

President's Message

Gary Mitchell, WB6YRU

Remailer change

In the last issue, we announce the start of an internet remailer where the board can meet electronically, an "e-meeting." As of late January, our host pulled the plug and went his separate way. It took a few months, but we now have a new host, thanks to Bob Vallio, W6RGG. The new remailer address is ncpa@qth.net.

The new remailer is also a majordomo system, so the operation is similar to the old one. In order to participate, you must be subscribed to the list; however, in the spirit of open meetings, anyone may subscribe. To subscribe, send e-mail with command **subscribe ncpa** in the message body to majordomo@qth.net (the subject doesn't

matter).

Some of you may realize that the Spectrum Management Committee (mentioned in the last issue) also was on the same host as we were. It too has changed hosts; its address is now smc@narcc.org. It should be mentioned that this doesn't mean the SMC is in any way a sub-group of NARCC. Thanks go to Tim Sivils KE6FSE for relocating the SMC remailer.

Band Plan Change

Since the last *Downlink* issue, there has been only one significant change to the band plan. The BBS channel 145.79 was dropped as a digital channel and is now part of the guard-band between 145.80 and 145.77 (DX spotting). This change provides a 30 kHz buffer between Space Shuttle operations on

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145.80 and digital in this area. Other areas also appear to be making similar changes. Since we recently got several new channels from the old Oscar sub-band of 144.30-40, it seems this is the

NCPA General Meeting

The next general meeting will be Saturday, June 13, 1998 at 1:00 PM, (after the Foothill Electronic Flea Market). We have reserved a meeting room at the Raynor Park in the south-east part of Sunnyvale. From Hwy., 280, go north on Wolfe for a few blocks then right (east) on Inverness. After a few more blocks you will reach the south end of the park, turn left (north) on Quail. The parking lot and building should be near the north end of the park.

The general meeting is when the directors are elected. If you are interested in representing a special interest in packet on the board, this is the time and place. We would like the board to have at least one representative from each special interest in packet (APRS, Keyboard, DXPSN, TCP/IP, BBS, etc.).

In addition to the election of directors, we will discuss various other issues of NCPA's operation. Also, Dave Harris, N6UOW has agreed to give a brief presentation on recent APRS activities.

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least we can do.

Downlink

We still are in desperate need for an editor. We've managed to only get out an occasional issue by passing the editor's duties around the existing officers. If you have a computer with a good word processor and would like to help out, or even if you think you might be interested and want to know more about what's involved, please contact me.

New DXPSN Rep.

Bob Vallio, W6RGG was recently voted in as a director representing the DXPSN by the board. Such appointments are temporary until the next general meeting. Since there currently was no DX spotting representation on the board, we felt this would be a good move. I hope Bob will decide to run for election at the general meeting.

Treasury

It seems the treasury only has enough money to produce this issue of the *Downlink*. It also means we probably won't be involved in any meaningful way with Pacificon this year.

If you will recall, we had a significant presence at the last few Pacificons. Unfortunately, the number of new or renewing members did not make up for those expenses.

The mailing label should indicate when your NCPA membership is due. If you were a member and your dues are past, now is a good time to renew. Of course, new members are most welcome too.

Pacificon '98

As mentioned above, we don't have the financial resources to purchase tables at Pacificon '98. It has not been decided whether we will have any sessions this year. This will be one of the topics of discussion at the general meeting.

EOF

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Back issues of The NCPA Downlink, as well as other information about the NCPA, are available on the Web at: <http://www.arasmith.com/~ncpa>

The NCPA Board of Directors meets electronically in order to transact association business and meet with members and interested amateurs. The address for the board mailing list is: ncpa@qth.net. E-mail to majordomo@qth.net with the text "subscribe ncpa" in the body of the message to subscribe to the discussions.

Northern California Packet Band Plan

Jan. 1998

50 MHz

50.60-50.80 (20 kHz channels, non-specific at this time)
51.12 SCA backbone
51.14 BBS
51.16 Keyboard to Keyboard
51.18 Experimental
51.62-51.68 (20 kHz channels, non-specific at this time)

144 MHz

144.31 BBS
144.33 Balloon & experimental¹
144.35 Keyboard to keyboard¹
144.37 BBS LAN forwarding¹
144.39 APRS (same as Canada)¹
144.41 duplex, lower half (145.61 upper half, 1.2 MHz split)¹
144.43 TCP/IP (OK to run duplex with 145.65)^{1,2}
144.91 Keyboard to Keyboard
144.93 BBS
144.95 DX Cluster
144.97 BBS
144.99 BBS
145.01 APRS
145.03 Keyboard to Keyboard
145.05 Keyboard to Keyboard
145.07 BBS
145.09 BBS
145.61 duplex, upper half (144.41 lower half)²
145.63 BBS
145.65 TCP/IP 9600 bps
145.67 DX Cluster
145.69 BBS
145.71 9600 bps
145.73 BBS
145.75 TCP/IP
145.77 DX Cluster
146.58 DX Cluster

¹ The allocations from 144.31 through 144.43 are tentative for now. Please be sure you are not over-deviating on these frequencies since they are relatively close to the weak-signal sub-band.

² Duplex on TCP/IP channels 144.43 and 146.65 is currently under review.

NOTE: 145.79 MHz has been dropped as a digital channel as of Jan. 1 1998. It is now part of the guard band between satellite operations on 145.80 and 145.77. A one-year grace period is in effect for digital users of 145.79.

220 MHz

219.05-219.95 100 kHz channels, Backbone³
222.14 LAN
223.54 LAN, East Bay (EBAY)
223.56 LAN, West Bay (WBAY)
223.58 LAN, Gilroy (GARLIC)⁴
223.60 LAN, Sacramento Valley (SACVAL)
223.62 LAN, South Bay (SBAY)
223.64 TCP/IP
223.66 Keyboard to Keyboard
223.68 BBS
223.70 LAN, Monterey Bay & North Coast (MRYBAY)
223.72 LAN, North Bay (NBAY)
223.74 DX Backbone

³ By coordination only. There are currently political problems with using 219-220.

⁴ TCP/IP interlink (Sacramento) Not to interfere with node uplink.

440 MHz

433.15 BBS backbone (by coordination only)
441.50 Any

More 70 cm packet channels are currently being investigated, possibly 433.x and 438.x MHz. Contact the NCPA for details.

900 MHz

903.500 1 MHz wide, TCP/IP
904.500 1 MHz wide, TCP/IP
915.500 1 MHz wide, experimental
916.100 200 kHz wide, experimental
916.300 200 kHz wide, experimental
916.500 200 kHz wide, experimental
916.650 100 kHz wide, experimental
916.750 100 kHz wide, experimental
916.810 20 kHz wide, experimental
916.830 20 kHz wide, experimental
916.850 20 kHz wide, experimental
916.870 20 kHz wide, experimental
916.890 20 kHz wide, experimental
916.910 20 kHz wide, experimental
916.930 20 kHz wide, experimental
916.950 20 kHz wide, experimental
916.970 20 kHz wide, experimental
916.990 20 kHz wide, LAN links (Contra Costa County only)

900 MHz activity is on a non-interference basis to vehicle locator service. This sub-band is not considered suitable for

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omnidirectional systems, use for point-to-point links only.

1296 MHz

1248.500 1 MHz wide, experimental⁵
1249.000-1249.450 Unchannelized, experimental
1249.500 100 kHz wide, experimental
1249.600 100 kHz wide, experimental
1249.700 100 kHz wide, experimental⁵
1249.800 100 kHz wide, experimental⁵
1249.870 20 kHz wide, experimental
1249.890 20 kHz wide, DX Packet Cluster
1249.910 20 kHz wide, experimental⁵
1249.930 20 kHz wide, experimental⁵
1249.950 20 kHz wide, experimental⁵
1249.970 20 kHz wide, experimental⁵
1249.990 20 kHz wide, experimental⁵
1250.500 1 MHz wide, experimental
1251.500 1 MHz wide, experimental
1297.000-1298.000 Unchannelized, experimental
1298.500 1 MHz wide, experimental⁵
1299.000-1299.450 Unchannelized, experimental
1299.500 100 kHz wide, experimental
1299.600 100 kHz wide, experimental
1299.700 100 kHz wide, experimental⁵
1299.800 100 kHz wide, experimental⁵
1299.870 20 kHz wide, North Coast LAN
1299.890 20 kHz wide, DX Packet Cluster
1299.910 20 kHz wide, experimental⁵
1299.930 20 kHz wide, experimental⁵
1299.950 20 kHz wide, experimental⁵
1299.970 20 kHz wide, experimental⁵
1299.990 20 kHz wide, experimental⁵

⁵ Full duplex channel pairs at 5 MHz separation, example:
1249.910 ↔ 1299.910)

Definitions

9600 BPS Stations using 9600 baud with direct FSK (G3RUH, TAPR, etc.) modems.

Backbone No uncoordinated stations. These channels are for specific purposes as defined by the NCPA and/or affiliated groups. These are frequencies where the various BBS, nodes, and clusters forward traffic and are very high volume channels. Please use the normal user entry points of the network you want to access rather than these channels.

BBS These frequencies are for user access to a full-service BBS. Keyboard-to-keyboard is tolerated. Please don't put high level nodes or digipeaters on these channels since they are *local*. A low-level direct link or node that links into a backbone on another frequency is the proper implementation.

Duplex Simultaneous transmit and receive by a single station, including digital repeaters. Duplex channels are intended for high-volume applications. 9600 baud or higher is encouraged, but not required at this time.

DX Cluster Northern California DX packet spotting network. No other activity should be on these channels.

Experimental Anything goes except full service BBS or any 24 Hr/Day services (nodes, gateways, etc). This is where you can test new gear, programs, etc. These channels may be reassigned in the near future, so no permanent activities please.

Forwarding same as *backbone*

Keyboard to Keyboard Anything but full service BBS, TCP/IP, or DX Cluster. Primarily chat channels. These are also the primary emergency channels.

Interlink same as *backbone*

LAN Local Area Network. BBS's are grouped into LAN's for more efficient forwarding. A LAN frequency is the forwarding channel within a LAN and to the backbone. Please do not attempt to access the BBS network on these channels.

Personal mailbox/mailedrop A BBS-like system, often running entirely within a TNC, with a small number of users that handles information of a personal, local or special-purpose nature. A mailbox is allowed on keyboard-to-keyboard channels *only* if it does not forward with other BBSs. Mailboxes may forward with full-service BBSs on LAN channels at the discretion of the BBS SYSOP.

TCP/IP Stations using TCP/IP protocol on top of AX.25. Some AX.25 tolerated to communicate to TCP/IP stations if a compatible p-persistence access method used.

Procedure for changes

Send requests for changes to either the frequency coordinator or the NCPA board. The frequency coordinator will then present the request to the board along with suggested assignments. The NCPA board, elected by you, the packet user, makes all assignments!

Misc. Info.

NCPA currently does not coordinate individual stations, nodes, etc. leaving that to the special interest groups. BBS station coordination is done by the PSNC in Northern CA and by CENCA in Central CA. Coordinations of an alternate BBS type network including keyboard and TCP/IP in the central valley is done by CVDRA. DX spotting is coordinated by DXPSN. Some digital is coordinated on auxiliary channels by NARCC.

The NCPA board conducts most of its meeting activity electronically by internet e-mail remailer, ncpa@qth.net. As with face-to-face board meetings, interested persons are welcome. Subscribe to the remailer by sending e-mail to majordomo@qth.net with "subscribe ncpa" as the message. Subscribing to the remailer is like attending a continuous NCPA board meeting.

NCPA board of Directors Electronic Meetings

NCPA board remailer activity summary, late September 1997 through late May 1998. Compiled by Gary Mitchell WB6YRU (full text of traffic is available).

Sep. 26, 1997

Gary, WB6YRU:

The digital band plan has been updated. The items to note are:

- * new six meter assignments
- * the note regarding duplex on TCP/IP in two meter section
- * new listing of 219-220 and 222.14 in 220 section
- * BBS backbone in 440 section
- * a little house-keeping fix-ups in the "Definitions" section
- * additional info about who does digital coordinations in the "Misc. Info." section

Sep. 27 1997

Tim, KE6FSE:

I would like to see at least 2 duplex pairs for 9600/19200 show up in the plan.... Plans exist to put up bit-regen repeaters in the near future in this band.... At least one of them will be a backbone system..

Gary, WB6YRU:

Take a look at the current band plan and make a specific suggestion. Most of six meters is wide open at this point. Duplex crossing bands is also possible.

Nov. 13, 1997

Gary, WB6YRU:

We still have a motion by Bob to drop 145.79 from the digital band plan to allow room for satellite activity on 145.80 MHz. This couldn't go forward until we heard from the PSNC (BBSs on 145.79). I just heard from Larry WB9LOZ, one of those heading up the PSNC. Evidently, dropping 145.79 is OK with them. All the BBSs with user ports on 145.79 have agreed to move.

K7WWA needs more time to work things out. He has node stacks including APRS and it's a bit of a balancing act to set all the filters. Larry suggested that he wait until the possible APRS move is figured out before he changes anything.

Nov. 13, 1997

Gary, WB6YRU:

Some weak-signal people have received packet on 222.14. Reportedly there are just ten of them and it was only noticed during a VHF contest. There are other weak-signal frequencies, so digital on 222.14 apparently isn't much of a problem for them at this time.

David, N6UOW:

Re: APRS Switch to 144.39

The No. CA APRS folks aren't ready to do it this month, but there are more enthusiastic supporters than nay-sayers. Folks are still talking about proposing long schedules, and others want to see the move sooner.

Roy, KA6EYH:

Re: dropping 145.79

According to my records 145.01 is a keyboard to keyboard channel.

[Discussion of the history behind 145.01 assignment followed.]

Gary, WB6YRU:

145.01 has been designated as APRS for years now--that's what counts; it isn't keyboard any more.

Eric, WD6CMU:

I think that if APRS moves to 144.39, the board should review the current situation and see what the best use for 145.01 would be. How much are the other keyboard channels being used? Is another keyboard to keyboard frequency needed, or would 145.01 be better used by some other activity? The activity levels for all of the various packet activities have changed in the last few years. This would be a good time to evaluate our needs.

Nov. 15, 1997

[Bob KO6RI forwards a message from Steven Hess KC6KGE to NARCC charging that they and the NCPA won't recognize CENCA.]

Steven KC6KGE:

The NCPA will not recognize we

even exist.

Gary, WB6YRU:

That's not accurate. The NCPA does recognize CENCA as a BBS coordinator.

A while back, shortly after CENCA started doing band planning--in what was NCPA territory--the NCPA tried to get CENCA to join with the NCPA, like the other packet groups. They (Steve) wouldn't hear of it. They claimed to represent all packet interests and would do what the NCPA does over any area where they had BBSs.

At the time, they claimed to have no bylaws, no officers, nor any kind of formal representation--and didn't need any. Given that, the NCPA board decided to not recognize CENCA as an organization like the NCPA (representative band planner for the region).

[Discussion followed. Steven insists NCPA should recognize CENCA as an equal regardless of its organization, rules, etc.]

Gary WB6YRU:

If CENCA now has officers and bylaws, the NCPA will re-evaluate how it views your group. I'm sure that will have a big influence on how NARCC views you too.

Nov. 16, 1997

Steven, KC6KGE:

When BBS system set up and dominates a frequency over a large area it is a infestation. I ought to know I run one.

[Discussion followed as to the nature of packet BBS and Steven's view of them as an "infestation."]

Steven KC6KGE:

The CENCA Board is Steven KC6KGE (chair), George KC6KGH, Ernie KD6WAP, Fred K6RAU, and Louis W6UR.

Our Charter is very specific. It states the Chairman known as the Frequency Coordinator.... is the "sole

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spokesman" and is the "physical representative of CENCA when required."

CENCA ceased to simply be a group of BBS sysops a long long time ago.

Bob, KO6RI:

When CENCA is an equal it will be treated as one. Anyone can claim to be a frequency coordinator. Would CENCA treat me as an equal if I claimed to be the frequency coordinator for the area from Fresno to Oregon east to Nevada and west to the coast range? I got some buddies that I can call board members.

Nov. 17 1998

Eric, WD6CMU:

One of the reasons for NCPA's reluctance to accord peer status to CENCA was, as I recall, CENCA's refusal to enforce its own rules against self-declared CENCA members that violated them.

Nov 22, 1997

(Steven reports the CENCA charter is available on the web.)

Don, WB6UCK:

[Don lists several examples of how the CENCA Charter restricts membership.]

I, for one, cannot accept CENCA as an OPEN, ABOVE BOARD digital spectrum management body serving the ENTIRE digital community, based on its discriminatory membership policies set forth in this "Charter". It is my recommendation to my fellow Board members that NCPA continue to not accept CENCA as a bona fide coordination body at this time.

Bob, KO6RI:

Any group that does digital band planning must represent all hams with digital interests. Troublemakers and ego trippers have rights too. Cenca has made it clear that it is a group with very special interests. I'm not sure what its interests are, but I do know that I am offended by its exclusivity.

Gary, WB6YRU:

[invites comparison of CENCA's charter and NCPA bylaws.]

If you want the NCPA to recognize

CENCA as an equal, then you have to BE AN EQUAL. This (charter) *certainly* isn't it.

[Gary lists many examples from the CENCA charter demonstrating it is not a representative group.]

Mike, WA6ZTY:

I have downloaded and read the "CENCA Charter" and cannot, by any stretch of my imagination, consider this group to be representative of the interests of digital interests in the area that they claim they serve, nor can I consider them an equal to NCPA.

[Mike lists many specific objections to the CENCA charter.]

This CHARTER creates an organization almost TOTALLY CONTROLLED by the Chairman and the Secretary/Treasurer, a board that is nearly powerless, a closed membership, a membership that cannot elect its leaders, and leaders that need not explain or even disclose their decisions!

Nov 27, 1997

Gary, WB6YRU:

TAPR has offered an update to the AX.25 Protocol. Check it out on the their web site, <http://www.tapr.org/tapr/html/ax25.html>.

Dec. 3, 1997

Gary, WB6YRU:

Call for the vote...

Shall 145.79 MHz (currently a BBS frequency) be removed from the digital frequency allocations to provide room for satellite operations on 145.80 MHz? How about including grace period of about one year?

The existing NCA BBSs on 145.79 have already indicated a willingness to move and the PSNC has no problem with it.

Dec. 5, 1997

Bob, KO6RI:

We have a problem with 144.31 here in the Sacramento area. It seems that K6DJP is operating a remote or something and has no plans of moving.

I think I have a short term fix for this problem.... If we swap 144.31 and 144.37 then those folks can stay there and listen to forwarding if they like and it won't cause problems for users. As far as I know no one is forwarding there yet

and that gives us time to work things out.

144.31 is listed as BBS and 144.37 is listed as LAN

Dec. 8, 1997

Larry, WB9LOZ

Since Bob is the first user on .31 and nothing has been assigned to .37 yet, I have no problem with the change. I talked with Mike, WA6ZTY, and he doesn't have a problem either. If they're going to be switched, now is the time to do it.

Dec. 20, 1997

Gary, WB6YRU:

There is apparently an effort underway by a New York VHF group to have 53.530 MHz designated a national APRS frequency primarily for detecting propagation across the country. At this point, it seems unlikely that this will go anywhere... at least not on this frequency.

Jan. 1, 1998

Gary, WB6YRU:

Regarding the vote to remove 145.79 from the digital band plan to allow room for satellites/space stations on 145.80... The last vote is finally in:

Five - yes

One - no

Two - abstained

The motion passes. Furthermore, pretty much everyone seemed to think a one-year grace period would be fine.

Jan. 3, 1998

Gary, WB6YRU:

KE6FSE reports that the NCPA web page seems to be down.

Jan. 4, 1998

Gary, WB6YRU:

We still have a motion pending... Currently, 144.31 is BBS and 144.37 is LAN. The proposal is to swap these assignments.

The BBS folks have said not much has been coordinated on these two frequencies yet and if we are going to do this, sooner is better.

Shall 144.31 be assigned to LAN and 144.37 be assigned to BBS?

Roy, KA6EYH:

144.31 has been assigned to

K7WWA & N6QMY in place of 145.79, W6CUS-1 will QSY to 145.71. These changes are already being adopted.

Bob, KO6RI:

Yup, well 144.37 in Sacramento isn't a LAN frequency anymore. I started using it on 12/8/97 when Larry and Mike gave their okay to the change. On 144.37, I offer BBS, TCP/IP and gateway to 145.05 keyboard. I don't plan to make any changes in the near future. I don't care what happens with 144.31 but we need to change 144.37.

Roy, KA6EYH:

Bob...how come as BBS Coordinator I am the last to know about this, also you are NOT coordinated on 144.37, as this is the first I heard about it being a BBS frequency, plus I never received a request from you about a change, your are still on 144.31 according to my records.

On another topic, here is the list of BBS's moving from 145.79 with their new frequencies:

K7WWA 144.31 (Cahto Peak)
K7WWA 145.69 (Laughlin Ridge)
N6QMY 144.31
W6CUS 145.63

Jan. 5, 1998

Larry, WB9LOZ:

Bob KO6RI wrote:

> well 144.37 in Sacramento isn't a
> LAN frequency anymore. I started
> using it on 12/8/97 when Larry and
> Mike gave their okay to the change.

As far as the PSNC and NCPA are concerned .37 is still a LAN frequency at this point!

> 144.37, I offer BBS, TCP/IP and
> gateway to 145.05 keyboard.

Gatewaying between a BBS frequency and a keyboard frequency is something that should NOT be going on. That was something that was discussed at length a while back, and the keyboarders DO NOT want BBS traffic on the keyboard frequencies.

Bob, KO6RI:

Yes it should, it does, and it will continue. Not only do I gateway keyboard to BBS but to TCP/IP the internet and nodes all over the world. Do I need a special frequency for the

Unix shell account I offer to ax25 users?

There are FM voice users on 144.31 in this area and they are not going to go away. I needed a frequency in that subband and no one was using 144.37.

Mike, WA6ZTY:

As Howard and Larry have already stated, a forum exists where these problems are discussed, sysops should not be self-allocating or doing private rationalizations for ignoring policies that were created with the participation of representatives of the various packet interests. If you have a problem that cannot be solved within the existing policies, bring it to NCPA. NCPA cannot guarantee a solution, but it can prevent other users from being hurt by an anarchistic approach.

Gary, WB6YRU:

Bob, the various packet groups were formed for good reasons. If we all just went out and did whatever we wanted, however we wanted, whenever we wanted, things would degrade to chaos.

Jan. 21 1998

Gary, WB6YRU

A board representative for the DXPSN has stepped forward, Bob Vallio, W6RGG. I expect this to just be a formality, but the board needs to approve appointments to the board--effective until the next general meeting.

So, all in favor of Bob Vallio becoming a board member representing the DXPSN, please say AYE...

Jan. 25, 1998

[KO6RI resigns from the board...says the NCPA remailer (which he hosts) will go away very soon.]

Jan. 27 1998

Gary, WB6YRU:

Roy KA6EYH working on a majordomo remailer at his site.

Apr. 25, 1998

Gary, WB6YRU

The NCPA remailer is back! A big THANKS to Bob W6RGG for setting us up on the qth.net system. (This is a majordomo system and will act the same way as the last one.)

NOTE THE CHANGE IN ADDRESS

New: ncpa@qth.net

Previous: board@ncpa.ampr.org

We still have two motions still pending: 1) swap the usage definitions on 144.31 and 144.37 and 2) accept Bob W6RGG to the board representing DXPSN.

We need to have a general meeting very soon.

Howard N6HM:

If we can get an APRS presentation at the meeting, I think that would be good.

David, N6UOW:

I'd be happy to give a (brief) talk about the event, and our use of APRS and Mic-E hardware this year.

May 6, 1998

Howard, N6HM

I'll try to reserve a room here in Sunnyvale June 13, 1998 from 12:30 pm to 5:30 pm.

May 7, 1998

Larry, WB9LOZ:

Newsline reports that the last remaining APRS hold-out in southern California is changing his mind and switching to 144.39.

May 10, 1998

Gary, WB6YRU:

Vote results:

Proposal to swap the usage of 144.31 (BBS) and 144.37 (LAN) so that 144.31 would be LAN (forwarding) and 144.37 would be BBS:

Three -- yes

Four -- no

One -- abstain

The motion fails, (barely).

Proposal to accept Bob Vallio W6RGG to the board of directors representing DXPSN until the next general election:

Six -- yes

zero -- no

One -- abstain

The motion passes.

May 26, 1998

Gary, WB6YRU:

I'm receiving complaints from

Northern California Packet Association

keyboard folks in Sacramento about heavy TCP/IP traffic on the keyboard frequency 145.05. Reportedly, most of it involves KO6RI.

EOF

From The ARRL

The ARRL Letter, May 8, 1998

LAND MOBILE SEEKS SHARED ACCESS TO 70 CM BAND

The ARRL is organizing opposition to a new threat to the 70-cm Amateur Radio band. The Land Mobile Communications Council (LMCC) has asked the FCC to immediately reallocate 420 to 430 MHz and 440 to 450 MHz from the federal government to the Private Mobile Radio Service (PMRS) on a primary basis. Amateur Radio now enjoys the use of 420 to 450 MHz on a secondary basis, and the 430 to 440 MHz segment is an international allocation. The 70-cm band is the second most popular of the hobby's VHF/UHF allocations, with substantial FM repeater and other operation in the 440 to 450 MHz segment and a variety of uses in the 420 to 430 MHz segment.

The LMCC request, based on "additional spectrum needs of the PMRS community," acknowledges Amateur Radio's use of 420 to 430 and 440 to 450 MHz, and suggests that ham radio applications can remain secondary to PMRS in those segments, but offers no explanation of how sharing could be accomplished. The LMCC says it believes the 430 to 440 MHz subband "is more important to the amateurs for use in emerging technologies such as links with spacecraft and amateur television applications."

The petition also suggests that equipment availability and technology resulting from an expanded PMRS presence on 70 cm would benefit hams "pursuing such applications as compressed video television in the 430-440 MHz band." The LMCC

Packet BBS's

<u>Call</u>	<u>Location</u>	<u>User Ports</u>
KB5IC	Almaden	145.63
WH6IO	Benicia	145.75+, 433.43&+
KJ6FY-1	Benicia	144.93, 441.50
N6MPW	Ben Lomand	145.79
N6EEG	Berkeley	144.97
KD6RKP-2	Brookdale	144.99
W8GEC	Boulder Creek	145.73
KM6PX-1	Citrus Heights	145.07, 441.50
N6ZGY	Clovis/Fresno	145.73
KB6AML	Concord	145.09, 441.50
KA6EYH-3	Daly City	145.69
KD6EUK	Felton	145.09
N6IYA-2	Felton	145.09
N6QMY-1	Fremont	144.31
N6CKV	Gilroy	144.99
N6OA	Lemoore/Hanford	144.99#
WA6YHJ-1	Livermore	145.09
N6LDL	Los Gatos	144.97, 145.71&, 441.50
K6RAU	Merced	145.09
K6LY	Monterey	144.97
WA6NWE-1	North Highlands	145.09, 145.75+, 144.93,
AA6QR	Orinda	145.73
KA6EYH-4	Pacifica	145.75+, 441.50
KD6DG	Redding	145.09,
WD6CMU	Richmond	144.97
W6CUS-1	Richmond	145.71
KC6PJW	Rohnert Park	145.07, 441.50
KO6RI	Sacramento	144.31
KO6RI-1	Sacramento	145.71&
W6PW-3	San Francisco	144.99
KB6MER-1	San Jose	145.73
W7AZF	San Luis Obispo	145.03/145.05/145.73
KG6EE	Santa Cruz	145.07
KI6EH	Santa Cruz	145.07
KM6RZ	Santa Maria	145.03/145.63 147.585#
KD6KWM	Santa Rosa	145.09
KD6JZZ-2	Sonora	144.97
WA6EWV-1	South Lake Tahoe	144.97
W6YX-9	Stanford Univ	145.75+, 433.43&+
W6SF	Stockton	144.99
N0ARY-1	Sunnyvale	144.93, 433.37&
KE6IZU	Tracy/Modesto	145.79
KA6VAF	Visalia	145.63
K7WWA	Willits	144.31, 145.69
KM6WU	Wofford Heights	145.05
KE6LW-1	Yuba City	144.99, 145.63
KE6LW-1	Yuba City	145.63, 441.50

Keys:

2400 baud & 9600 Baud Port + TCPIP Port

concedes, however, that its "most urgent need" for PMRS is voice and low-speed data applications, not advanced technologies which might come later on.

The petition also notes that PMRS already uses 420 to 430 MHz in three Canadian border cities (Buffalo, Cleveland and Detroit) and a "reduction in military use of this band is foreseen."

The LMCC also seeks allocations at 1390 to 1400 MHz, 1427-1432 MHz, and 1670 to 1675 MHz as well as 85 MHz at 960 to 1215 MHz by 2010.

Reply comments are due by June 15. The FCC has not indicated if it will accept electronically filed comments in this proceeding.

SOLAR EVENTS DISRUPT RADIO SPECTRUM

Huge solar flares in late April and early May wreaked havoc on the ham bands and other radio spectrum here on Earth. But the aftereffects of the solar storms on April 30, May 2, and May 6--the first major geomagnetic storm in years--continued for several days to keep HF noise levels higher than normal and to disrupt HF skip propagation. "It has been an amazing week for solar flares and geomagnetic disturbances," said propagation reporter Tad Cook, K7VVV. "Suddenly the earth is getting bombarded by protons, and the immense solar wind just doesn't let up." (see Tad's propagation report below).

Paul Harden, NA5N, of the National Radio Astronomy Observatory in Socorro, New Mexico (pharden@aoc.nrao.edu), says several huge flares--explosions of solar mass on the sun's surface--took place, one on April 30, two on May 2, and three on May 6. As they occur, the flares emit high-energy radiation from X-rays down to HF, producing about 20 minutes of "strong, bursty static" here on Earth. But that's not the end of it.

The explosion throws heavy particles into the sun's atmosphere. Harden

explains that many of these particles get trapped in the sun's magnetic field, spiraling along the flux lines and generating RF energy from about 800 MHz downward to--in this case--about 20 MHz. "This is called a Type III storm," Harden said. "The RF sweeps downward in frequency about 20 MHz per second, so if you were in a QSO, this Type III sweep would sound like a big burst of static at regular intervals, almost like ignition noise." A Type III storm lasts about 10 to 20 minutes following a solar disturbance.

The mass of electrons and protons traveling through the sun's magnetic field produces electrical currents which, in turn, generate RF over a wide band of frequencies simultaneously. "This is called continuum radiation or a Type IV storm," Harden said. This produces the wide-band noise on Earth--an elevated noise level over much of the HF spectrum. A Type IV storm persists for about an hour, Harden explained. But our troubles are not over here on Earth.

The "shock wave" of electrons and protons continues into space. "If the trajectory is right, it can smack right into Earth, triggering a geomagnetic storm." Harden says not all flares result in geomagnetic storms, however, and the ones on April 30 and May 2 were not a direct hit. This is how flares continue to make themselves known--and heard--for several days. A couple of days or so after a flare, the shock wave hits Earth's magnetic field "just like a big gust of wind," Harden said. "This causes our magnetic field to wiggle and tremble like it was a sphere of Jell-O." The resulting electric currents generate gobs of wide-band noise. Electrons and protons traveling along the magnetic field fall inwards into the ionosphere at the poles and bunch up on the D layer. This makes it dense and difficult for radio signals to pass through to the E and F layers, shutting down skip propagation.

Harden says D-layer absorption can tend to come and go during a geomagnetic storm. "With a large solar disturbance, these electrons and protons keep getting

pumped into the earth at the poles for many hours -- sometimes for days -- keeping this condition active," he said. While HF signals can't get through the D layer, VHF can, sometimes resulting in unusual propagation feats in that part of the spectrum. Many hams reported auroral conditions on VHF during the recent storms. Harden says that in a geomagnetic storm, the lowest usable frequency or LUF--normally about 2 MHz--can rise to 30 MHz. "That would be a blackout, which many experienced," he said.

Harden compared forecasting such solar events to predicting the stock market. It's not yet known if the shock wave from the May 6 flares will hit Earth, but the forecast was calling for major to severe storming by May 8 or 9 and potential HF blackout conditions. Harden says that with the polar caps already charged up, the May 6 events could trigger some aurora in the middle latitudes. Effects tend to linger a bit in higher latitudes.

Cook suggests the recent events are part of Nature's give and take. "We are seeing a big increase in solar activity, but with the increased sunspots comes a downside, with flares disrupting HF communications, often to the point of total blackout." To check the latest solar forecast, see <http://www.sel.noaa.gov/forecast.html>.

The ARRL Letter, May 15, 1998

LEAGUE CALLS MEMBERS TO ACTION ON 70 CM PETITION

The ARRL says the recent Land Mobile Communications Council petition seeking access to 70 cm is "incompatible with continued amateur use of the band" and urges members to comment in opposition--not only to the FCC but to the LMCC's members. The LMCC has petitioned the FCC for immediate reallocation of 420 to 430 MHz and 440 to 450 MHz from the federal government to the Private Mobile Radio Service. Amateur Radio enjoys the use

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of 70 cm on a secondary basis to government radiolocation (military radar). The LMCC has proposed to share the two sub-bands with Amateur Radio, but has not said how sharing would be possible. The LMCC also seeks additional UHF reallocations in the intermediate and long term.

For those planning to file comments, specific information and recommendations plus a copy of the LMCC petition and a list of LMCC members are available on the ARRL Web page at <http://www.arrl.org/>.

Commenters should explain how the loss of access to 420 to 430 and 440 to 450 MHz would affect them personally and how it would affect the ability of hams to provide needed public service. "Even if you do not use these segments yourself, it is likely that loss of access would result in more crowding and interference in the part of the band, or in another band, that you do use," said ARRL Executive Vice President David Sumner, K1ZZ. "Don't overlook the fact that if you use linked voice or packet systems, it is quite likely that some of the links you rely on are in either or both of these segments."

Additionally, amateurs involved in public service communication can ask the government and nongovernment agencies they assist for written statements of support. Hams also should urge Amateur Radio organizations, especially those with interests in the 420 to 450 MHz band, to comment as well.

The LMCC, a nonprofit association, includes several well-known organizations such as the American Automobile Association, the American Petroleum Institute, the International Association of Fire Chiefs, and the Association of Public Safety Communications Officials-International (APCO), a frequent Amateur Radio supporter. The League suggests that ARRL members who also belong to one of the LMCC member organizations consider writing to inform the organization that the LMCC is acting contrary to your interests and requesting

them to disavow the LMCC petition insofar as it affects Amateur Radio.

Sumner says ARRL members should not complain to members of Congress nor write angry letters to the FCC. "The LMCC petition is a private-sector initiative, not a government proposal," Sumner said. "By law, the FCC has to put the petition on public notice and invite comment. That's all the FCC has done with it." Sumner says that criticizing the FCC at this stage would be "inappropriate and counterproductive."

Sumner reminds members that nothing is going to happen overnight with the LMCC petition, and there will be at least one more opportunity for public comment. "Before the FCC can take the next step to reallocate this spectrum, it must get the federal government to agree," he explained, because the government is the primary occupant. Then, the FCC would have to issue a Notice of Proposed Rule Making and solicit public comments on its proposal.

The FCC is accepting only written comments in response to RM-9267. Comments are due by June 1, and reply comments are due by June 15. Address comments to RM-9267, Secretary, Federal Communications Commission, 1919 M St NW, Washington, DC 20554. Formal comments must be submitted with an original and four copies.

RSGB SAYS "NO" TO MANDATORY MORSE CODE [CW takes yet another hit... -Ed.]

The Radio Society of Great Britain is taking up the banner to seek reconsideration of the IARU policy supporting mandatory Morse code testing for access to Amateur Radio HF bands. As a first step, the RSGB Council has opened talks with the Radiocommunications Agency--the UK's equivalent to our FCC--to institute an additional license class giving full HF privileges to existing Class B (no-code VHF/UHF) licensees who pass a 5 WPM code test.

"We're not trying to get rid of Morse! No way!" insisted RSGB President Ian Kyle, G18AYZ/M10AYZ, during a visit to ARRL Headquarters. In a statement slated to appear in the June issue of RadCom, the RSGB journal, the Society says it will continue to support Morse code and CW sub-bands on HF "as core elements of Amateur Radio globally." But, Kyle said, "Mandatory testing of Morse is going to go whether we like it or not."

Kyle and RSGB General Manager Peter Kirby, G0TWW, say there no longer is any good reason to insist that applicants pass a Morse code test to operate on HF. "It's stopping growth in the hobby," Kirby said, adding that he disagrees with those who think it will be the death of the hobby or would lead to lower operating standards.

Kirby, a former professional CW operator, said that making someone pass a 12 WPM test "doesn't make one a good operator." He allowed that enhanced practical testing requirements were a possible replacement, and said the Society is looking at a possible revamping of the entire licensing and testing structure in the UK.

Both Kyle and Kirby have been making the rounds of Amateur Radio clubs in the UK and floating the idea of eventually getting rid of the Morse code requirement altogether. They say most of the hams they speak with support the elimination of compulsory Morse testing. As Kyle put it, most hams in the UK are "thinking with their brains, not with their hearts."

The present UK licensing structure has two basic classes, A and B (plus a Novice class A and B ticket). The full Class A license requires 12 WPM and offers all amateur privileges. The Class B license, with the same technical requirements but no code test, offers access to bands above 30 MHz.

Kirby says the RSGB Council has determined that it cannot support compulsory Morse testing in the long term but also recognizes that it can't

change things overnight. "This will ease things a bit," he said of the RSGB's "intermediate" proposal to the RA.

Kirby said the RSGB proposal "gives other countries the opportunity to debate this subject" before it's dealt with in a World Radiocommunication Conference in 2001 or 2002. He says the RSGB's plan has received support "from around the world and even from within the US," and that other European countries are beginning to embrace the British position.

At present, the IARU supports keeping the Morse code requirement, but the RSGB hopes to change some minds. "Council now believes that this position cannot be sustained in the longer term and will be opening discussions with IARU societies and other interested bodies to reconsider the position to be adopted at the WRC in 2001," the RSGB statement declares.

There are approximately 58,000 hams in the UK, and slightly more than 28,000 of them are RSGB members.

EOF

APRS QSY

Gary Mitchell, WB6YRU

As many of you know, the NCPA allocated (among other things) 144.39 for APRS at the spring meeting of 1997. The NCPA was one of the first to do so once this sub-band became available. To my knowledge, Canada was the only other major area that used 144.39 for APRS at the time.

It looks like this allocation is really starting to "snow-ball." Here's a couple of notices from *the ARRL Letter*, the first is dated March 13, 1998:

The great APRS shift under way: Paul Knupke, KR4YL, of Pinellas County, Florida reports that the Tampa Bay and Sarasota County areas of Florida have completed the switch to 144.390 MHz for APRS operations as of March 1. A number of other areas of the Florida peninsula are expected to switch this spring, but there is no word yet on the Jacksonville and panhandle regions.

The Greater Boston area, New Hampshire, and southern Vermont are set to make the switch on May 3, and Connecticut and Rhode Island are expected to join them. Hams in northern Arkansas also have announced plans to move in the next 60 days, but no coordinated effort has been announced. In Branson, Missouri, a new APRS digipeater is set to hit the air in early May on the new 144.39 MHz frequency.--This Week in Amateur Radio

And this from the March 20, 1998 edition:

More APRS shifting: The SkyWarn Technical Committee, working in conjunction with the National Weather Service Forecast Office in Mt. Holly, New Jersey, has announced its support for the APRS frequency shift from 145.790 MHz to 144.390 MHz. The APRS Network serving the 34 counties in the Mt. Holly NWSFO County Warning Area will make the change the weekend of April 5-6 unless severe weather threatens the area. APRS activity is moving to provide more elbow room for Earth-space communication at 145.80 MHz.--Robert Hill, WX3ROB

DX Spotting Nodes

<u>Location</u>	<u>Call</u>	<u>Alias</u>	<u>Frequency</u>	<u>Coverage</u>
California City	K6ZZ		144.490	Antelope Valley area
	K6ZZ	EARN8	144.490	Oak Peak
Castro Valley	W6RGG	DXCV	145.770	East, West, South SF Bay area
Chico	K6EL	DXC	145.670	Chico
	K6EL	DXW	145.670	Oroville, Red Bluff
	K6EL	DX	144.950	South Fork Mtn - Redding area
Hanford	K6UR	DXFRES	144.950	Bear Mtn, Fresno area
	K6UR	DX7	145.770	Mt. Adelaide, Bakersfield area
	K6UR	DX16	145.770	Oakhurst
Livermore	NF6S	DXL	145.770	Tri-Valley
Los Gatos	N6ST	DXLG	146.595	Santa Cruz Mtns, Monterey Bay
	N6ST	DXF	146.595	Santa Cruz/Los Gatos
Mill Valley	WA6CTA	DXCTA	1299.890	Napa/Benicia/vallejo/Marin
	WA6CTA	DXFMT	1299.890	San Jose - So. SF Bay
Mountain View	K6LLK	DXMV	144.950	Mtn View, Ntwk Node and Hub
Oakdale	K60Q		146.580	Modesto area
Penngrove	K6ANP	DXANP	144.950	Sonoma County
Pittsburg	AHOU	DXPB	146.580	Walnut Creek area
	AHOU	DX4	146.580	Sugarloaf Mt.- Napa valley
Reno, Nevada	N7TR	RENODX	144.950, 146.58, 441.500	(2400 baud), 51.7
	N7TR	PCDX1	146.580	Low Level in Reno
	N7TR	PCDX	144.950	Virginia City, NV
	N7TR	DX2400	441.500 (2400baud)	
Rio Linda	W6GO	DXRL	144.950	Sacramento, Woodland, Davis
San Francisco	W6OTC	DXSF	145.670	East Bay and North

Northern California Packet Association

The NCPA fosters digital communications modes of amateur radio through education, band planning, and acts as an umbrella organization for various packet special interest groups. Your annual dues helps pay for this newsletter and other educational materials activities. If you might be interested in getting more involved, please let us know.

Call: _____ Home BBS: _____ e-mail: _____

Name: _____ Address: _____

City: _____ State: _____ Zip + 4: _____ Phone: _____

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