The Bullsheet

The Official News Bulletin of
The Texas DX Society
An ARRL Affiliated Club

The Texas DX Society, Houston TX K5DX@tdxs.net May 2014

May Meeting: Los Tios Mexican Restaurant 9527 Westheimer, Houston, TX

The May 1st meeting was held at Los Tios Mexican Restaurant on Westheimer. A time to socialize, make new friends, and renew old acquaintances.

Unfortunately I wasn't able to make it or get the Bullsheet out in time before the dinner meeting. This year many of the meetings will be held at various restaurants instead of Tracy Gee Community Center. I hope to make the next one. [Ed]

Editor's Note by Allen N5XZ

There's a lot to read in this issue, but I think you'll appreciate the range of articles from all of our contributors, from light hearted to serious. Mine starts on a more serious note:

By now, I'm sure most of you have heard of the hot debate around the ARRL's Proposal for Rule Making to the FCC RM-11708.

For those of you who enjoy CW, RTTY, PSK and other narrow band modes, I urge you to write to the FCC and to the ARRL to state your opposition to this proposal.

I know there is a lot of copies of emails to read, but I feel this is one of the most important issues for all of us to be concerned about recently. Most if not all of these emails came from the CTDXCC reflector. I wish to thank CTDXCC for hosting these important oratories.

First: to quote Terry AB5K:

"First, the 300 baud symbol rate that the ARRL is asking to be removed is something that protects us. The ARRL is looking at this from the side of WinLink which is simple as they want to run Pactor 4 in the US. If RM-11708 is approved, there is a wideband digital waveform call STAAG that has 40 db superiority over narrow band waveforms that would be legal. Do we really want a waveform with 40 db superiority running roughshod over narrow band CW /RTTY?

Second, sub bands division is used to separate waveforms that are not compatible. That is why 2.8 KHz SSB operations are at the top of the band and narrow band CW/digital is at the bottom of the band.

If RM-11708 had provisions for a sub band that protected traditional CW/data and a sub band for wider 2.8 KHz bandwidth digital experimentation that would go a long way in solving some of the issues.

If the ARRL had allowed outside technical experts help steer RM-11708, then the above concerns plus several others would have been addressed. Unfortunately they opted to form the steering committee with NO input from anyone representing narrow band interests and the result is that RM-11708 is one sided and caters to a "special interest group"."

Terry AB5K

Please read several other opinions from very well recognized engineers in the field starting on page 7. Don't get me wrong, I am not bashing the ARRL, I am a life member and proud of it and agree with most of what they do, however, this time I think the ARRL is WRONG.

The instructions for filing are here:

<http://64.128.19.154/RM11708.pdf

The process takes about 5 minutes.

For now, 73, Allen N5XZ

Inside this issue:

The Prez Sez by Bob, W5UQ

BS Prez Sez for May 2014

By Bob Hardie W5UQ

Spring has SPRUNG!!!!! Whoooo oooooooo weeeee.

My head is spinning from all the activities this month. Which means that I am really busy. Lots of things blooming all over the place too. So, some activities have had to take a back seat. However, I'll bet you know what I mean. Rearrange your calendar… but it works out okay. J

What I am trying to figure out is, "is this good or is this bad?" I mean being really busy…. Okay, I'll just take it as being good. I sure hope your month is being a good one too. As we all know, life is what we make it. Waiting for someone else "to make our day" is a lost cause and then we have to take what "they give us".

Okay, my apologies for digressing. Let's go to TDXS events. We had our "big 3 meeting" on April 24th. Well I'm not so sure it was the "big 3" as much as it was a bunch of hams getting together to discuss the BVARC Field Day activities between BVARC, TDXS and the Echo Society.

The meeting was officiated by Bill Stone, President of BVARC. Frankly, I think he did a good job of outlining the program and setting up our parameters for getting it going. And we did get going too. All in all, we have a Field Day Chairman who volunteered and other officers volunteered as well.

I had to leave a little early for a prior commitment, however, here is what I wrote down.

Roy Storey, W5TKZ Field Day Chairman or chief

Nathan Vessey, N5NYV Planning and Operations Chairman

Stephani Vessey, K5SFV, Administration and Finance Chief

Jerry Muller, KF5EYC, Security/Safety Officer

TDXS does have the GOTA station and its call will be K5DX. There are a lot of specific details that had to be worked out, but I do have to say that Mike Davidson-N5MT, Ron Litt-K5HM and Cookie-K5EWJ were there to help represent TDXS and they did a great job. I was proud of how they represented all hams that would be involved and not just TDXS. In fact, Mike also spoke for The Echo Society as well. I do have to say Mike was one of the main contributors to the meeting.

Roy, W5TKZ had his arm twisted a little by Mike Davidson, N5MT to be the FD Chairman for the event. However, I think Roy was ready to do so. We all voted and he was elected as such. I'm told that Roy comes to the position with a lot of past experience and a lot of helpers, advisors and devoted workers. And I am sure that he and his captains will do a great job this year and all involved will have a great Field Day.

Of course Field day is a contest which is an event to set up our ham fixed and portable equipment, to test our rigs and skills in case of an emergency. However, we really need to remember that one of the main things is to compete in a contest with the rest of the USA. So it needs to be treated like it as an important event, one which we can learn from and be ready when we are needed in a disaster.

So, since it is a contest, then having all stations manned as much as possible is important. And at the same time, to realize that after all, it is a hobby. A volunteer hobby. And being to the extreme either way is not good. So let's just treat it as a "fun and competitive event". With the main idea of enjoying it and no one getting hurt, put out, taken advantage of or badgered into doing something they don't want to do. Doing the best we can in those respects to make it fun.

So, join the fun, volunteer and come on out to the event June 28th and 29th. They really need more operators to help keep all stations on the air. Especially during the wee hours of the night.

Field Day is a one time a year event that reflects the very core of our ham radio heritage. Jump in, the water is great. Contact Roy, W5TKZ or one of the TDXS, BVARC and/or Echo Society members and volunteer to have a good time.

Remember that the event is the last weekend in June. Watch and listen for announcements about meetings and such. Oh yes, and BVARC has a obtained a wonder place to hold the event. Check TDXS website and BVARC website for Field Day information.

Oh yes, I'm off for Dayton HamVention in mid May.

SEE you at the TDXS DINNER NIGHT ON MAY 1st at LOS TIOS Restaurant at 6:30PM. We plan to have a good time visiting and making new friends.
See you next month.

Bob Hardie W5UQ

TDXS President 2014

DX Report by Cookie K5EWJ

From the DX Chairman

2014 started for me with a call from the incoming president for TDXS who asked me to step down from my appointed position as Contest Chairman and step up to the position as DX Chairman which I was happy to accommodate. I think both are important tasks and TDXS certainly needs more operation of both types or the mixture of both Contesting and DXing.

I decided that the way to keep my focus on DX and help others do the same was to find out where most of the members stand on DXCC and subscribe to some publications to keep me up to date. I have found that keeping up to date with the coming and going of DXpeditions is a formidable task, but needed to make continued progress with DXCC. I was not even sure how many countries I had worked or what I needed, much less everyone else. I think I have made some progress, but I am still not quite there. To help, I subscribed to the Daily DX where Bernie McClenny, W3UR sends a daily email with updates and rumors each day for a small fee and subscribed. It has been a great help. I also found Club Log (www.ClubLog.com) and discovered a number of utilities which help keep track of DXpeditions. I discovered that TDXS had some individuals who used it, but had no member as a club. We now are and I am happy that we now have 20 members subscribed and are in 12th place of 88 clubs subscribed. It is a good showing, but 100% participation would be super. This is something that Inactive and Associate members can join us in the activity.

The first three months of this year were good DX pickings with very good propagation and several rare ones. The big news was that a group was going to activate FT8ZM on Amsterdam Island and another group was going to Mellish Reef to activate VK9MT. Surprise expeditions to Myanmar by Zorro at XZ1Z gave me a new one that I had missed last year and Krish, VU1K went to Andaman Island for another. Things change really fast with propagation up and down and weather on these dangerous and hard to access places , so to really be on top of things one must look at the situation daily or as often as possible to stay on top of things. I have tried to alert you to upcoming expeditions and sometimes I have succeeded and others I have failed to be timely. The needs of those of us who are on the Honor Roll or close enough to smell the Bacon need to work at it to stay current. Those who need more will find good DX that is needed even more often. So subscribe to some good daily newsletters of your choice and check the cluster and DX Summit for ones you need often. Watch Club Log for DX Cluster spots you missed for needed countries and keep working to see your DXCC log grow. LOTW is a good way to accumulate new countries and band spots without spending a fortune on QSLs.

Good DX and see you on the bands from K5EWJ. April has not been so good, but it is now May.

Some Basics for CW Operating.

There has been a long thread on the Elecraft Reflector about the definition of QRQ and the practices of hams in general, contesters and DXers. I think that a few words about CW practices may be in order.

The Q signals QRQ and QRS are sent as questions and answers with no particular code speed in mind. QRQ?, sometimes INT QRQ means simply "Should I send Faster?". Sometimes it is followed by a number such as QRQ? 20 which would mean, "Should I increase speed to 20 words per minute?" By the same token QRS? 20 would mean, "Should I decrease speed to 20 words per minute. The reply would be either QRQ or QRS.

You will often hear "I am a QRQ operator." Or, I am a QRS operator." By which the person means that he is a fast CW operator or a slow CW operator, but the speed is ambiguous. QRQ is generally thought to be, maybe 35 words per minute and QRS, maybe 10 words per minute, but the speed is in the mind of the speaker and could be anything. Average QSO speeds are usually around 15 to 25 words per minute, but you will hear everything from 5 to 50 or more as you listen to the bands. But there is no generally accepted threshold speed below which is QRS or above which is QRQ. The official meaning is Slower and Faster. Slower or Faster than what speed is left to the individual or to context.

Now the real question is how fast do you send for a particular situation? Again that depends on who you want to talk to and why. It also depends on your skill level and your QSO partner's skill level and your mood at the moment. That really means that what I am about to write is my opinion and a suggestion, so you are free to deviate or ignore them entirely if you wish or the circumstance. Since I am appointed DX Chairman and I need to start somewhere, I will start with working DX stations.

The DX station should control the pile-up and set the speed. So you want to be able to copy your call and 599 as fast as you can manage because you must be able to tell when he calls you. It helps if you can copy well enough to at least tell what areas of the world he is able to copy. You have an advantage over him because he must pick a call sign from the multitudes and get it right. You just need to know if he called you. You first must be able to tell the dits from the dahs and when the letter starts and stops. It sounds a bit silly when I write it, but everyone has a limit which rises as you practice. For beginners this is usually about five words per minute but rises rapidly if you are diligent.

DX Report by Cookie K5EWJ

Accomplished CW DXers and Contesters can usually manage 50 words per minute or more. People who consider themselves QRQ or exceptionally fast can hear upward from 50 wpm. Everyone else is between 5 and 50 which is a big band, but it contains 98% or so of operators who consider themselves CW operators.

Practice to get as fast as you can. It depends on how well you can hear and how talented you are as well as how diligent. It is hard work and takes a long while. I have been working at it off and on for 60 years and I am still trying to get better and faster. Pick your target and see if you can copy what he is sending. If it takes you several tries to copy his call correctly, so be it! Keep at it until you can hear what he sends. If it is a complete blur, find another station that is enough slower that you find you can actually tell the dits from the dahs and one letter from another. If you can get his call in two or three, maybe more tries, he is just right.

Now enter macros into your logger. Get some help if you need it. Buy a roll of typing correction tape and stick a strip on your keyboard. Write what each sends above the F Key that sends it. My keyboard reads ESC-Cancel, F1-CQ, F2-Exch, F3-TU de, F4-K5EWJ,F5-599 TU, F6-QSO B4, F7-?, F8-HIM de ME. F9-10X#, F10-AGN, F11-R599 4, F12-STX. The abbreviations are TU, Thank You; Exch, The exchange for the contest in question, B4-Before or Dupe, HIM the call in the logger, ME-call in F4, 10X#-My Ten-Ten number. 4-My CQ Zone, STX-South Texas. You can change the was your buttons are programmed periodically, but mine have been labeled this was for quite a while. Practice pushing the right button and chaining the buttons together to send what you want on a DX contact. On most DX contacts I use only F4 and F5. Turn your VOX off so that you only get a side tone when you press the F4 key and listen to your call until you can copy it at a fast speed.

Now let's try making a DX pileup contact. I like to look at the K5DX Cluster on the Telnet window of my logger and find a station that I would like to contact. With my XM log, I double click on a frequency and it moves that frequency to my transceiver. My amplifier also will move to the band and frequency automatically, but yours may not. Be sure that your amplifier is properly tuned for the frequency in question and that the proper antenna is selected. The direction to point the antenna will be given in the Telnet window. Usually the DX station will be operating split, or transmitting on one frequency and listening on another, usually higher frequency. Listen for a while to learn the rhythm of the DX Station and to find out where he is listening and when he completes a contact and is ready for another caller. Be sure not to transmit on the DX station frequency unless you hear him answering a station you heard on that frequency. Set your transceiver up for split frequency operation so that you call on the correct frequency.

When the DX signals that he is ready for a call, press your F4 key once, listen for your call. After 5 seconds or so, if you have not heard him call you or someone else, press the F4 key again until he calls someone. Wait for him to finish with the person he called. If he gets a partial call from a station, you may call again only if your call matches enough that I might have heard you. Don't keep calling if he did not call you and QRM his frequency. When at last he calls you, press the F5 key and send 599 TU. He then will usually send TU or 73 but some will send CFM or ACQ to complete the QSO. Log it and you are done. If the DX station copied your call wrong or you are not sure, press the F4 twice and send your call twice then press F5 to send 599 TU. The DX will usually come back with your call and TU or in some way let you know that he copied your call correctly. It is important to both of you that the contact was logged correctly by both parties. If you still don't think he has your call correct try again. As a last resort, wait a while, maybe an hour or so and make another contact, particularly if signals improve or things slow down for him and he has more time.

Now, for contests things are similar, but not so one on one. There will be many stations to choose from and some will be quite fast. If one contester is too fast for you, go on to the next. If you choose to call CQ or run as contesters put it, choose a speed that you can read the call signs of the callers. If you're maximum run speed is QRQ, then choose a speed that will not discourage your callers. I usually keep my speed on about 28 for DX contests and about 22 for Field Day when the participants may not be so fast on average.

I think this is enough for one month, so I will quit and come back next month with some more advice for other types of CW operation. I hope this helps some of you.

Contest Chatter by Joe W5ASP

CONTEST CHATTER

Yep ... I guess I was right. April was pretty much a non-event for TDXS contesting. I only got a single reply to my query as to who had operated during the month. Steve, W9DX spent some time in the Florida QSO Party. Otherwise I have to assume that the DXing was hot and heavy for most of those operating their radios. You can check K5EWK's DX Column for all the latest on the DX scene.

I talked a bit about state QSO parties in last month's column. April was a very busy month with ten separate events. Activity was quite good especially in the Georgia QP (159 counties, 2nd only to Texas in county count) and in the Florida QP (67 counties). The big attraction in the FL QP was the prevalence of the mobiles … at least a dozen both days. This feature of the FL QP dates back to the days of the TDXS sponsored Armadillo Runs when Jim White, K4OJ worked all 254 Texas counties in a single weekend. Jim's home was in Florida, and he got the local guys fired up about mobile county contesting. This has continued and made the FL QP an outstanding event.

The computer has become an integral part of amateur radio primarily as a means of record keeping especially in logging. While contest activity can be recorded with practically any logging software, it is most easily and efficiently done with "contest" logging programs. While there are quite a few such programs available, many of them without cost, they do differ in some important aspects. I won't try to discuss them all or even make comparisons. But I do want to mention one particular contest program which I have followed since its start.

Back in 1989 Larry "Tree" Tyree, N6TR put together some code for his own use in contest logging. He continued to develop the software during the following years, eventually creating what was called "TR Log". Tree made this software available to users at a modest price, and it quickly became one of the premier logging programs along with its rivals CT and NA. It supported multiple contests, provided SSB, CW, RTTY and VHF contest options, allowed computer interface and control, supported digital voice keying, and implemented the techniques required for single-operator, two radio operation. It was definitely a "top-of-the-line" product and has remained so ever since.

After some years of enhancing and expanding TR Log Tree found it impractical to continue his efforts. Microsoft had brought its Windows operating system into dominance on the PC. The old DOS world was being left behind. The effort required to convert TR Log into a Windows based package was not an option for Tree. TR Log continued to be a favorite of many contesters, but as the older machines were replaced the need for change became unavoidable.

Onto this scene in March of 2006 stepped Dmitriy Gulyaev, UA4WLI. Dmitriy obtained the source code for TR Log from Tree, and proceeded to implement it under Windows. The result was an upgraded version of TR Log running under Windows known as TR4W. This program retained all of the features of TR Log, and allowed a seamless transition with only a minor learning curve. TR4W supports over 140 different contests, interfaces with the telnet DX cluster, allows antenna and rotor selection and control, and further refines the SO2R feature. Unfortunately Dmitriy recently ran into same dilemma as Tree had years before, i.e. other pressing demands on his time to the extent that he had to cease his support of TR4W last year.

Nature abhors a vacuum. This time it was a group of TR devotees led by Todd Olson, K0TO including N4AFand GM0GAV along with several others (supported by N6TR and UA4WLI) who stepped up to the plate and took the baton. As a result of the efforts of this team there is now a new version of TR4W (Version 30, Release 4) residing at: http://n4af.net/TR4W ... and it's free. A Users Guide and Reference Manual are available.

A contest logging program that has survived the test of time like TR certainly has a lot going for it. You might want to give it a try. Until next time … "dit dit" … Joe, W5ASP

The Great Harvey Wells Caper—Part 1 by Ron Litt, K5HM

It was April in New York. I was on my way home from the regular weekly breakfast with the Queens County Bagel, Bowling and Spark Club.

These were the halcyon days of kid-dom on the cusp of adulthood. I had my General Class ticket now for about two years; gotten. Got my acceptance letter from college and it was six months before anybody would hear of Sputnik. Life was good.

As I walked home from the bus stop, I was thinking about getting on the air today and rolling up a few new states for my WAS. I needed South Dakota and my old buddy Ralph from the QCBB&SC said there were only three active hams in the whole state. I could see that South Dakota was going to be a real challenge.

I climbed the front steps two at a time, walked through the front door and headed directly for my basement ham shack. I am halfway down the hall when I hear my old man say, "Where are you going?"

Any kid who has reached the age of five, immediately recognizes the peril in that question. Its not a question really, it more a combination of Red Alert, General Quarters and Take Cover simultaneously.

I turned around to see the old man advancing toward me. He was upset. I tried to think of anything I did or failed to do in the last twenty four hours. I aced my Physics quiz, took out the trash last night, and didn't leave any wet towels in the bathroom; check, check, check.

He was about two feet away when he stopped, thrust a letter in front of me and said, "What's this?" His hand was shaking so much, I couldn't read the envelope at first but it looked very important. Eventually, the oscillation decayed enough for me to see better. It was one of those business window envelopes with no stamp. The top right hand corner of the envelope contained the words, *U.S. Government Official Business!*

The old man was really wound up; like a pressure cooker ready to explode. He'd lived his life avoiding entanglements with authority. He was 4-F for the draft in WWII, voted at least once in every election and was an associate member of the Police Benevolent Association. Any unexpected things that had to do with "Official Business" made him very nervous.

Desperately, I tried to think of something that would get him in such a lather. I had gotten my draft card six weeks ago. Maybe this was the dreaded, "Greetings from Uncle Sam" letter. Then I noticed the return address; *Federal Communications Commission, Washington, DC.*

I stopped breathing. The FCC! This was worse than getting drafted. Looking through the window of the envelope I could see the paper inside. A pink ticket!

The envelope was torn open. At the top of the page, I could see the words, *Notice of Violation!* He'd already read it and assumed the worst; a life sentence for me at Leavenworth. I was doomed!

Flight was the only response I had. I grabbed the letter and ran for the basement. I read and re-read the notice several times. Cold sweat was dripping off me.

The letter said that my signal had been observed operating at a frequency out of the band at such and such time and date. It demanded I explain what happened. That I take immediate steps to prevent this from happening in the future and that I report those steps to the FCC within 30 days. No wonder the old man was upset. Single handedly, I had brought the wrath of the entire federal government down on our home.

I pulled out my log and started flipping pages; hoping this was a mistake. Some other guy with a similar call sign, maybe. The time in the letter was around 2 AM. Was the FCC really awake that late?

I ran my thumb down the logbook pages slowly, hoping against hope. Yikes! There it was. At the alleged hour, I had been on the air. What could I do? "The old man was right, you're going to Leavenworth", said the voice in my head.

That night I'd logged several calls to DX stations who were calling CQ on the other side of the 20 meter band edge. The last entry in the log that night was a guy in VK-land that I had finally managed to work. I was so excited, I almost woke the old man out of a sound sleep to tell him. I must have strayed too close to the band edge!

Maybe I'll just throw myself on the mercy of the court. *"Your honor, I'm just a kid. I didn't know I was committing a crime." "I fell in with a bad crowd; they dared me to do it!"*

In a panic, I called my old buddy Ralph on the land line. Ralph was a charter member of the QCBB&SC. He knew everything about ham radio. He had been a ham so long that he said Marconi was his Elmer.

After an eternity of rings, he answered. Without giving him a chance to say hello, I unloaded on Ralph in one single breath. When I finally finished, Ralph calmed me down and assured me that I was not going to Leavenworth. "Yeah kid (everyone was a kid to Ralph), I got my first pink ticket in '36", he said softly, as if someone were listening.

What a relief! My old buddy Ralph, the greatest Elmer of all time had gotten at least a couple pink tickets and he was still walking around a free man. There was a ray of hope for me!

I could swear he was grinning on the other side of the phone. The voice in my head said, "Yeah, they'll probably confiscate all your radio gear instead."

It was only two years earlier that I went to the FCC offices in Manhattan to take my General exam under the watchful eye of Lurch, the examiner. I still remember the big bullpen where the FCC guys worked. They were all dressed alike too; white shirts rolled up to the elbow, black ties and black pants. It was the official FCC uniform. I didn't know what would be worse; just quietly going off to Leavenworth or having a squad of FCC men in black show up at my house in front of all the neighbors!

"Listen kid", he began; his voice had a way of piercing through the QRM in my head. "You just need an accurate marker for the band edge. A crystal calibrator. You can pick one up at Harrison Radio for about ten bucks."

I could hear Ralph take a deep breath. He'd been a chain smoker for twenty years so his inhale had a signature wheeze, just like a good CW operator's fist.

Then he continued, "The dial markings on your VFO ain't worth the plastic they're printed on kid. So when you are chasing DX, don't get any closer than three kc to the band edge marker, no matter what."

"Hey Ralph", I said "What about the letter I have to write? What should I say?" Ralph started in again, "Listen kid, just tell them the truth, you'll be fine. See you later kid." And then there was a click.

I sat for a long time; thinking. The U.S. phone band ended at 14200 KC. Most of the good DX was always just below that great divide. We worked split back then, running full carrier double sideband AM, pushing as close to the band edge as we dared, calling for that rare station we needed.

I wasn't really willing to give up a whole three kc of band, if I didn't need to do it. Maybe I could just turn down the mike gain. Just listening to twenty meters some nights it was easy to see how everybody pushed the limit. Still, I was willing to do or say anything get back in the old man's good graces and the FCC off my back! Finally , the beginnings of a diabolical plan began to form in my head. If I played my cards right, I would solve my FCC problem and then some.

To be continued

RM-11708— "The Rest of the Story"

If you read the Q&A on RM-11708 from the ARRL, it's all Peaches and Cream. All I have heard from the proponents is that the interference won't happen, with no technical backup, not to mention the fact that we need to "keep up with the rest of the world" mentality. Many of those against ARRLs proposal have sound technical reasoning to back up their (and my) position. You can see from the emails below that this is not only bad for CW, but for other narrow band digital modes, such as RTTY and PSK31/63, etc. Those who think our opinions are not based on sound technical reasoning, please read closely.

Personally, my solution would be to increase the symbol rates but to limit them to 400-500 Hz and/or to limit these transmissions to the very top 20 kHz or so of the CW/digital subbands. If these stipulations were part of the proposal, you would see a lot less opposition from many like me.

Now for THE REST OF THE STORY, please read the following emails from Ted Rappaport N9NB, Rob Brownstein K6RB and Lee Gaspard WA5QXB. Please excuse me if you have read some or all of these emails before. I think this is too important to let go.

FOR EXAMPLE:

Message: 1
Date: Sun, 23 Mar 2014 13:43:44 -0400
From: "Ted Rappaport"
<tedrappaport@verizon.net
Subject: [CTDXCC] Regarding RM-11708 -=-= this is really bad!
To: "'CTDXCC List'" <ctdxcc@kkn.net

Dear Colleagues:

Heavens knows that we are all very busy people, but on rare occasion, something comes up that is important enough to require us to take the unusual step of putting down whatever were are working on, and to get deeply involved in an effort to help our community, with the hope of helping years into the future.

Repelling RM 11708 is one of those rare occasions where I am compelled to take time out and give this my full attention.

I must tell you I worry about the massive number of emails that might result from this note I am sending, and I am being transparent in the "to" box, so I would simply ask that we NOT respond-- please let's not clutter up each other's inbox..don't even thank me or blast me, whether you agree with me or not.....all I ask of you is to please consider this dialogue between many active hams, below, many who you may know, and then decide what you want to do about this rulemaking on your own, or in your own circle of influence.

I promise I won't spam you again. All I ask is that you please take this under advisement, and do with this information whatever you care to do with it. My hope is you take action of some kind, whether you agree with me or not. We need to be involved, because as written, RM-11708 will be a disaster in my technical opinion. Key leaders and key emails are given the dialogue below, if you want to follow up on your own. Please take a quick read, and see for yourself.

I had heard about this rule making 11708 in one of my favorite DX club reflectors a few weeks ago, with heated debate and the fear that the "death of CW" was coming.

I did not pay any attention to the banter, because I believed that all was surely well, that the ARRL knew better than a few fearful hams, and that a few of my fellow human beings were being reluctant to change, etc. Plus, I was way too busy at work to even bother with this silliness.

I thought for sure that the ARRL would properly and thoughtfully promote a new set of digital modes-- after all, multilevel signaling is the key to Wi-Fi and 4G LTE cellular-- and it needs a place to grow in our hobby, as do all futuristic signaling methods. At the same time, I was confident that the ARRL would similarly protect CW, a mode of communication that launched the wireless revolution and was key to my ability to stay in the hobby even when I didn't have a tower or an amplifier over more than 35 years. We all know that CW is the only mode with such a small bandwidth that best facilitates long distance communication, low power communication or QRP operation, and allows a new ham to deploy a very economical station (barefoot with wire antennas, or even put into Altoids boxes), and I was sure that the ARRL was cognizant that DXpeditions to faraway places rely on CW for most of their QSOs because of the narrowband nature, and the good filtering that we can use. I was quite sure that when I went to look at the ARRL FAQ page at sunrise this morning, there would be good rationale and a fair technical approach to introducing new digital modes that are becoming increasingly popular and important to our hobby.

But this morning, I spent a couple of hours digging into this, and was quite horrified.

Hence, this very rare email to all of my HamVention VIP friends of Janeen Hire, and a few others.

You are some of the movers and shakers of the hobby, and I believe that your involvement and activism is needed (let the dialogue below inform you to whatever degree you care to. No need to respond to this, please).

Suffice it to say that my couple of hours reviewing the open literature on this proposed rulemaking gives me great concern. Apparently I am not alone, but the ham community needs to be vocal.

It appears that the rulemaking wants to introduce a digital modulation that is 5 to 7 times the bandwidth of today's CW signals, and wants to lawfully allow any ham to plop those new digital signals anywhere they want to in the CW-only portion of the band. Even if voluntary band planning is ever implemented, the fact is that this proposed rulemaking threatens to remove the lawfully protected CW-only status of the CW portion of the band.

The new proposal will introduce bandwidth hogs right into the protected spectrum of where narrowband CW transmissions (where each CW transmission has a 400 - 500 Hz bandwidth - that is a liberal estimate) have historically been protected from the wider bandwidth SSB signals (say 2.4 - 2.8 kHz bandwidth). The sad fact is that these new, exciting digital signals that are being proposed for introduction into the protected CW bands have essentially the same bandwidth as SSB signals, yet the proposal puts these new SSB-like signals lawfully into the CW band. Thus, this RM proposal is essentially a proposal to remove the long-lived legal protection of CW.

CW has coexisted with RTTY (RTTY can have an RF Bandwidth of slightly less or more than one CW signal -- 250 -600 Hz, as can be seen here:
http://elecraft.365791.n2.nabble.com/K3-RTTY-bandwidth-already-too-narrow-td7571756.html and here:
http://en.wikipedia.org/wiki/Radioteletype

RM-11708— "The Rest of the Story" - Page 2

Avid CW operators and RTTY/PSK31 operators have perceived more interference from the current digital modes, simply because there has been a much greater increase in hams using these modes, and while everyone seems to do a nice job obeying the agreement of voluntary segregation of the CW bands, the numbers are dramatically increasing for digital operation. That's a good thing. However, it is critical to know that RTTY has the bandwidth of about one CW signal. And PSK31 actually has a bandwidth of about 1/3 of a CW signal. Thus, the beauty of the protected bands and the narrow bandwidth of RTTY and PSK31 allow all of us to operate in harmonious fashion.
See:
http://www.arrl.org/psk31-has-rtty-s-replacement-arrived and
http://en.wikipedia.org/wiki/PSK31

The horror of this new proposed rulemaking 11708 is that the ARRL is backing a plan to now introduce SSB-like signals (signals that have bandwidths of 5 to 7 independent CW signals) into the protected CW bands.
Given the rapid growth of digital users in our hobby (a good thing), compounded with a new signal that hogs 7 X the bandwidth of today's RTTY Signal, we are in deep trouble-- In fact, it made me wonder how the ARRL could ever propose this in the first place without such careful thought.
Further work, described below, shows that the ARRL arguments are in fact technically flawed and misleading.

I could easily do analysis (so could many of you) showing the huge loss of CW user capacity (e.g. the number of CW users per band will be drastically shrunk due to the massive increase in interference from the new digital
signals) in the face of an increasing number of new 2.8 kHz digital signaling modes in the protected CW band. Very rapid deterioration will ensue unless there are truly forbidden frequencies, by law, that protect CW and the other narrowband digital modes such as RTTY and PSK31. This proposed rulemaking will not provide the continued protection, by FCC law, and if it is passed, these new digital signals would quickly overtake the CW spectrum, just as if SSB were allowed to operate in the protected CW band.....We must realize that this new digital modulation is just like SSB in terms of bandwidth occupancy and interference power spectral density. The new rulemaking essentially is akin to allowing digital equivalents of SSB signals to occupy the CW band freely.

Due to the fundamentals of Signal to Noise Ratio, and the Power spectral density of a SSB signal and these new 2.8 KHz digital signal, as compared to a CW signal, it is ALWAYS easier to operate using a wider bandwidth signal in the face of an narrow band interferers (e.g. it is easy to copy a detectable SSB signal while a cw transmission occurs, because the narrowband CW signal occupies a much smaller percentage of the SSB spectrum, and can be nulled out or ignored without a great change in the Signal to Interference
(SINR) ratio of the received SSB signal. This is why the FCC has always allowed CW to operate in the SSB band. It is because energy in a received signal is spread out over 2. 4 or 2.8 kHz in a SSB signal, and thus the area under the curve is much greater for the wider band signal. A simple notch filter can remove the single tone CW signal (or our brain can do it), and given that we are already receiving the SSB signal above a noise threshold, we can tolerate a narrowband interferer, and SSB works fine. Hence today's rules that allow CW to operate in the SSB bands.

However, it is MUCH HARDER to copy a narrowband signal in the face of wider band interference source (that's why the CW bands have always been protected). The narrow band nature of CW is sensitive to any energy that falls within its narrowband spectrum, and a wider band interferer will have some portion of its energy falling into the CW channel of interest. The CW signal cannot notch out the wideband energy in its own channel without also notching out its own signal -- thus, the interference effect is MUCH GREATER when a wideband signal spreads its energy across a narrowband signal (anyone experience the effect of hearing the woodpecker over the horizon radar, or when you try and maintain a CW QSO and a broad pile up erupts around your frequency?) The broad interferer wipes out the narrowband CW signal. What's worse is that the wider band interferer also simultaneously interferes with
MANY CW QSOs at the same time. Yet, the ARRL proposal is PROPOSING TO ALLOW WIDEBAND INTERFERENCE on the protected CW band! This cannot be allowed, or else CW will be overtaken very abruptly. THE FCC LAW THAT PROTECTS CW, AND CW-LIKE BANDWIDTH SIGNALS SUCH AS RTTY AND PSK31,MUST BE PROTECTED IF WE CARE TO MAINTAIN THE VIRTUES OF CW.

Why the ARRL did not propose the new digital signals to occupy the SSB bands, where the bandwidths are matched 1:1, is beyond me (actually, I understand the nuances of the FCC law, and can understand why the ARRL might have been a bit hesitant, but this could have and should have been argued as a one for one bandwidth, and one for one user swap in the SSB spectrum. In fact, I am relatively sure it would be looked upon favorably by the FCC in the face of new digital VoIP and multilevel keying for voice communications today-- remember when the cellular world went from Analog FM in first generation cellphones to 2nd Generation TDMA IS-54, IS-95 in the same 30 kHz channel bandwidths? This easily could be proposed to the FCC to get a quick win on allowing the new digital modes to share the SSB spectrum -- and that is what the ARRL should do as it has much less impact on a user basis.

I cannot hide my deep disappointment at the ARRL, when I viewed their FAQ on this rulemaking and their rationale.
http://www.arrl.org/rm-11708-faq

Below you will see my thoughts and comments. I hope you will get involved.
Thanks for listening.

73, ted n9nb

RM-11708— "The Rest of the Story" - Page 3

ANOTHER EXAMPLE:

From: "k6rb@baymoon.com" <k6rb@baymoon.com
To: cwops@yahoogroups.com

Sent: Sunday, April 20, 2014 12:17 PM
Subject: [cwops] RM-11708 again

All:

This RM-11708 issue is really raising a lot of Cain. What worries me is that people who I like and respect appear to be coming down firmly on one extreme or another. So, please allow me to reduce the stridency with an attempt (perhaps over simplification) to put it in context.

We have RM-11708 which is for establishing a firm 2.8 KHz bandwidth for data signals. The argument is that relying on the current 300 baud limitation opens up the CW/data sub-bands to the 'possibility' of much wider data signals that still adhere to the 300 baud limitation.

Neither side is arguing the point that with a 300 baud limitation, someone could create a data signal that complies with that but has a much wider bandwidth than 2.8 KHz.

This is really the crux of the argument. One side (let's call it the 'pro' side) says the possibilities of these wideband compliant signals makes it necessary to set a firm bandwidth limit rather than a baud limit. Therefore, they are in favor of RM-11708. In fairness to AD6E, he does say let's do it but reduce that bandwidth to 300 Hz rather than 2.8 KHz.

The other side (let's call it the 'con' side) says the wideband examples cited are possible but woefully impractical. They argue further that the 300 baud limitation imposes restrictions that make these wideband signals impractical. So, they are against RM-11708 and for keeping the 300 baud limitation.

Neither side argues that with the current 300 baud limitation it would be impossible to create a wideband data signal. One side says such a data signal would be impractical and have no appeal; the other side says who knows what lurks behind the corner if we don't set a bandwidth limit.

I made my comment on Friday to the FCC with regard to RM-11708. I came down 'against it. My reasoning had less to do with what was theoretically possible than what is occurring, now, under the 300 baud rule. We are not being plagued by wide bandwidth data signals on the CW/data sub-bands. My reasoning goes if it were possible to subscribe to the 300 baud limitation and create a practical wideband data signal technology that complied...it would have been done by now, because it would have been legal.

My other rationale is that by eliminating the 300 baud limitation and replacing it with a 2.8 KHz limit, it would be far more likely to encourage development of a data signaling technology that used 2.8 KHz of bandwidth. This is equivalent to a SSB signal. And, quite honestly, I don't relish the thought of trying to operate CW amidst a group of 2.8 KHz data signals.

I think the choice comes down to this. If you believe that there is a wideband data technology lurking out there that could become a monster and still comply with the 300 baud limit - then comment in favor of RM-11708.
If, like me, you feel that history has shown that a practical wideband data signal limited to 300 baud has not emerged and will probably not emerge, then vote against RM-11708.

Right now, the CW/data sub-bands 'ain't' broken. And, as they say in the Navy, 'if it ain't broke; don't fix it.'

73,

Rob K6RB

AND FINALLY:

It has been an interesting read on this matter. One of the initial comments I saw was a message from Ted Rappaport, N9NB. **I know Ted from IEEE Communications Society circles. His is one of the world's leading experts on propagation and interference and is currently developing millimeter wave propagation models for 5G communications systems.** I pulled down his comments from the FCC website on this proceeding. He has a few insights as to the spectral density problems with high-modulation data causing interference to narrow banded signals such as CW, RTTY, or PSK31. **Ted's summary accurately predicts the results these signals mixing in the same "sub-band."**

I have not spent an exhaustive amount of time researching the proposal, but there does appear to be a disconnect between what the words in ARRL's submission and the mark-ups they have provided in the tables and text modifications in the petition. If ARRL's main intent is to modify the 300 baud limit in HF that appears to be one path with one set of results. If the petition's aim is causing that "wider-band" emission in the narrow-band HF segments, then the interference results are much more dramatic. Un-intended interference consequences could result following that path.

The regulatory framework updating has merit, but it appears that the spectral neighborhood occupied by narrow-banded signals would suffer technical interference problems with too many "wider-band" high-level digital signals. I'll rely on Ted's analysis for the impact.

Opening the "wider-band" high-level digital signals in the phone band could provide insight into the practical impact of the technology shift and provide feedback into the interference nature of mixing digital signals and other modes. However, the wording of the ARRL petition's target appears to be vague in my quick read.

73,
Lee Gaspard, WA5QXE

RM-11708— "The Rest of the Story" - Page 4

MORE FOOD FOR THOUGHT; THANKS TO CTDXCC REFLECTOR:

Message: 1
Date: Fri, 2 May 2014 12:03:08 -0500
From: "Tom Morrison" <k5tm@morrisons.us
To: "'Dan Bates'" <n5tm@katytx.net
Cc: ctdxcc@kkn.net

Subject: Re: [CTDXCC] RM-11708
Message-ID:
<007101cf6628$64e97460$2ebc5d20$@us
Content-Type: text/plain; charset="us-ascii"

Thanks for the quick response, Dan. [I am CCing the CTDXCC list, as that is where I picked up your email from a thread.]
Yep, heard that argument. It is a straw-man argument, perhaps designed by lawyers, but not engineers familiar with communication theory and practice.
And it seems to be the League's main talking point; K1ZZ went to significant lengths to promote that argument to me.
Which particular modulation scheme now in use has this characteristic? And what would the on-the-air characteristics of this signal be? How well would it contend with interference from other signals, intentional or unintentional? If there is no such scheme in current use, why?
This is why consensus should have been sought. I am not arguing against the proponents' much-beloved relaxation of the symbol/baud rate. I am against the unbridled introduction of 2.8 kHz signals right down to the lower edge of the HF bands, signals which furthermore legally can be unidentifiable by the League's own OO corps and others. You see, what 'current rules allow'
cuts both ways.
The law of unintended consequences should give us reason to pause, reconsider and do a better job.
But perhaps - just perhaps - the law of intended consequences is in play.
The manner in which this RM came into being, the manner in which the proponents marshaled a 'greeting card' campaign to generate FOR comments that parrot talking points, and the treatment by the League's officers of those members that have solid objections, all point to something that is very intentional.
How much better it would be to have a transparent reason and process for a rule-making. I have seen West Gulf ASEC N5TW claim that the need for this RM is to permit higher symbol rate Pactor, thereby giving better throughput for emergency communications. Okay, let's address that need. But let us also do this in a way that protects the legacy users of our HF bands, and which promotes good engineering practice within the unique constraints of the amateur service (self-policing, openness of communications, etc.).
I am open to a significantly different approach to the current regulatory scheme, which can be a straight-jacket on innovation. But the League eschewed that approach. The current RM was created by an ad hoc committee of directors squarely on the FOR side and League employees (who serve at the convenience of those same directors). This committee left behind almost no paper trail which might allow the membership to understand the decision making process of the committee. The membership, both those that favor and those that oppose this particular RM, deserve better.

73, Tom K5TM

From: Dan Bates [mailto:n5tm@katytx.net]

Sent: Friday, May 02, 2014 11:06 AM

To: 'Tom Morrison'
Subject: RE: RM-11708

Tom, Current rules allow for a very inefficient digital signal which can be as wide as a phone signal as long as the baud rate is lower than 300. This makes no sense with today's technological advances. What would be more logical would be a rule limiting a minimum baud rate for any given bandwidth.
The current rules state: no non-phone emission shall exceed the bandwidth of a quality non phone emission. 97.307(f)

http://www.gpo.gov/fdsys/pkg/CFR-2002-title47-vol5/pdf/CFR-2002-title47-vol5

-sec97-307.pdf

From: Tom Morrison [mailto:k5tm@morrisons.us]
Sent: Friday, May 02, 2014 10:52 AM
To: n5tm@katytx.net

Cc: 'Terry'
Subject: RM-11708

Dear Dan - and fellow '5TM',

Your email made its way to the CTDXCC reflector where I lurk. I would urge you to study modulation techniques before you continue these lines of argument, because you are making some factually wrong statements.

RTTY, despite the frequency separation of the mark and space 'tones', is not a difficult signal for other narrowband users to deal with. Perhaps you have shared my experience of actually working DX between the mark and space frequencies of an RTTY signal.

New modulation schemes use a larger number of tones which fill the entire bandwidth being used. This creates a thoroughly filled, 'wide as SSB' signal (by design - the target of these schemes is the legacy SSB bandwidth in available HF transmitters and receivers). Some of these modulation schemes even document their ability to continue to operate in the presence of 'interference' by single tone (CW) signals.

Operational characteristics of stations transmitting data, especially in automatic or semiautomatic operation, also are incompatible with the operational characteristics of narrowband schemes, especially CW (consider QSK). There has been plenty of recent evidence that automated 'data'
stations do not have, or do not use, adequate listen-before-transmit capability to prevent QRM.

Taken together, the modulation schemes and the operational characteristics of 'RM-11708 stations' present a very significant and very real danger to existing CW, PSK31, and other narrowband users of the HF spectrum.

This is the basis of my objection to RM-11708. It is flawed with regard to good engineering practice, and it is further politically flawed because it lacks the consensus of all the affected parties. It also opens the door to transmissions using proprietary techniques that will thwart self-policing and potentially open our bands to even more intrusion from non-amateur uses.

Finally, the 'spark gap' comment does nothing to further any reasoned discussion on this matter. As I hope you will endeavor to discover, there are reasonable technical and operational arguments against RM-11708, and there are also reasonable ways to reach consensus. I would urge you to read Ted Rappaport's filings on the FCC web site for the engineering arguments.

And, I too used to be a CWops member (#609), courtesy of some software I provided to them for online certificates. Then they wanted dues. If that's not enough, K1ZZ himself was my 'CW Elmer' and he too has heard of my concern.

Thank you for your service to the continued use of CW; I hope we will all continue to have HF spectrum in which to use it.

Very 73,

Tom Morrison K5TM

On Fri, May 2, 2014 at 9:06 AM, Dan Bates <n5tm@katytx.net wrote:

I m sorry, but I have disagree with these arguments. Only the US is stuck with this archaic baud rate rule.

The other thing I must laugh about is cw advocates embracing the RTTY community. RTTY is every bit as wide and annoying to a cw station as any proposed 2.8KHz digital signal. The reason RTTY falls under the 300 baud limit is that it is so inefficient in use of bandwidth.

Amateur radio has always been on the forefront of technology and a leader in exploring new techniques and propagation modes. To try and limit the HF bands 300 baud is similar to trying to maintain spark gap.

The new proposed rule will allow us to experiment with some exciting new modulation modes and keep amateur radio a leader in the progression of radio communications.

Oh, by the way, I m a CW Ops member and run a CW class every week.

Dan n5tm

RM-11708— "The Rest of the Story" - Page 5

Message: 2
Date: Fri, 2 May 2014 14:06:58 -0500
From: Terry <ab5k@hotmail.com
To: <ctdxcc@kkn.net,
<DFWcontest@yahoogroups.com

Subject: [CTDXCC] FW: [RTTY] [DFWcontest] Please forward this far and wide, its important if you care about CW and RTTY
Message-ID: <SNT148-DS192C7518E81327539405292430@phx.gbl

Content-Type: text/plain; charset="us-ascii"

Forwarding.....

-----Original Message-----
From: RTTY [mailto:rtty-bounces@contesting.com] On Behalf Of Joe Subich, W4TV

Sent: Friday, May 02, 2014 1:53 PM
To: Dan Bates
Cc: hdwgby@gmail.com; Ted Rappaport; sedxc@contesting.com; halken@comcast.net; ctdxcc@kkn.net; rtty@contesting.com

Subject: Re: [RTTY] [DFWcontest] Please forward this far and wide, its important if you care about CW and RTTY

97.307(f) only applies in the phone band - and effectively limits
IMAGE transmissions to 2.8 KHz. Remember, RTTY and data are not currently permitted in the "voice, image" spectrum which prohibits the data portion of mixed content protocols.

HOWEVER there is one bandwidth limitation in the RTTY, data bands:
FSK signals *only* are restricted to 300 baud and 1000 Hz shift which works out to 1500 Hz bandwidth although nobody ever uses that much.

To date, technology (the nature of superhetrodyne receivers and modulator/mixer transmitters) has limited data modes to approximately
2.4 KHz (the "flat" portion of the transceiver IF). That is given by the developers of PACTOR 3 as the primary reason for selecting the bandwidth characteristics for both PACTOR 3 and PACTOR 4. ARRL claims that RM-11708 will prevent future, even wider modes, but none is on the horizon and there is no need to remove the 300 baud *SYMBOL RATE* limit if the goal is to prevent such future modes.

ARRL could have achieved its *stated goal* by simply asking for the imposition of a 2.4 KHz limit for data. Such a limit would have "grandfathered" PACTOR 3 without exposing amateur radio to new, more interference causing, modes with higher spectrum power density or
wider bandwidth. ARRL could have also bypassed the controversy
entirely by asking that the restrictions on emission type be removed entirely and a 300 or 500 Hz bandwidth limit imposed on the traditional CW/RTTY bands - wider RTTY and data modes *as well as mixed voice/data* modes up to 2.8 KHz wide could then operate freely among the other wide bandwidth modes.

However, ARRL - or more specifically the West Gulf and Roanoke Division Directors have misused of their positions of trust and cynically manipulated the entire ARRL organization to benefit a narrow special interest and legalize one specific protocol without any regard for the severe *unintended consequences*, and potentially grievous damage to traditional amateur operation their actions will cause.

Increasing signal levels of current interference sources bu 2 dB and opening the door to other protocols with even more obnoxious interference profiles should be of immediate concern to *every* user of narrow band modes - CW, PSK**, RTTY, or JT* - as increased interference levels at the top of the narrow band spectrum will only upset the already uneasy bandplans and push current activity ever lower in the bands in an effort to escape the interference.

For 80 years or more the FCC has prevented wideband modes from entering spectrum used by narrow band modes because the interference from those wideband signals to narrow band users is asymmetric. Wideband users can use notching and/or repetition to work through narrow band signals. The narrow band users have no such protection ... if a 2.8 KHz signal pops up in the middle of a RTTY pile-up, the whole pile-up is wiped out.

RM-11708 is poorly considered, is fraught with too many unintended consequences and the Board of Directors should have never permitted its filing. It is up to us as individuals to stand up, say clearly that the Emperor has no clothes see that the FCC does not follow the lead of a poorly informed ARRL Board of Directors.

73,

... Joe, W4TV

On 5/2/2014 11:49 AM, Dan Bates wrote:
Joe,

There is no arbitrary bandwidth limit below the phone segment of each
band.

The current rules state: no non-phone emission shall exceed the
bandwidth of a quality non phone emission.
97.307(f)
http://www.gpo.gov/fdsys/pkg/CFR-2002-title47-vol5/pdf/CFR-2002-title4

Dan

-----Original Message-----
From: Joe Subich, W4TV [mailto:lists@subich.com]

Sent: Friday, May 02, 2014 10:33 AM
To: Dan Bates; DFWcontest@yahoogroups.com; ctdxcc@kkn.net; rtty@contesting.com

Cc: 'Ted Rappaport'; 'Dan White'; 'Hal Kennedy'; SEDXC
Subject: Re: [DFWcontest] Please forward this far and wide, its important if you care about CW and RTTY.

The new proposed rule will allow us to experiment with some exciting new modulation modes and keep amateur radio a leader in the progression of radio communications.

That's ARRL propaganda and completely untrue. The only thing is will permit is a *commercial* protocol (PACTOR 4) with a significantly stronger interference profile. This move would further codify the separation of modes based on content rather than basing allocations on modulation characteristics (bandwidth).

The *real* issue is 1) 2.8 KHz bandwidth and 2) symbol rates greater than 300 baud.

RTTY, PSK31, JT65/JT9 *already* have a problem with 200 baud 2.4 KHz wide PACTOR 3 signals wiping out five or six 300 Hz wide (RTTY) or less signals. If the bandwidth is increased to 2.8 KHz and the baud limit removed that problem *will become an issue for CW* as the PSK31, RTTY and JT mode signals *move down the band* to escape.
PACTOR 3 at its widest mode has a crest factor (peak to average ratio) of 5.7 dB. PACTOR 4 with its *1800 baud* modulation has a crest factor of less than 4 dB - that means PACTOR 4 is 2dB *stronger* than the typical PACTOR 3 QRM today. Other 2.8 KHz digital modes with higher baud rates *have even lower crest factors* - N9NB can probably give us a theoretical number but I would guess for a 2400 or 3200 baud STANAG modulation the crest factor might be sub 3 dB or *double the strength* of the already crippling PACTOR 3 crap.

THERE IS NO NEED for higher data rates in amateur service - ham radio is not an alternative to commercial internet access. There is no need to remove the current symbol rate limitation even if ARRL feels it is necessary to add a bandwidth limitation for data modes to protect from some hypothetical multi-tone modulation of the future.

Wideband data belongs with other wideband (voice, image, etc.) modes. If wideband techniques are to be used, update the rules to allocate based on necessary/occupied bandwidth, not emission type of the content of the modulation. Take that step and the rules instantly become ready for the future *and* permit amateur experimentation in mixed content (digital voice with text/control/signalling) that are currently not permitted because data (telemetry) is restricted to one area of the spectrum and voice is restricted to another.
73,

... Joe, W4TV

Texas DX Society Board members

President	**Bob Hardie, W5UQ**	**w5uq at att.net**
VP Membership	**Steve Smothers, W9DX**	**cougar70 at earthlink.net**
VP Programs	**Lance Rumfield, WD5X**	**ltrumfield at sbcglobal.net**
Secretary	**Arthur Alvarez, N5KTN**	**KingArthur at msn.com**
Treasurer	**Mike Bragassa, K5UO**	**bragassa at consolidated.net**
Contest Chairman	**Joe Staples, W5ASP**	**w5asp at yahoo.com**
Field Day Chairmen	**need volunteer**	
Repeater Chairman	**Glenn Anderson, WB5TUF**	**wb5tuf at earthlink.net**
DXpedition Chairman	**Willis "Cookie" Cooke, K5EWJ**	**wrcooke at yahoo.com**
Outgoing QSL Manager	**Scott Patout,, K5DD**	**k5dd at arrl.net**
Webmaster	**Steve Smothers, W9DX**	**cougar70 at earthlink.net**
Bullsheet Editor	**Allen Brier, N5XZ**	**n5xz at arrl.net**
DXCC QSL Card Checker	**Bob Walworth, N5ET**	**rwalworth at charter.net**
CQ WAZ Card Checker	**Bob Walworth, N5ET**	**rwalworth at charter.net**

How to reach US

On the World Wide Web **http://www.tdxs.net** email address: **k5dx@tdxs.net**

On 2 Meters: 147.96/36 MHz (100 Hz) On 70cm: 447.00/442.00 MHz (103.5 Hz)

DX Cluster—On Packet: Connect to **K5DX** on 145.71 MHz or telnet via IP address 75.148.198.113

TDXS says "HAPPY BIRTHDAY" to these members with birthdays in May

Leon Pringle, Jr. - W5NA
John Guida - K5XA
Henry Schneider - W5HNS
Jan Carman - K5MA
Mike Mauldin - K5NU
Mitch Whitney - AD5W
Kenny Manchester - NZ5I
Gregg Erlenbusch - W5IDX
Joey Clements - W5BAK