

NCPA

Downlink

**The Official Journal of the Northern California Packet Association
Serving Amateur Radio Digital Communications in Northern California**

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President's Message

Gary Mitchell, WB6YRU

Meetings

The NCPA held its annual general meeting in June. The turnout could have been better. There wasn't a quorum for the election of directors. The current directors will continue for now. It was decided to try holding another general meeting at Pacificon. It is expected that since many active amateurs go to Pacificon anyway, that meeting should be better attended.

The NCPA internet remailer was started as a way for people in distant locations to participate in the NCPA without having to travel far for a meeting. One idea mentioned at the June meeting was to have teleconferencing meetings. This would have the benefits of a face-to-face

meeting yet retain the advantage of the electronic meetings. Unfortunately, the response on the remailer from the more distant folks was poor. Many of those saying they'd like to try a teleconference meeting were those who show up to regular meetings anyway. The main concern is that we would have to use the facilities of someone else (CalTrans was one suggested host) and it certainly wouldn't be good if only a few people showed up. We'll discuss this again at the next general meeting and decide then whether there is enough interest to try it.

Next Generation Packet

One of the main topics at the general meeting and on the remailer lately has been the current state of packet (especially the BBS network) and

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possible ways of moving it into the future. Some BBS sysop's have complained that usage and traffic has

Next Meeting at Pacificon '98

Normally the NCPA has one annual general meeting. However, since there wasn't a quorum at the June meeting, there will be another general meeting at Pacificon '98. It is hoped that this will result in a better turn-out.

The meeting will be Sunday, Oct. 18, at 2 PM in the Los Medanos room, Sheraton Hotel, Concord.

We will be electing directors to the board, so this is your chance as packet users to get someone on the board that reflects your views or run for director yourself. (The board makes all digital band plan assignments.) We also we be talking about some ideas for the future of packet, among other things. While this may not be the sort of meeting for the average amateur, anyone interested in band planning or "higher level" issues in the packet world is welcome to attend.

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been down recently and users seem to be abandoning packet for the internet. Most people seem to feel any significant change has to involve the internet or internet-like operations.

Some suggestions include making a packet sub-net of the internet. In this case personal messages would be replaced with e-mail and bulletins would be replaced with something like usenet groups. The whole thing would be like a merger of the BBS network and TCP/IP (perhaps keyboard to keyboard too). The main sticking point seems to be maintaining the RF links, without which there is no packet/amateur radio, just the internet

The idea is that the existing BBS LAN structure would remain more or less as is, but the LAN hub would have an internet link. The forwarding backbone would also remain. Traffic would then flow via internet and the backbone in parallel. Should one go down, the other would continue normally. Such a configuration would be useful in a disaster where the phone system went down and the RF links (theoretically) would continue operating. This would be good for non-amateurs too because they wouldn't have to switch over to some other method (BBS network) to pass traffic, they could just use the same internet protocols and methods.

Packet BBS users currently connect to the local BBS, read bulletins, send & receive personal messages, etc., all in simple text mode. If the user had a TCP/IP stack that used a TNC instead of a modem, the user could simply run existing web browser and e-mail software for working the BBS. It was suggested that if a browser wasn't recognized, the BBS would default to standard text (as is the case now) for those without internet software. This would avoid the abandonment of amateurs that still want to do things the old way.

Some pointed out (on the remailer) that

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The NCPA Web page is: <http://www.aenet.net/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.

much of the software to do this sort of thing already exists, especially in the Linux platform. It was also pointed out that there already exist some BBS's with web pages. So, it seems we are already moving in this direction.

Many people say that we need to work on faster RF links, including full duplex. Unfortunately, amateurs have been lagging the technical revolution somewhat in this regard. High-speed RF links exist, but tend to be expensive and many find they have to almost be RF technicians in order to set up such links. Only in recent years has even 9600 baud become simple and cheap enough to be widely used. With the increased use of spread spectrum data communications, some are hoping to find inexpensive alternatives by modifying such equipment for the amateur bands.

At any rate, it appears this is the direction we are headed. More than a decade ago, the BBS network was in its infancy. It has since grown up into a real working global network. But now, compared to the speed and efficiency of the internet, our good ol' store & forward BBS network technology sometimes seems like cans on a string. But rather than wring our hands about users jumping ship to the internet, I believe we should look to future and reinvent ourselves into the next generation packet network.

EOF

From the ARRL

The ARRL Letter, June 19, 1998

FCC Proposes 5.9 GHz Allocation

The FCC has proposed allocating 5.850 to 5.925 GHz for use by intelligent transportation systems (ITS). The Amateur Service has a secondary

allocation at 5.650 to 5.925 GHz with government radar systems and nongovernment fixed satellite service uplinks. Under the proposal, Dedicated Short Range Communications (DSRC) highway safety systems would share the band as co-primary users.

The FCC seeks comments on the need for nationwide operational standards and channelization and on the potential for DSRC operations to share with other services.

The June 11 NPRM was in response to a rulemaking petition from the Intelligent Transportation Society of America (ITS America) requesting the allocation on a co-primary basis. Proponents said the band is optimal for DSRC on the basis of propagation, consistency with international allocations, and compatibility with existing users.

ITS America, a nonprofit organization dedicated to promoting ITS, has worked with the ARRL and others to develop a sharing plan. The League has said it is prepared to work with ITS entities to resolve spectrum sharing issues.

In its comments, the ARRL questioned whether the 5.9 GHz band was appropriate for DSRC and urged the FCC to look into frequencies above 40 GHz, where DSRC systems could avoid interference from other users. The League said the ITS proposal and the FCC decision to deploy unlicensed National Information Infrastructure (U-NII) devices in the band could render 175 MHz of spectrum in the 5.8 GHz range significantly less useful to hams.

3M, a DSRC proponent, argued that hams could be displaced from the band because they already have plenty of spectrum between 50 MHz and 50 GHz and make only light use of 5.9 GHz. 3M suggested a powerful amateur station could "swamp out" DSRC services.

The FCC said interference problems that

might crop up could be resolved by changing the frequency of the amateur operation, by power reduction, or by using directional antennas.

Possible ITS applications include what's known as automated roadside safety inspection. This would permit transmission of vehicle safety and other data between roadside inspection stations and commercial trucks moving at highway speeds, the FCC said. Another potential application, incident management operations, would use roadway sensors and DSRC-equipped vehicles to more quickly detect traffic congestion and dispatch any emergency personnel or take other action. Other emerging DSRC applications include traffic control and en-route driver information systems.

ITS DSRC transmissions would be "narrowly focused and rapidly dissipating signals," according to ITS America. The FCC proposes a maximum of 30 W EIRP for DSRC systems.

Comments on ET Docket 98-95 are due 75 days after publication in the Federal Register. The complete NPRM is available on the FCC Web site at <http://www.fcc.gov>.

The ARRL Letter, Aug. 14, 1998

FCC Streamlines Away NOVICE, TECH PLUS Tickets

The FCC has proposed to phase out the Novice and Technician Plus class licenses, leaving just four amateur license classes in place--Technician, General, Advanced, and Extra. The Commission also has asked the amateur community to express its opinions on Morse code requirements for licensing and testing, but offered no specific changes. And the FCC proposed to permit Advanced class licensees to administer amateur exams up through General class. The proposals were

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among several suggested rules changes disposition and invitations to comment contained in an FCC Notice of Proposed Rulemaking, WT Docket 98-143, made public August 10.

Given the December 1 comment and January 15 reply comment deadlines, it's likely that the issues the NPRM raises won't be resolved until well into next year.

In proposing to phase out the Novice and Tech Plus tickets, the FCC pointed to what it called "an unnecessary overlap between the Novice, Technician, and Technician Plus," and asserted that Technician and Tech Plus operators "predominantly" use FM and packet on VHF and UHF. The FCC said Novice applicants last year numbered fewer than 1000, while there were nearly 21,500 Technician applications.

Under the FCC plan, Novice and Tech Plus licensees would retain current operating privileges, but no new Novice or Tech Plus licenses would be granted. For examination purposes, current examination elements 2 and 3A would be combined into a new element 3A. For administrative purposes, the FCC would combine the current Technician and Tech Plus databases into a single Technician database.

The proposal would eliminate the 5 WPM code test, Element 1A, as a required element for any class of license, while retaining references to it elsewhere in the rules. This has left hams wondering exactly what the Commission intends. The elimination of the Novice and Tech Plus license classes and Element 1A as a requirement appear to effectively raise the bar for most future applicants wanting HF operating privileges, unless the FCC ultimately reduces Morse code requirements.

The FCC did not propose to change any operating frequencies or license

Packet BBS's

<u>Call</u>	<u>Location</u>	<u>User</u>	<u>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	
NOARY-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 + TC/PIP Port

privileges for amateurs. However, the FCC does seek comment on the of the current Novice HF bands, which carry a 200-W output power limit for all licensees. The FCC invited comment on whether it would be "appropriate" to delete the Novice bands and the power restrictions on higher-class licensees and permit Novices to operate CW anywhere on 80, 40, 15, and 10 meters at 200 W output.

The FCC opened the door to comments on all aspects of Morse code testing from the amateur community. In particular, the Commission said it wants to know if hams prefer the current three-level system or would like to see it reduced to a one or two-tier system--and, if so, at what required speeds. The FCC asked whether hams would be willing to trade a reduction in Morse code requirements for additional written elements on newer digital technologies "which, in part, are replacing the Morse code." And, the Commission asked whether it should consider specifying Morse code examination methods, such as fill-in-the-blank or one minute of solid copy, instead of allowing VEs to determine the testing method.

FCC Proposes Other Amateur Radio Rules Changes

In its Notice of Proposed Rulemaking, WT Docket WT 98-143, the FCC seeks comments on how to deal with potential abuses of the current disability waiver for higher-speed Morse code tests. In its proposed rules, however, the FCC has altogether deleted current language regarding a physician's certification to waive the 13 or 20 WPM Morse requirement. In RM-9196, the ARRL had asked the FCC to require anyone applying for an exemption pursuant to a doctor's certification to first attempt the higher-speed test before examination credit could be given. The League also asked that VECs have access to relevant

medical information from the certifying physician. The FCC said the ARRL's proposal would place "an unfair burden on examinees" and raised serious privacy and confidentiality issues.

The FCC went along with an ARRL petition and proposed allowing Advanced class hams to be eligible to prepare and administer license examinations up through General class under the VE program. The Commission said the change would permit greater testing opportunities for hams. The FCC also invited comments on whether it should change written examination requirements "to provide VEs and VECs additional flexibility in determining the specific contents of written examinations."

Referring to yet another ARRL petition, RM-9150, the FCC invited comments on how it can improve its Amateur Radio enforcement processes. The FCC applauded the ARRL "for its creative thinking" in that petition, but said the specific proposal was "inconsistent" with the current statutory role of administrative law judges. The FCC raised the possibility of encouraging complainants to include a draft order "to show cause to initiate a revocation or cease and desist hearing proceeding." The FCC said it also wants to hear how it can better use the services of the Amateur Auxiliary in beefing up enforcement.

The FCC proposed to phase out Radio Amateur Civil Emergency Service, or RACES, stations by not renewing their licenses. No new RACES licenses have been issued since 1980, and only 249 valid licenses remain. The FCC said RACES stations no longer are needed because any amateur station that has been properly registered with a civil defense organization has the same privileges as a RACES station.

The FCC also used the occasion to clarify the definition of "power" as used in the RF exposure table in Section 97.13(c)(1). The FCC said it refers to peak envelope power (PEP) input to the antenna. It also made clear that no one holding an FCC-issued ham ticket may apply for a reciprocal permit for alien amateur licensee.

Without comment in the NPRM text, the FCC also appears to have eliminated the 365-day time limit for a Certification of Successful Completion of Examination (CSCE) to remain valid. The current 365-day limit remains in proposed wording in Section 97.9(b), Operator license, however.

The FCC is expected to issue an erratum to correct outright errors in the NPRM, but it has no plans to clarify the Commission's intent on individual issues.

The FCC set a longer-than-normal comment period. The deadline for comments is December 1, 1998. The deadline for reply comments is January 15, 1999. The FCC will accept electronic comments via the Internet at <http://www.fcc.gov/e-file/ecfs.html>.

A copy of the complete NPRM has been posted on the ARRL Web page, <http://www.arrl.org>. The FCC NPRM also can be downloaded from the FCC Web site in WordPerfect 5.1 version and text version as <http://www.fcc.gov/Bureaus/Wireless/Notices/1998/fcc98183.wp> or <http://www.fcc.gov/Bureaus/Wireless/Notices/1998/fcc98183.txt>, respectively.

An article and an editorial in the October issue of QST will explore the FCC's NPRM and its implications in greater detail.

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Northern California Packet Association

General Meeting June 13, 1998

Called to order at 1:05 PM by President Gary WB6YRU Attendance: K6CDO (formerly WB6UCK), KQ6LX, N6HM, WA6ZTY, K8ERL, W6RGG, N6UOW, WB6YRU.

Announcements

* Sorry about the late notice for this meeting. The newsletter was supposed to go out sooner, but this issue was a last minute rush-job by WB6YRU (who isn't the editor).

* The NCPA has a new remailer: ncpa@qth.net (thanks W6RGG)

* The SMC also has a new remailer: smc@narcc.org.

Presentation

Dave Harris, N6UOW, talked about

APRS use in the Baker to Vegas 120 mile relay race. They are able to track the location and velocity of service vans. He also talked about the Mic-E (mic encoder) modification (send only) which better allows other use of dual band radios.

Review of board's "electronic meeting"

The remailer was started last year. Comments included: 1) Put time limits on votes and declare the outcome when it becomes clear (i.e don't need to get each and every last vote if the outcome wouldn't change). 2) When reporting a vote outcome, include how each director voted and what they represent. 3) Face-to-face meetings are more efficient and don't suffer from the shortcomings of text-only communications. 4) The remailer makes it easy for people from distant locations to participate. 5) We should explore teleconference meetings. Don K6CDO will look into using CalTrans teleconferencing facilities, if there is enough interest. This would

have some of the advantages of a remailer and FTF meetings.

Election of directors

We don't have a member quorum, but there is a quorum of directors. Another meeting should be held--probably at Pacificon if possible. Until then the current directors and officers will continue unless they resign. Don K6CDO suggests changing the bylaws to remove the requirement that general meetings be held "as near as practical in April or May" and have them at Pacificon, since most NCPA members are likely to be there anyway.

Treasury

The treasurer, Roy KA6EYH isn't here, but sent word that we have \$165. Also, Roy is interested in staying on as a director (BBS & TCP/IP) and treasurer.

Before committing to any more expenditures, it was decided to wait at

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
Hanford	K6EL	DXW	145.670	Oroville, Red Bluff
	K6EL	DX	144.950	South Fork Mtn - Redding area
	K6UR	DXFRES	144.950	Bear Mtn, Fresno area
	K6UR	DX7	145.770	Mt. Adelaide, Bakersfield area
Livermore	K6UR	DX16	145.770	Oakhurst
	Los Gatos	NF6S	DXL	145.770
Mill Valley	N6ST	DXLG	146.595	Santa Cruz Mtns, Monterey Bay
	N6ST	DXF	146.595	Santa Cruz/Los Gatos
	WA6CTA	DXCTA	1299.890	Napa/Benicia/vallejo/Marin
Mountain View	WA6CTA	DXFMT	1299.890	San Jose - So. SF Bay
	Oakdale	K6LLK	DXMV	144.950
Penngrove	K60Q		146.580	Modesto area
	Pittsburg	K6ANP	DXANP	144.950
Reno, Nevada	AHOU	DXPB	146.580	Walnut Creek area
	AHOU	DX4	146.580	Sugarloaf Mt.- Napa valley
	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
Rio Linda	N7TR	DX2400	441.500 (2400baud)	
	San Francisco	W6GO	DXRL	144.950
	W6OTC	DXSF	145.670	East Bay and North

least a couple of weeks to see how many renewals we get from having the member form printed on the back cover of the Downlink. This issue of the Downlink was printed more cheaply than previous issues, we will continue that until the treasury is more robust. There weren't any member renewal forms in the past couple of newsletter issues. Also, we didn't get many renewals/new members at the last Pacifcon.

Pacifcon

With the Treasury being low, it was decided to take a breather from Pacifcon this year. Dave N6UOW said APRS probably will have a table there and may donate a corner of their table for NCPA hand-outs.

Downlink

We need to get the newsletter on a regular schedule--most of all, we need an editor. Don K6CDO volunteered and the board quickly voted him in as editor. A discussion followed about getting articles.

Since Don was the NCPA V.P. and just became editor, Dave N6UOW was voted in as the new V.P. Also, Mike Marneris, K8ERL was voted in as a director representing packet satellite (Project OSCAR). (The board can do this, but the appointment is only valid until the next membership meeting.)

Frequency Allocation

K6UEY had reported heavy TCP/IP and/or BBS type traffic on the keyboard channel of 145.05. KO6RI is apparently running a user-access port to his network where users can run many types of operations (BBS, TCP/IP, etc.). This violates policy of no BBS or other heavy-use type traffic on a keyboard channel.

Since APRS is moving off of 145.01 to 144.39, it was suggested that 145.01 be allocated to a new type of activity--user access to a network. This will be discussed further on the remailer (where more people can join in.) Dave N6UOW

reports that most APRS is now on 144.39, but there are still a couple hold-outs (mostly for technical reasons).

Packet Activity

There have been reports of reduced activity on the BBS network. Discussion followed on how to boost interest in packet. The consensus was to encourage BBS authors or other programmers to consider a new kind of BBS--one that would operate more like a web site. Ultimately, it would work more like the internet. It was mentioned that this might take the form of a merger between BBS and TCP/IP.

Other Discussions

It was pointed out that we spent a lot of money for tables at Pacifcon in recent years and might be able do as well with a \$15 spot at the Foothill Electronic Flea Market.

Adjourned 4:03 PM

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NCPA board of Directors Electronic Meetings

Excerpts from the NCPA board remailer, late May through early September 1998. Compiled by Gary Mitchell WB6YRU (full text of traffic is available).

May 10, 1998

Gary Mitchell:

Regarding the pending two NCPA proposals, all the votes are finally in.

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:

- 3 yes
- 4 no
- 1 abstain

The motion fails, (barely).

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

- 6 yes
- 0 no
- 1 abstain

The motion passes.

(Note, we had one less director when this motion was made, thus the total number of votes of the two motions are not the same.)

June 9, 1998

Gary Mitchell

The NCPA general meeting will be Saturday, June 13, at 1:00 PM

June 15 1998

Gary Mitchell:

(posted June meeting minutes)

June 15 1998

Larry Kenney:

I agree with the comments on the electronic meetings. They are working, but I think a face-to-face meeting should be held occasionally to bring everyone together. It facilitates more productive discussion, I think.

Having the General Meeting at Pacifcon is a great idea.

The idea of web-like BBS software is interesting, but I think finding someone to write it is going to be a major stumbling block.

Mike Stickney:

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This idea is key, in my opinion, to the future of packet radio.

I would suggest something under an already existing protocol like http (as you suggest in a roundabout way). That way you can browse it from any medium.

I heartily agree that something has to be done if you intend on maintaining the packet radio network. It is gradually shrinking and I find myself sometimes sitting here wondering why I am throwing resources at a 1200 baud linked system.

Writing a browser to be able to talk to a TNC isn't really any big deal anymore. Browser controls come with just about every compiler package today and incorporating them into any custom application is almost drag and drop. You would have to write the serial interface, but that's about it.

Tim Sivils:

A HTTP server is already available in the JNOS and TNOS packages for both DOS and LINUX..... Both fully RFC compliant..... No need to re-invent the wheel when it's already out there.

There is a driver available that allows a user to use his/her NetScape or etc. to drive a TNC on packet.. Which solves the problem of having a familiar browser for the user to connect to the Web BBS.

"Or, are you saying that the "packet message to webserver interface" is already there?"

Exactly. The HTTP BBS is there, ready to handle BBS traffic, and forwarding in common formats including FBB Compressed. It will test (based upon it's rewrite file) and send BBS messages and bulletins thru the BBS routing, and send internet addresses thru the internet routing. Full Internet access control, sysop definable. The amount of graphics (or lack of the same) would depend upon how much you wrote into the HTML file.... To check out what it could look like, use the following URL: <http://www.lantz.com/ko4ks.html>

Then click on the option: Visit the TNOS PBBS at ko4ks.ampr.org

The links to the public and private message areas is on the left margin... Oh... When your browser asks for a user name and password, give it your call sign for a user name and your first name for a password.

June 16, 1998

Gary Mitchell:

Regarding the idea of a teleconference meeting... Is there interest in this? In other words, would you guys who are far from the usual meeting places we've had in the past (Sunnyvale, Concord, Livermore) be willing to go to a site nearest you that has teleconference facilities?

One suggestion was that we see if CalTrans would allow usage of their system on some weekend. There are several sites around No. CA, but it may still require travel for some. If this wouldn't significantly bring people out, then there's little point to perusing it.

Is Pacificon the best compromise for meeting place/time? (either general or board...or both)

One other thing...let's have comments regarding the reallocation of 145.01 to "user access to a network"

Mike Stickney:

Gary Mitchell wrote:

"In general, what I ultimately had in mind was to combine TCP/IP and BBS into the sort of thing currently being discussed; namely, turn the packet network into a piece of the internet--but with mostly RF links."

I believe what you describe is already being done. Under Unix, the connectivity is already there and the packet radio drivers have been written and are in use. FBBS has a Unix version and there are many flavors of *NOS out there. I didn't realize how far it had progressed until a few individuals pointed me to sites that actually are using web servers for packet message manipulation.

http://www.hwcn.org/~am335/ethrax_win95/how-to.html Explains how to talk to a TNC via winsock.

<http://www.tapr.org/~wa0ptv> Interesting idea on a "broadcast" packet BBS.

<http://www.wa4dsy.radio.org> An example of accessing the Internet through multiple 56k RF modems.

<http://www.hamradio.si/hid.html> 1.2288 Mbit radio links.

<http://www.tapr.org/ss> TAPR's 900MHz spread spectrum radio project

<http://symek.com/tnc-g/tnc3.htm>

Two port TNC capable of 614k per port.

<http://www.w2xo.pgh.pa.us> Jim Durham's Internet/Packet BBS under FreeBSD.

<http://ko4ks.ampr.org/bbs> TNOS and WWW.

I think the main stumbling block is Unix. Many BBS operators are going to be intimidated by the Unix environment. Sort of like, "Toto, we're not in Kansas anymore..."

TCP/IP routing is very similar to NetROM-style routing. It's a broadcast protocol with dynamic address resolution just like NetROM is. This makes it a perfect protocol for packet radio. If a link is down, it tries to find a way around it. In fact, it's a helluva lot more efficient than NetROM in this regard. Unfortunately, it does carry a lot of baggage and the throughput is lower since the frame headers are larger. The biggest problem I see is getting sysops to adopt it.

Taking all the facts and present conditions into account (declining user-base on packet, increasing familiarity with the Internet, etc.) I don't see any other options.

In my opinion, it would be a renewal of interest for everyone, much needed at this time.

June 17 1998

Gary Mitchell:

Steven L. Hess wrote:

"I have been waiting for the rf bandwidth problem to be solved. We need to really have full duplex high speed links for this kind of interaction to be transparent to the user. I need to "plug and play" as much as possible equipment wise (affordable.) To make it work for me."

Therein lies the rub. There is bandwidth available at 900 MHz and above, but the equipment isn't cheap. I contacted PacComm last year asking if they had anything like a Tekk radio at 900 or 1296...they don't.

June 18 1998

Gary Mitchell

On the issue of allocating 145.01 to "user access to a network"...

Remember, APRS is moving off of 145.01 to 144.39. I'm told there are still a couple of hold-outs, but that shouldn't be a problem since it will take time for user-access ports to get going significantly anyway.

The Downlink

It seems this might be the best solution to get current TCP/IP activity off of the keyboard channel of 145.05 and at the same time provide a frequency for the new packet activity that we were discussing.

What does everyone think?

Eric WD6CMU:
Why don't we just make 145.01 an open channel, like 441.5?

Gary Mitchell:
I recently heard that it's OK with the APRS folks if we proceed with re-assigning 145.01 to "user access."

Mike Stickney:
It makes sense to have 145.01 some sort of packet network, user, or BBS channel since it is in the middle of the coordinated block in this area.

Allan K Chapman:
I think teleconference meeting is great idea - to be able to participate (observe, really) in the NCPA meetings and functions....from way up here in the Napa valley. Being partially handicapped, travel of any distance is a problem for me.

Howard M. Krawetz:
I am in favor of the periodic teleconference of meetings.

Mike Stickney:
Seems to me it's a good idea. Whether it is successful or not remains to be seen. I would hate to see a grand project started with lots of resources committed and find out the apathy can't be bridged.

Dave Harris:
It will be a 30-40 minute drive for me to reach the closest facility, but that would be closer than a meeting that is farther away. Count me as being interested in teleconferencing.

Gary Mitchell:
I'm afraid five or six people will say "yeah, good idea," Don will get CalTrans to let us use their teleconferencing system, then two people show up at one location, one at another, and that's it.

I believe there needs to be a significant positive comment--especially from those outside the greater Bay Area--before we seriously consider this.

What about the alternative of trying to meet

at Pacificon? At least it would be a lot less embarrassing if few people show up.

Mike Stickney:
I would attend a meeting at Pacificon. I attended one there two or three years ago and it was quite productive.

Howard M. Krawetz:
Meeting at Pacificon is good, but I think we should also try the teleconferencing method.

Dave Harris:
Count me in for Pacificon as well. I'll be there for APRS and Baker-to-Vegas talks as well.

Carol A Byers:
Gary, good points on teleconferencing ... NO ONE WOULD SHOW UP ! Also, I'll be speaking at Pacificon, again ... so can make a meeting there.

Mel Gregonis:
I would be interesting in participating in a teleconferencing meeting. I'm planning to attend Pacificon - already have a ticket. I think Pacificon would be a good time / place to have an "eye ball" meeting.

Meeting agenda item: Future Packet Radio. I've read the recent E-mail messages proposing the next generation of Internet-style TCP/IP packet BBS's. Let's keep the ball rolling!

Gary Mitchell:
The more I think about it, Pacificon might be a better choice for meetings.

Larry Kenney:
Personally, I'm not very enthused about the teleconference idea. I don't think there would be much participation.

I do like the idea of having a meeting a Pacificon.

July 23 1998

Mike Stickney:
About this new network idea... I've grabbed a ton of software and am pouring over the source code. (Thank God Unix programmers release source code!) What exactly do you want? Here's my wish list:

- 1) Easy installation (well, as easy as it can be)
- 2) Internet access to the packet BBSes that is almost identical to packet access to packet

BBSes.

3) Compatibility with our present network.

4) Reliance upon radio links for forwarding (primary), with Internet as filler and backup (secondary).

5) World Wide Web-based interface available so a browser can be used under either access method (radio or Internet).

6) Character-based interface so those without browsers and having no desire to play Internet can still use the system like they are accustomed.

7) Regional link servers that funnel the Internet-TCP/IP traffic into the Internet that is seamless.

8) If the Internet goes away temporarily, for whatever reason, the radio links will still carry the traffic.

9) Some sort of centralized NTS server system to resolve all these damn missing ZIP codes!

10) A method whereby you can "subscribe" to particular packet bulletin subjects and have those qualifying bulletins delivered to your e-mail address.

11) SPAM FILTERS!

12) the LANs upgrading to 9600.

Dave Harris:
I like the ideas proposed. Especially the idea of being able to 'subscribe' to various message types and have them delivered to the email address.

Gary Mitchell:
"4) Reliance upon radio links for forwarding (primary), with Internet as filler and backup (secondary)."

I've always thought of the two running in parallel.

"5) World Wide Web-based interface available so a browser can be used under either access method (radio or Internet)."

This has been mentioned by several people as perhaps the best way to increase interest in packet BBSs--make them compatible with Netscape. All the user would need is a TCP/IP stack that worked with their TNC/radio.

Northern California Packet Association

“8) If the Internet goes away temporarily, for whatever reason, the radio links will still carry the traffic.”

I think this would be the big selling point to the RF purists.

“ I think 900 MHz and 1200 MHz are too costly, for now.”

Not just that, but getting rigs that can handle high-speed digital is a consideration too.

July 25 1998

Gary Mitchell:

Barry Barnes wrote:

“if there is internet access to the packet BBSs, why have anything other than gateways on line?”

The point isn't to simply provide access to the internet (although that would come along for the ride). The upgrade we are talking about it just that--an upgrade--new features and capabilities.

Mike Stickney:

Once any system is in place that takes advantage of TCP/IP, the radio bandwidth at present just couldn't handle it. Right now we can handle boilerplate packet since traffic hasn't grown, usage is down, but if we were to see a resurgence, we would see primary dependence on telephone.

Ham radio, more and more seems to be becoming just a hobby, less of a serious communications medium. Communication across the planet isn't that big of a deal anymore.

My twelve year old daughter can garner more information in one evening of browsing the web than I could have imagined pouring through the entire Encyclopedia Britannica at her age. I once tried to explain the packet BBS to her. She asked me why we didn't use e-mail.

I enjoy ham radio, but I carry a Nextel phone and many of my friends do too. But I don't think amateur radio in general is in trouble.

The only reason for maintaining the RF links would be in the event of disaster. But without periodic disasters, where's the motivation? I need to qualify my comments. I am not promoting dumping the RF. I'm wondering where it's going to go.

Gary Mitchell:

Mel Gregonis wrote:

“Metricom's Microcellular Data Network (MCDN) is a wide-area digital, packet-switching radio network that uses spread-spectrum data”

Metricom relies on low power transceivers on streetlight poles. If the power goes out, so do they! However, we might want to look into that technology or using their rigs.

Aug 6 1998

Gary Mitchell:

Carol A Byers wrote:

“TAPR has a 900 MHz spread spectrum project going. This looks like a project for the NCPA, too ?”

In the past, I've wanted to get the NCPA involved in things like this, but there wasn't much enthusiasm. Perhaps that has changed now?

Mike Stickney:

I would be willing to try it out on Vaca.

Aug 12 1998

Gary Mitchell:

The NCPA web page is up!

The URL is <http://www.aenet.net/ncpa>. Apparently it was there all along, we just had the wrong URL. (?) Most of it is up to date, some not. For example, the DXPSN and PSNC sections might be a little dated.

Aug 20 1998

Gary Mitchell:

NARCC claims to have just now noticed some of the 70 cm frequencies listed in the PSNC's LAN list, (not the NCPA band plan). That list has been around for years. NARCC originally coordinated those frequencies for those BBS's on an individual basis. Oddly enough, NARCC is using this as their only evidence that the NCPA went around behind their back, allocating 70 cm frequencies. They have pulled out of the Spectrum Management Committee (SMC) and plan to form a SMC within NARCC.

I don't know what's going on over there. Apparently what some of you warned me of is true, NARCC isn't to be trusted. So, what course of action should we take now?

Mike Stickney:

They sure seem to have their own view of things. I've seen this before, where they go off half-cocked without even talking to anybody involved. This sounds like corporate warfare.

This is precisely why SHARKK was formed. Originally as a joke to get NARCC off their butts, but turned out to garner support from so many repeater owners tired of NARCC's policies, and lack thereof.

Larry Kenney:

Tim Sivils (NARCC) wrote:

“Ever since discovery of a new public posting of BBS's and their frequencies, it has been very apparent that NCPA is not interested in doing things the right way. The 433 frequencies should never...”

First, what's this about a "new public posting"? We've been on those frequencies for years...it's certainly NOT new...and as far as I know we haven't received any complaints from the ATV and Weak Signal folks.

Howard M. Krawetz:

This is not a new situation. NARCC blows hot and cold at what appears on the surface to be whims of the moment.

Dave Harris:

If we get to Pacificon, and they stay their current course, then I think we should be prepared to defend our position as digital coordinators.

Aug 22 1998:

Gary Mitchell:

In the matter of changing the allocation of 145.01 from "APRS" to "user access to a network," the results are:

5 yes
0 no
0 abstain
3 not voting
The motion passes.

A one-year grace period is in effect to give any remaining APRS stations time to move to 144.39.

By the way, I think it should be noted that the APRS rep. on the board was one of those voting in favor.

Sept. 3 1998

Dave Harris:

(Suggested an automated way of having the NCPA web page report the latest change date of the web page.)

EOF

ARRL Pacific Division Update

OCTOBER 1998

by Brad Wyatt, K6WR

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Major Amateur Radio License Restructuring Proposals Announced

In the last six weeks, two major US Amateur Radio License Restructuring proposals have been announced - one, the most recent, by the FCC and an earlier one by the ARRL. Because of the current complex US license structure and these announcements, it is probably inevitable that there will be a major restructuring. It is now YOUR turn to express your views about the future of Amateur Radio licensing and related topics in the US!

FCC Proposal

As part of the Telecommunications Act of 1996, Congress mandated a "Biennial Review," -- "aimed at simplifying, eliminating or modifying regulations that are overly burdensome or no longer serve the public interest." Reviews are to be carried out for all services regulated by the FCC. The Biennial Review process for the Amateur Radio Service resulted in an FCC Notice of Proposed Rulemaking (NPRM), WT Docket 98-143, made public August 10, 1998. The FCC, in the NPRM, has proposed to phase out the Novice and Technician Plus class licenses, leaving just four amateur license classes, Technician, General, Advanced, and Extra. The Commission

also has asked the amateur community to express its opinions on Morse code requirements for licensing and testing, but offered no specific changes. They also asked for comments on the written examinations and on how to improve enforcement of rules. Comments on the NPRM are solicited by the FCC and are due no later than Dec. 1 of this year. This is an unusually long comment period for a NPRM. Also unusual is that comments will be accepted via the World Wide Web, or via E-mail, as well as by the conventional hard copy comments by normal US mail. The long comment period, as well as the flexibility in the method that may be used to comment, provides a unique opportunity for ALL amateurs to give their opinions on a wide range of topics vital to the future of Amateur Radio.

In proposing to phase out the Novice and Tech Plus tickets, the FCC said "there appears to be an unnecessary overlap between the Novice, Technician, and Technician Plus license classes." The FCC also said that Technician and Tech Plus operators "predominantly" use FM and packet on VHF and UHF. In addition, the FCC said Novice applicants last year numbered fewer than 1000, while there were nearly 21,500 Technician applications.

Under the FCC plan, Novice and Tech Plus licensees would retain current operating privileges, but no new Novice

or Tech Plus licenses would be granted. For examination purposes, current examination Elements 2 and 3A would be combined into a new Element 3A. For administrative purposes, the FCC would combine the current Technician and Tech Plus databases into a single Technician database.

The FCC did not propose to change any operating frequencies or license privileges for amateurs. However, the FCC does seek comment on the disposition of the current Novice HF bands, which carry a 200 W output power limit for all licensees. The FCC invited comment on whether it would be "appropriate" to delete the Novice bands and the power restrictions on higher-class licensees and permit Novices to operate CW anywhere on 80, 40, 15, and 10 meters at 200 W output.

The Commission asked for comments on Morse code testing from the amateur community. In particular, the Commission said it wants to know if hams prefer the current three-level system or would like to see it reduced to a one or two-tier system--and, if so, at what required speeds. The FCC asked whether hams would be willing to trade a reduction in Morse code requirements for additional written elements on newer digital technologies "which, in part, are replacing the Morse code." And, the Commission asked whether it should consider specifying Morse code

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examination methods, such as fill-in-the-blank or one minute of solid copy, instead of allowing VEs to determine the testing method.

The FCC also invited comments on whether it should change written examination requirements "to provide VEs and VECs additional flexibility in determining the specific contents of written examinations."

Referring to ARRL petition, RM-9150, the FCC invited comments on how it can improve its Amateur Radio enforcement processes. The FCC applauded the ARRL "for its creative thinking" in that petition, but said the specific proposal was "inconsistent" with the current statutory role of administrative law judges. The FCC raised the possibility of encouraging complainants to include a draft order "to show cause to initiate a revocation or cease and desist hearing proceeding." The FCC said it also wants to hear how it can better use the services of the Amateur Auxiliary in beefing up enforcement.

The FCC also seeks comments on how to deal with potential abuses of the current disability waiver for higher-speed Morse code tests. In RM-9196, the ARRL had asked the FCC to require anyone applying for an exemption pursuant to a doctor's certification to first attempt the higher-speed test before examination credit could be given. The League also asked that VECs have access to relevant medical information from the certifying physician. The FCC said the ARRL's proposal would place "an unfair burden on examinees" and raised serious privacy and confidentiality issues.

In other matters the FCC went along with another ARRL petition and proposed allowing Advanced class hams to be eligible to prepare and administer license examinations up through General class under the VE program. The FCC also proposed to phase out Radio Amateur Civil Emergency Service (RACES) stations by not renewing their

licenses. The FCC also took the occasion to clarify the definition of "power" as used in the RF exposure table in Section 97.13(c)(1). The FCC said it refers to peak envelope power (PEP) input to the antenna. It also made clear that no one holding an FCC-issued ham ticket may apply for a reciprocal permit to operate in the US if the individual also holds for a foreign amateur license.

Significantly, the FCC set a longer-than-normal comment period. The deadline for comments is December 1, 1998. The deadline for reply comments is January 15, 1999. The FCC is encouraging electronic comments via the Web at <http://www.fcc.gov/e-file/ecfs.html>; by E-mail at ecfs@fcc.gov. For instructions on how to file using the ecfs address, send an E-mail to ecfs with the words "Get form <your E-mail address>" in the body of the message. Of course, written comments prepared in the traditional way and sent by US mail will also be accepted.

A copy of the complete NPRM has been posted on the ARRL Web page, <http://www.arrl.org>, and at the Pacific Division web page at <http://www.pdarrrl.org>. The FCC NPRM can also be downloaded from the FCC Web site in WordPerfect 5.1 version and in text version at <http://www.fcc.gov/Bureaus/Wireless/Notices/1998/fcc98183.wp> and <http://www.fcc.gov/Bureaus/Wireless/Notices/1998/fcc98183.txt> respectively.

October QST carries the full story starting on page 56 plus an excellent editorial on this matter on page 9. Please read both articles.

Latest Developments on the FCC NPRM

In a mid September announcement, the FCC issued some corrections and clarifications to the NPRM. The Errata document (ARRL Web page at <http://www.arrl.org/news/restructuring/>

98-143/Errata.html and on the FCC Web site) addresses most of the questions and confusion raised by the original announcement.

The FCC said the corrections were issued "to conform the proposed rules to the proposals discussed in the text of the Notice." The FCC noted that in some instances the NPRM included sections of rules they did not propose to change. These have been deleted, and only sections of the rules where changes have been proposed remain.

A major change from the original rulemaking proposal was to effectively reinstate the language in Section 97.505(a)(10)--the provisions for a physician's certification that an applicant is unable to pass a 13 or 20 WPM telegraphy examination. In the NPRM text, the FCC invited comment on this issue and on an earlier ARRL proposal, RM-9196. The ARRL had asked the FCC to require anyone applying for an exemption pursuant to a doctor's certification to first attempt the higher-speed test before getting exam credit.

The Errata also clarify the Commission's intention to retain the current 365-day time limit for a Certificate of Successful Completion of Examination (CSCE) to remain valid.

The FCC also has added the words "Element 1(A), 1(B) or 1(C)" to Section 97.301(e), referring to the 5, 13, and 20 WPM code examination elements, respectively. While this clarifies the need to at least have credit for the 5 WPM Morse code examination to gain Novice/Tech Plus HF privileges, neither the original NPRM nor the Errata list Element 1(A)--the 5 WPM code test--as a specific requirement for any license class. The FCC appears to be proposing to provide that a Technician licensee could gain HF privileges by passing a 5 WPM code test, but how this would actually be done in practice remains unclear. The FCC describes elsewhere in its proposed rules how applicants may claim credit for Element 1(A), however.

A proposed change at Section 97.507(d) that would have substituted the words "no less than 5 WPM" has been dropped. The current wording says "no less than the prescribed speed."

The FCC also addressed apparently inadvertent rules changes in the NPRM to Section 97.305. Under the Errata, no changes are proposed. Language in the NPRM would have eliminated Extra class phone and image privileges in the 20 and 15-meter Extra class phone subbands and data privileges in the 20 and 15-meter Extra class CW subbands. In addition, the NPRM would have dropped data privileges from Novices and phone privileges for current Tech Plus operators on 10 meters. The FCC also eliminated all proposed changes to Section 97.307, including wording that seemingly would have limited Novice CW operation to "only messages sent by hand."

The FCC's Errata also indicate that the Commission intended to retain the current 200 W PEP power limit on the current Novice/Tech Plus HF bands (and on the 30 meter band and on 7.050-7.075 MHz within Region 1 or 3) in Section 97.313. The NPRM had proposed imposing the 200 W PEP power restriction on HF only when the control operator is a Novice.

The FCC also made it clear that someone holding a Technician class license granted before February 14, 1991, could get examination credit for written Element 3(A). The Errata also add Element 1(B), the 13 WPM code test, to the elements that may be prepared by an Advanced class Volunteer Examiner.

The Errata also correct several apparent typographical errors and make other relatively minor changes to the original NPRM.

The Errata fail to address another discrepancy in the NPRM that was raised by the ARRL. The NPRM gives an applicant who held a Technician license (expired or otherwise) granted before March 21, 1987, examination

credit for written Element 3(B). But the proposed rules do not extend similar credit to an applicant who had held a General or higher class license, once the grace period is past. There will be an article dealing with the Errata in the Nov. QST.

Thanks to the ARRL Letter, ARRL Bulletins and other sources.

ARRL Proposal

The ARRL Board delivered a license restructuring plan to FCC on July 22 (see ARRL Bulletins and the Special Edition of the Pacific Division Update for July 30, 1998). In brief, the plan is targeted toward 4 classes of licenses by renaming the Technician Class as Class D; would "grandfather" Novice and Tech Plus into Class C (General); expand phone bands on 80, 40, 15 meters; set Class C (General) code speed at 5 wpm - and Class B (Advanced) and Class A (Amateur Extra) at 12 wpm. Written examinations would be broader in scope and more comprehensive. The Board members were adamant that simplifying the structure should not come at the expense of privileges already earned by any amateurs.

The following key documents are available on the ARRL web site at <http://www.arrl.org/news/restructuring/>.

1. The announcement and outline of the plan itself.
2. Board meeting minutes (see Minute 53 for the details of the motion adopting the plan).
3. ARRL letter of transmittal of the plan to FCC on July 22.
4. Frequently Asked Questions about the plan.

The full story of the ARRL Plan, "License Restructuring for the Future", appears on page 48 in the Sept. QST. An excellent editorial on "Restructuring" by Dave Sumner, K1ZZ, ARRL Executive Vice President, is on page 9 in the same issue. Please read both articles. Also, many local club newsletters are

reporting on this proposal in their current issues.

Thanks to the ARRL Letter, ARRL Bulletins and other sources.

Now it is YOUR Turn

I believe that the new NPRM from the FCC provides a unique opportunity to express our views on the direction that Amateur Radio will take in the US in the years ahead. I urge all of you to write and send your constructive comments to the FCC at one of the addresses noted above. To be effective, you should not only include your suggestions for change (or no change) in your letter, but should also include the rationale behind your suggestions. If you wish, please also send a copy to me at k6wr@arrl.org or at the address on page 10 of any QST!

Question Pool Changes Put on Hold

Citing "almost certain and imminent restructuring of licensing," the Question Pool Committee (QPC)--the group that formulates the questions that show up on Amateur Radio examinations--has put further changes to the question pool on hold until restructuring issues are settled.

ARRL/VEC Manager Bart Jahnke, W9JJ, says the decision includes postponing the Advanced class question pool update, scheduled for revision and release this year for implementation next July 1. The Committee says restructuring could cause anything from making a few rules questions unusable to "total deletion of one or more question pools or even combination of two or more of the present question pools into a differently configured question pool."

The decision to put further revisions to the question pool on hold had majority support of the National Conference of VECs. The QPC will postpone its current question pool review schedule "until the direction of such restructuring is more certain," QPC

Northern California Packet Association

Chairman Ray Adams, W4CPA, said in a statement.

Thanks to the ARRL Letter and ARRL Bulletins.

FCC Adopts the Universal Licensing System

The FCC has adopted a new electronic licensing process. As this article is being written on Sept. 18, the details are not available; however, the following is understood to be true concerning the Universal Licensing System (ULS) and the Amateur Radio Service based on the FCC press release and other sources.

On Sept. 17, the Commission adopted rules that consolidate, revise, and streamline its license application procedures for radio services licensed by the Wireless Telecommunications Bureau (Wireless Bureau). Specifically, the Report and Order (R&O) adopts rule changes that will implement ULS, the integrated database and automated processing system developed by the Wireless Bureau to facilitate electronic filing of wireless applications, licensing information, and public access to such information for all wireless radio services. This rulemaking is also the first R&O that is part of the Commission's 1998 biennial review of regulations pursuant to Section 11 of the Communications Act.

ULS will fundamentally change the way the Commission receives and processes wireless applications. It will eliminate the need for wireless carriers to file duplicative applications, and increase the accuracy and reliability of licensing information. ULS will enable all wireless applicants and licensees for the first time to file all licensing-related applications and other filings electronically, thus increasing the speed and efficiency of the application process. The enhanced information collection capabilities of ULS will, in turn, enable the Commission staff to easily monitor

spectrum use and competitive conditions in the wireless marketplace and will promote effective implementation of spectrum management policies. Finally, ULS will enhance the availability of licensing information to the public, which will for the first time have access to all wireless licensing data on-line, including maps showing licensing areas and service providers.

Specifically, the Commission took the following actions in the R&O:

- The Commission adopted the following four consolidated ULS application forms for wireless services replacing over 40 existing forms: Form 601 is the Long-Form or FCC Application for Wireless Telecommunication Bureau Radio Service Authorization; Form 602 is the FCC Ownership Disclosure Information for the Wireless Telecommunications Services; Form 603 is the FCC Wireless Telecommunications Bureau Application for Assignment of Authorization or Transfer of Control; Form 605 is the Quick-Form Application for Authorization in the Ship, Aircraft, Amateur, Restricted and Commercial Operator, and General Mobile Radio Services. The Commission will allow continued use of existing forms for a transition period of six months after the effective date of these rules.

- Electronic filing in ULS will be mandatory for applicants and licensees in services that are licensed by auction, but not for applicants and licensees in other wireless services. As a result, all common carrier services (e.g., cellular) and geographically licensed services (e.g., PCS, LMDS) will be subject to mandatory electronic filing. However, public safety, private land mobile services on shared spectrum, Amateur Radio, GMRS, Ship and Aircraft, and Commercial Radio Operators will have the option of filing electronically or manually.

- Electronic filing in ULS will be mandatory for frequency coordinators regardless of the service, and by

volunteer examiner-coordinators (VECs) in the Amateur service.

- These mandatory electronic filing requirements will take effect on July 1, 1999, or six months after the use of ULS in the particular service, whichever is later.

- The Commission took steps to ensure that ULS electronic filing and data programs are accessible to persons with disabilities in compliance with its program accessibility rules and the new requirements of the Workforce Investment Act of 1998.

- The Commission adopted requirements for the submission of Taxpayer Identification Numbers (TINs) in ULS consistent with the requirements of the Debt Collection Improvement Act of 1996. The Commission stated that all TIN information will be kept confidential.

- The Commission adopted proposals made in WT Docket 96-188 to authorize reciprocal operation by foreign amateur radio licensees by rule, pursuant to recent international reciprocal operating agreements. (Apparently this item means there will be no paper licenses issued rather only an electronic entry in a database.)

For more information on ULS the Commission's ULS web page can be accessed at: <http://www.fcc.gov/wb/uls/>

Thanks to the ARRL Letter, ARRL Bulletin, and other sources.

Amateur Radio Spectrum Protection Act Needs Cosponsors

On March 27, Representatives Michael Bilirakis (R-FL-9th) and Ron Klink (D-PA-4th) introduced HR 3572, the Amateur Radio Spectrum Protection Act of 1998.

The operational portion of the bill is Section 3 (see below), which, if passed, would require the FCC to provide "equivalent replacement spectrum" if the Commission reallocates any primary or

secondary Amateur Radio frequencies. You can look up the full text of the bill on the House THOMAS web site at: <http://thomas.loc.gov/cgi-bin/query/z?c105:H.R.3572>:

Our strategy is very simple - obtain as many House cosponsors as we can before the end of the legislative session and elections later this year. To date we have 68 cosponsors nationally including the following cosponsors in the Pacific Division: Patsy Mink (D-HI-2nd); Tom Campbell (R-CA-15th); John Doolittle (R-CA-4th); Barbara Lee (D-CA- 9th); George Miller (D-CA-7th).

Let's get more of the Pacific Division House Members to be cosponsors! Cosponsors don't vote against their own bills! Here is Section Three:

SEC. 3. FEDERAL POLICY REGARDING REALLOCATION OF AMATEUR RADIO SPECTRUM.

Section 303 of the Communications Act of 1934 is amended by adding at the end the following new subsection:

(y) Notwithstanding subsection (c), after July 1, 1998-

(1) make no reallocation of primary allocations of bands of frequencies of the amateur radio service;

(2) not diminish the secondary allocations of bands of frequencies to the amateur radio service; and

(3) make no additional allocations within such bands of frequencies that would substantially reduce the utility thereof to the amateur radio service; unless the Commission, at the same time, provides equivalent replacement spectrum to the amateur radio service.

Summary of Some Other FCC News Items Relating to Amateur Radio

- Lower fee levels for Vanity Calls: The vanity call sign application fee dropped to \$13 effective September 14, 1998. The new fee will be for the ten-year term, payable at the time of

application for a new, renewed, or reinstated license.

- New address for Vanity call applications: Effective September 14, there's a new address at Mellon Bank for vanity call sign paper application filers who submit Form 610V and FCC Fee Remittance Form 159 with the vanity fee via the US Postal Service. The new address is FCC Wireless Bureau Applications, POB 358130, Pittsburgh, PA 15251-5130. Electronic Form 610V Vanity Call Sign filers will continue to send Form 159 with the vanity fee to FCC Amateur Vanity, POB 358994, Pittsburgh PA 15251-5994.

- RM 9267, a Petition requesting access to the 70 cm Amateur Band and other non Amateur Radio spectrum was submitted by the Land Mobile Communications Council (LMCC), released for public comment by FCC on April 30, 1998.

The Comment and Reply Comment periods are over. The National Telecommunications and Information Agency (NTIA), a part of the Department of Commerce, commented that no change to the 70cm allocation should be made. Such a comment must be taken seriously, for the 70cm band has the US government as primary user, and the NTIA acts as the "FCC" for Federal government activities. Several members of LMCC itself also commented to FCC that the 70 cm allocation should not be changed. These events should end this issue, but FCC has not said anything further thus far.

Detailed information on this Petition and Comments are available on the Pacific Division web site, www.pdarrl.org, and the ARRL web site, www.arrl.org. See also the Editorial on page 9 of July QST.

- RM 9096, a Rule Making affecting the sharing of the 5 GHz band comment period ended on Sept. 14. ARRL and several Pacific Division hams

commented in opposition to the ITS America proposal to become a co-primary user of the 5 GHz band. Details are on the ARRL Web site.

Coming Events

- Livermore Swap Meet - 1st Sunday of each month at Las Positas College in Livermore, 7:00 AM to noon, all year. Talk in 147.045 from the west, 145.35 from the east. Contact Noel Anklam, KC6QZK, (510) 447-3857 eves.

- Foothill Flea Market - 2nd Saturday of each month from March to October at Foothill College, Los Altos Hills.

- The Western States Weak Signal Society and The 50MHz and Up Group are sponsoring the WSWSS '98 Conference on October 3, 1998. It will be held at the Sunnyvale Hilton, Sunnyvale, CA from 9AM to 9PM. The advance fee of \$35 includes lunch. A banquet will be held at 6PM with special speaker Paul, N6TX of SETI. Tickets for the banquet are \$35. For tickets contact Jim Moss, 862 Somerset Drive, Sunnyvale, CA 94087-2223. Call (408) 746-2789 for more info, or E-mail to n9jim@aol.com, or see the web site at <http://www.qsl.net/wb9ajz/wswss98>

- PACIFICON '98 - Convention sponsored by the Mount Diablo ARC is scheduled for Oct. 16 - 18 at the Airport Sheraton Hotel, Concord, CA. For information call (925) 932-6125; E-mail PACIFICON98@designlink.com; or see the web site at <http://www.mdarc.org>. Mail reservations to PACIFICON'98 PO Box 272613, Concord CA 94527. Obtain hotel reservations at \$76 per night by calling 1-800-325-3535 (mention PACIFICON '98 to get this rate).

EOF

Northern California Packet Band Plan

September 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 & experimental
144.35 Keyboard to keyboard
144.37 BBS LAN forwarding
144.39 APRS (same as Canada)
144.41 duplex, lower half (145.61 upper half, 1.2 MHz split)
144.43 TCP/IP (OK to run duplex with 145.65)
144.91 Keyboard to Keyboard
144.93 BBS
144.95 DX Cluster
144.97 BBS
144.99 BBS
145.01 User access
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)
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

NOTES:

- Since the allocations from 144.31 through 144.43 are relatively close to the weak-signal sub-band, watch your deviation.
 - Duplex on TCP/IP channels 144.43 and 146.65 is currently under review.
 - 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.
 - 145.01 was changed from APRS to "User Access to a network" on Aug. 21, 1998. A one-year grace period is in effect.
-

220 MHz

219.05-219.95 100 kHz channels, Backbone
222.14 LAN
223.54 LAN
223.56 LAN, West Bay (WBAY)
223.58 LAN, Gilroy (GARLIC)
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

NOTES:

- 219 channels are by coordination only. There are currently political problems with using 219-220.
 - On 223.58, TCP/IP interlink (Sacramento) is secondary, 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 omnidirectional systems, use for point-to-point links only.

1296 MHz

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

* 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.

User Access User access to a network. This is for the next generation of packet which is expected to operate like the internet. Users would access such a network on these frequencies. The load on these channels may be rather high, like BBS channels. The activity may be combination of BBS, keyboard, and TCP/IP.

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.

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: _____

- New Membership Renewal Change of Address I'm an ARRL Member
 One year: \$10 Two Years: \$20 Three years: \$30
(make checks payable to NCPA)

Please indicate your area(s) of interest:

- BBS SysOp BBS User APRS NET/ROM TCP/IP High-speed packet
 DX Packet Spotting Network Keyboard to Keyboard FCC/legal issues Other:
-

NCPA *Downlink*

Northern California Packet Association

PO BOX 61716

Sunnyvale CA 94088-1761

First Class