**	**2**	**3**	**4**	**5** PSK FEST
6	**7**	**8**	**9**	**10**	**11**	**12** NA CW QP
13	**14**	**15**	**16**	**17**	**18**	**19** NA SSB QP
20	**21** RUN 4 BACON	**22**	**23**	**24**	**25**	**26**
27	**28**	**29**	**30**	**31**	Notes: CLICK ON EVENT TO GO TO WEB SITE	

Treasurer's Report
(W0NAC)
November 2012*

Beginning Account Balances Oct 31, 2012   **$33,667.18**

November Income:

Money Market Interest	$2.07	
Awards Manager Income	$482.50	
Membership Income	$238.00	
Logger distribution	$70.00	
Total Income:		$792.57

November Expenses:

Awards Manager Expenses	$517.26	
Office Expenses	$0.00	
Miscellaneous Expenses	$396.00	
Total Expenses:		$913.26

November Net Income Less Expenses   **($120.69)**

New Total Balance ALL Accounts: **$33,546.49**

Checking Account Balance	$7539.33	
Money Market Account Balance	$26,007.16	
Total:		**$33,546.49**

Note:
The following monies are not included in the above:
    Awards Chairman's Funds $1,500.00

* Includes November transactions recorded through 12/4/2012

Awards Manager's Report
December 31, 2012

Funds Balance November 30, 2012   **$1,500.00**

Income $ 396.00
                                                            $ 396.00

Expenses:
    Office supplies $ 0.00
    Plaque Suppliers $ 0.00
    Postage $ 0.00
                                                            $ 0 .00

Sent to Treasurer $ 396.00
Reimbursement received from Treasurer $ 0.00
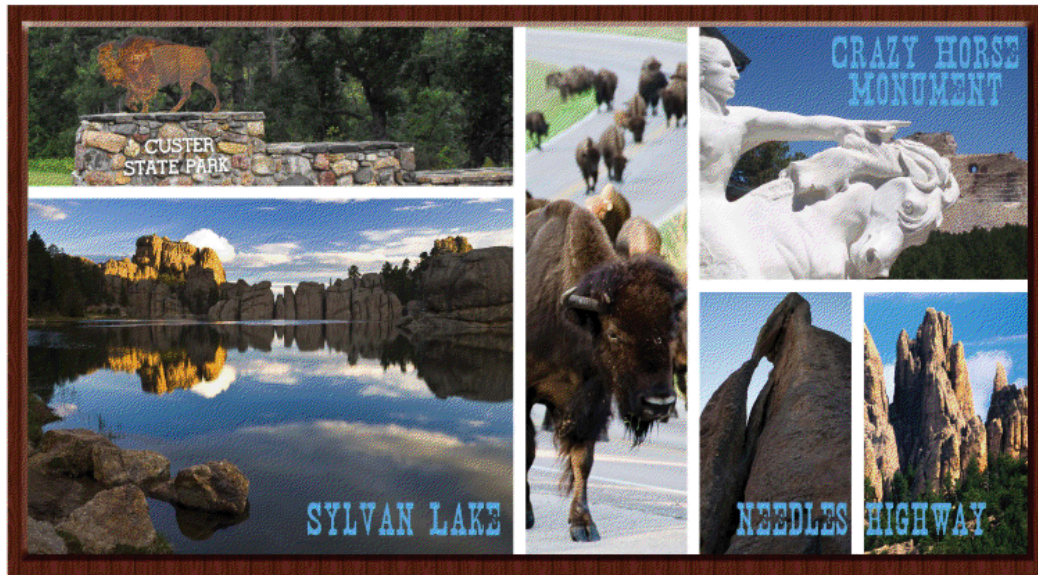
Funds Balance December 31, 2012   **$1500.00**
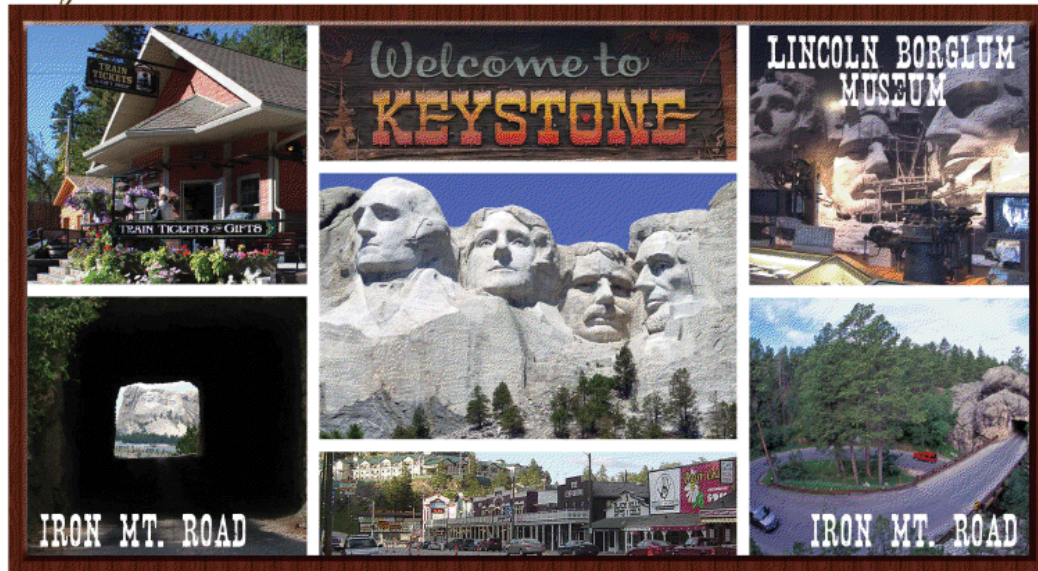
National

Please join us for the
2013 MARAC
National Convention

PLACE WHERE ONE CAN STILL
BE AN UNWORRIED AND
UNREGIMENTED INDIVIDUAL,
AND SIT ON A LOG AND GET
HIS SANITY BACK AGAIN,
AND WEAR ANY OLD CLOTHES.

in the
Beautiful **BLACK HILLS** OF SOUTH DAKOTA

Custer, SD

CUSTER
STATE PARK

CRAZY HORSE
MONUMENT

SYLVAN LAKE

NEEDLES HIGHWAY

Keystone, SD

Welcome to
KEYSTONE

LINCOLN BORGLUM
MUSEUM

IRON MT. ROAD

IRON MT. ROAD

National Registration

45TH ANNUAL MARAC NATIONAL CONVENTION
JULY 10TH THRU JULY 13TH 2013
(Deadline for Early Registration Prize Drawing is May 1, 2013)

Name: (First, Last and Callsign) _____

Address: _____

City, State, Zip : _____

ADDITIONAL NAME BADGES/TROLLEY PASS $7.00 EACH

NAME_____ CALL_____ USA-CA_____

NAME:_____ CALL_____ USA-CA_____

NAME:_____ CALL_____ USA-CA_____

REGISTRATION: INCLUDES 1 BADGE & TROLLEY PASS, 1 PRIZE TICKET

1 CASH TICKET & E-MAILED PHOTOS AND AS MUCH FUN AS WY7LL

AND WY7ML CAN PROVIDE YOU....ALL FOR _____ $37.00

FRIDAY NIGHT BBQ RIBS*HOTDOGS*BURGERS*SALADS & CHIPS __ X $23.00 ea. $_____

SATURDAY NIGHT BANQUET 4 MEAT BUFFET   __ X $30.00 ea $_____

PRIZE TICKETS $1.00 EACH OR BOOK OF TWELVE $10.00 $_____

CASH TICKETS $1.00 EACH OR BOOK OF TWELVE $10.00 $_____

THURSDAY MORNING TOUR : Historic Deadwood Including Boothill Cemetery with Wild

Bill Hickok and Calamity Jane *Homestake Gold Mine *Roundhouse Living Map_   __ X $20.00 ea. $_____

THURSDAY AFTERNOON TOUR: Keystone shopping & buy your own lunch *

1880 Train to Hill City * Prairie Berry Winery   __ X $35.00 $_____

(If you take both tours Thursday ... $50.00 total save $5.00)   Both Tours __ X $50.00_____

FRIDAY TOUR OPTION ONE: Mt Rushmore- Crazy Horse buy your own lunch __ X $25.00 $_____

Leave at 9:00 be at Rushmore about one hour...about 2 1/2 hours at Crazy Horse

for lunch back about 4:00

FRIDAY TOUR OPTION TWO: Mt Rushmore * Iron Mountain Road

Custer State Park * Buy your own lunch at State Game Lodge

Needles Highway * Crazy Horse .... Leaves @ 8:00 back @6:00   __ X $67.00 ea _____

Mail To: Leo Bingham WY7LL

           28 Buck Drive

           Pine Haven, Wyoming   GRAND TOTAL : _____

           82721   make Check Payable To Leo Bingham

Awards Committee

These MARAC members are serving on the Awards Committee:

Awards Manager - Bob Devine (KC6AWX)

Phil Yasson (AB7RW)

Bob Gedemer (KA9JAC)

Dave Splitt (KE3VV)

Kent Reinke (KL1V)

Ed Palagyi (KN4Y)

Leo Bingham (WY7LL)

"Matt" Mathew (W0NAC)

David Pyle (KW1DX))

The County Line Roadrunner
MARAC Secretary
2690 Bohicket Rd
Johns Island, SC 29455

"A Road Runner Is A Very Fast Bird"

Monthly Deadline for Articles is the 25th!

Board of Directors
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