

W5YI

America's Oldest Ham Radio Newsletter

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

May be republished providing credit is given to *The W5YI Report*.

Fred Maia, W5YI, Editor, P.O. Box 565101, Dallas, TX 75356-5101
Electronic mail: fmaia@internetMCI.com Website: <http://www.w5yi.org>
Tel. 817-461-6443 FAX: 817-548-9594

In This Issue...

ARRL Proposes Ham Restructuring With Less Ham Classes, Code Speed Proposal Delivered to Commission Station Call Signs Issued to Aug. 1st New & Upgrading Amateur Statistics Consideration of Element 4A Delayed Two Amateur Satellites Launched Emerging Electronics Technology Packard-Bell Now Owned by NEC Stratospheric Telecom. System (STS) Amateur Use of 76-77 GHz Suspended MACC Spread Spectrum STA Denied Phone Patching Coming to Japan

Vol. 20, Issue #16

\$1.50

PUBLISHED TWICE A MONTH

August 15, 1998

ARRL Proposes Simplified Amateur License Structure to FCC!

The Board of Directors of the American Radio Relay League, Inc., met in their second session of the year at the Marriott Hotel, in Rocky Hill, Connecticut, on Thursday, July 16, Friday, July 17, and Saturday, July 18, 1998. The meeting was called to order by President Rodney J. Stafford, W6ROD.

All 15 ARRL Division Directors were present including Kay C. Craigie, WT3P, Atlantic Division; Edmond A. Metzger, W9PRN, Central Division; Tod Olson, K0TO, Dakota Division; Rick Roderick, K5UR, Delta Division; Dave Coons, WT8W, Great Lakes Division; Frank Fallon, N2FF, Hudson Division; Lew Gordon, K4VX, Midwest Division; Tom Frenaye, K1KI, New England Division; Mary Lou Brown, NM7N, Northwestern Division; Brad Wyatt, K6WR, Pacific Division; John C. Kanode, N4MM, Roanoke Division; Marshall Quiat, AG0X, Rocky Mountain Division; Frank M. Butler, W4RH, Southeastern Division; Fried Heyn, WA6WZO, Southwestern Division; and Jim Haynie, W5JBP, West Gulf Division.

The bombshell coming out of the meeting is that the Board voted to recommend restructuring of the Amateur Service. And there is some reason to believe that this was not a planned agenda item. At least one director is quoted as saying he did not know about the vote beforehand. Another said he "had a gun held to his head."

Routine business was discussed on Thursday evening and Friday clearing the way for the main

event -- the need to restructure and reunify the Amateur Service. The FCC's pending Notice of Proposed Rulemaking was thoroughly hashed out on Saturday between 9:00 a.m. and 10:30 p.m.

Charts made earlier that morning discussed two possible plans; one with three license classes, another with four. Pointed out was such factors as a significant decrease in amateur population, license examinations, League members and the belief that there was a "them and us" split in the amateur community. Saturday was indeed a very controversial and argumentative day.

The Board analyzed a wide variety of options including both smaller and larger numbers of license classes, higher and lower qualification levels, and different privileges.

After lengthy discussion and debate, the majority of the Board felt that they needed more of a "ladder incentive system" so they decided to go with the simplified four class plan. The new lineup would consist of four written examination elements to establish amateurs' operational and technical qualifications instead of the present five, and two Morse code examination elements (5 and 12 words-per-minute) instead of the present three (5, 13 and 20 wpm.) Twelve WPM was selected as the highest speed since this is the requirement for the top-of-the-line "harmonized" CEPT international license.

ARRL President Rod Stafford told that Directors that the restructuring issue "...had to be settled

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #2

August 15, 1998

that night." All of the directors were in favor of 5 words-per-minute code for the General Class. There was a wide difference of opinion, however, -- ranging all the way up to 15 wpm -- as to what code speeds should be attached to the Advanced and Extra Class. What seemed to be a majority agreement was finalized just before 11:00 p.m. It was also decided that the ARRL should submit their own plan to the Commission for consideration before the FCC issued their NPRM.

ARRL restructuring proposal

The proposed structure would consist of four classes, A, B, C, and D, with privileges corresponding to the present Extra, Advanced, General, and Technician Class licenses respectively, but with the Extra, Advanced, and General telephony sub-bands increased by 50 kHz on 75 and 15 meters and by 25 kHz on 40 meters in accordance with the December 1996 Final Report of the WRC-99 Planning Committee. The frequency limits of all other bands would remain the same.

The new entry level into Amateur Radio would be known as Class D and would convey the privileges of the present No-Code Technician license. The written examination would be at the same level of difficulty as that of the present Technician examination and consistent with the privileges of the license (i.e. all frequency privileges above 30 MHz.) All amateurs now licensed as Technicians would become Class D.

The next step would be known as Class C and would convey the privileges of the present General license, but with phone subbands expanded by 50 kHz on 75 and 15 meters and by 25 kHz on 40 meters. Class C would be the new entry level to high frequency (HF) operating privileges. To upgrade from Class D to Class C, an amateur would pass a written examination (similar to Element 3B) on the operational and technical qualifications required for HF operation and a 5 word per minute Morse code examination.

The ARRL wants all amateurs now licensed as General, Technician Plus, and Novice to be automatically "grandfathered" to Class C without further examination. The expansion of the telephony sub-bands would result from "refarming" of the Novice CW bands that are no longer required for their original purpose.

The third step would be known as Class B and would convey the privileges of the present Advanced license, but with phone subbands expanded by 50 kHz on 75 and 15 meters and by 25 kHz on 40 meters. To upgrade from Class C to Class B, an amateur would pass a more advanced written examination similar in difficulty to the present Element 4A and a 12 word-per-minute Morse code examination. All amateurs now licensed as Advanced would become Class B, ARRL said.

The final step in the ARRL plan would be known as

Class A and would convey the full privileges of the present Amateur Extra Class, with telephony sub-bands expanded by 50 kHz on 75 and 15 meters and by 25 kHz on 40 meters. To upgrade from Class B to Class A, an amateur would be required to pass the most difficult written examination in the sequence (similar to Element 4B).

Consistent with the practice in many other countries, no additional Morse code examination would be required beyond 12 words per minute. All amateurs presently licensed as Amateur Extra Class would become Class A.

The Board said that the examination for each class of license should consist of a written element on the operational and technical qualifications commensurate with the privileges to be earned and a Morse code examination at the speed of 12 words per minute for Class A (Extra) or B (Advanced), and at 5 words per minute for the Class C (General).

Where the Morse code requirement has been decreased, the ARRL wanted a corresponding increase in the difficulty of the written examination. All amateurs now licensed as General, Technician Plus, and Novice would become Class C (General) without further examination.

The measure passed by the narrowest of margin with Directors Metzger, Olson, Fallon, Gordon, Frenaye, Heyn, and Haynie voting against the restructuring. The motion was adopted with 8 in favor and 7 opposed. The directors that were opposed generally wanted three license classes and various code speeds up to 15 words-per-minute.

Marshall Quiat, AG0X, Rocky Mountain Division then asked that the question be reconsidered. The objective was to try and end up with a unanimous vote. That motion was seconded by Frank M. Butler, W4RH, Southeastern Division Director. All directors except Frank Fallon, N2FF, Hudson Division and Lew Gordon, K4VX, voted for the motion to reconsider and it was adopted with 13 in favor and 2 opposed.

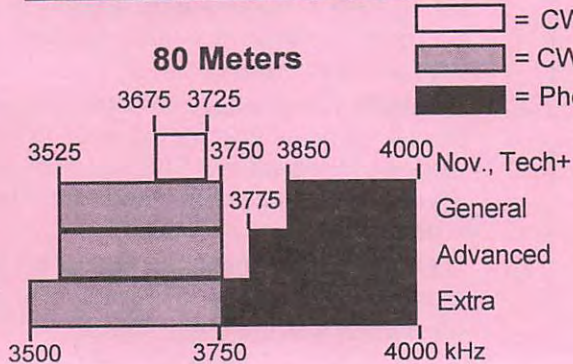
Another roll call vote was taken on the restructuring proposal and the vote gained one additional vote in favor of the restructuring proposal. The Dakota Division's Tod Olson, K0TO changed his vote from no to yes. The motion was again adopted -- this time with nine of the 15 Directors voting in favor of the plan and six opposed.

In their discussions, Board members emphasized that the objective is to rationalize and simplify the amateur licensing structure without reducing the requirements for any class of license. Where reductions in Morse code requirements are proposed, the ARRL wanted a corresponding increase in written examination standards.

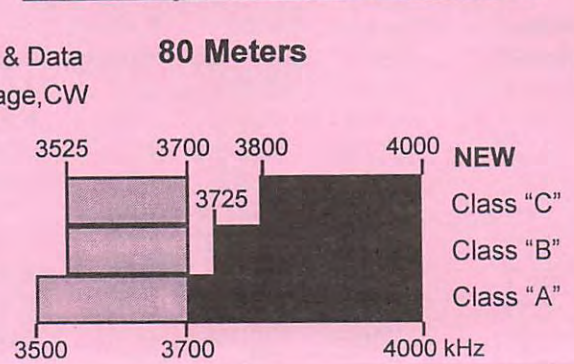
On the other hand, Board members were adamant that simplifying the structure should not come at the expense of privileges already earned by amateurs. Therefore, present Novice and Technician Plus licensees,

[Continued on page 8]

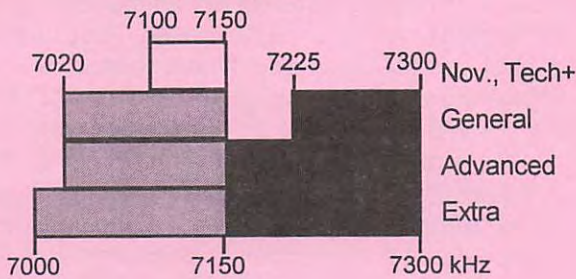
Present License Structure



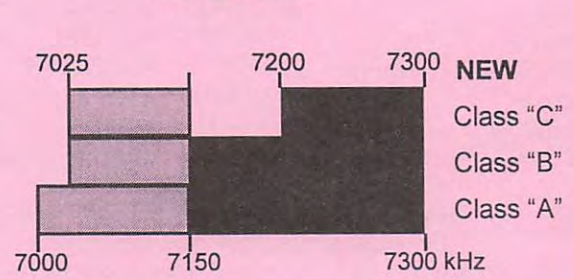
ARRL Proposed License Structure



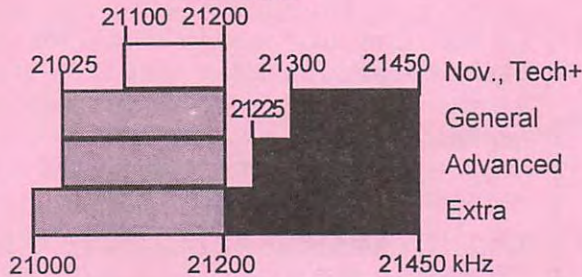
40 Meters



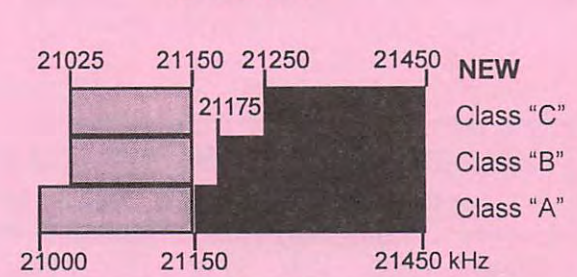
40 Meters



15 Meters



15 Meters



HOW PRESENT AMATEUR LICENSES TRANSLATE TO NEW LICENSES - UNDER THE ARRL PROPOSAL

Present	Proposed	Present	Proposed
Amateur Extra	Class "A"	Technician Plus	Class "C"
Advanced	Class "B"	Novice	Class "C"
General	Class "C"	Technician	Class "D"

REQUIREMENTS FOR AMATEUR LICENSES - UNDER THE ARRL PROPOSAL

License Class	Written Exam	Morse Exam	Level of Difficulty
Class D	Operational and Technical Questions relative to VHF/UHF	None	Same as present Technician
Upgrade from Class D to C	Operational and Technical Questions relative to HF	5 Words-Per-Minute	Same as upgrading from present Tech Plus to General
Upgrade from Class C to B	Similar to present Element 4A (Advanced)	12 Words-Per-Minute	Same as upgrading to present Advanced, plus Morse exam
Upgrade from Class B to A	More advanced technical questions	None	Same as upgrading from Advanced to Extra.

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #4

August 15, 1998

AMATEUR RADIO STATION CALL SIGNS

...sequentially issued as of the first of August 1997:

Radio District	Group A Extra	Group B Advanced	Group C Tech/Gen.	Group D Novice
0 (*)	AB0HV	KI0NX	(***)	KC0DYE
1 (*)	AA1TY	KE1KE	(***)	KB1DCI
2 (*)	AB2FN	KG2OU	(***)	KC2DXK
3 (*)	AA3RJ	KF3BY	(***)	KB3CXK
4 (*)	AF4LD	KU4TW	(***)	KF4ZOQ
5 (*)	AC5QY	KM5RZ	(***)	KD5EXS
6 (*)	AD6GD	KQ6XJ	(***)	KF6SFN
7 (*)	AB7YR	KK7PA	(***)	KD7CKW
8 (*)	AB8DB	KI8GM	(***)	KC8KSH
9 (*)	AA9WJ	KG9OD	(***)	KB9TFG
N. Mariana	NH0F	AH0BA	KH0HE	WH0ABJ
Guam	(**)	AH2DN	KH2TQ	WH2ANX
Hawaii	NH7I	AH6PM	KH7MW	WH6DEU
Am.Samoa	AH8R	AH8AH	KH8DM	WH8ABF
Alaska	AL0M	AL7RF	KL0PT	WL7CUW
Virgin Isl.	(**)	KP2CN	NP2KD	WP2AIJ
Puerto Rico	NP3Y	KP3BI	NP3XZ	WP4NNV

- * = All 1-by-2 & 2-by-1 call signs have been assigned.
 ** = All 2-by-1 call signs have been assigned.
 *** = Group "C" (N-by-3) call signs have now run out in all radio districts. (Group "D" now being assigned.)

Note: New prefix numerals now being assigned in Puerto Rico (KP3/NP3), Hawaii (AH7/KH7) and Alaska (AL0/KL0)

[Source: FCC Amateur Service Database, Washington, DC]

NEW AND UPGRADING AMATEUR STATISTICS

For the Month of July 1996, 1997 & 1998

License Class	New Amateurs			Upgrading Amateurs		
	1996	1997	1998	1996	1997	1998
Novice	74	58	45	0	0	0
Technician	1728	1334	1172	2	19	0
Tech Plus	125	108	157	303	282	218
General	50	15	22	313	310	237
Advanced	3	4	3	234	221	199
Extra Class	7	0	2	204	146	170
Club/Empty	42	172	64	10	3	0
Total:	2029	1691	1465	1056	981	824
Decrease:		(16.7%)	(13.4%)		(7.1%)	(16.0%)

QUESTION POOL COMMITTEE DELAYS FURTHER CONSIDERATION OF ADVANCED CLASS POOL

The Question Pool Committee [QPC] of the National Conference of VECs [NCVEC] met on July 30, 1998 by conference telephone call. Facts concerning the status of both the question pools outstanding and the workload of the QPC in drafting revisions thereto were reviewed, including:

- 1.) The Advanced Class question pool [Element 4A] which is scheduled for revision this fall in prepara-

tion for release into public domain December 1, 1998 and implementation in the examination room July 1, 1999 is, by and large, already in a reasonably good condition, not really needing massive changes at this time.

- 2.) The ARRL has already submitted an entire pool they propose to be used in replacement of the existing version of Element 4A. This submittal appears to be a quite usable document, needing but few changes to gain acceptance of the QPC.
- 3.) The League's proposal also makes but few changes to the outstanding pool, indicating their general satisfaction with the present pool.

In view of the uncertainty of regulatory changes in the licensing structure of Amateur Radio that exists today, we will therefore abdicate our announced detailed schedule of alterations to the Advanced Class question pool [Element 4A] which would have caused us to begin work on the pool in the early fall of 1998 -in other words NOW.

We will instead hold the detailed work of revision in abeyance until we have at least a Notice of Proposed Rulemaking which will give us a good indication of the Commission's thinking, at least at the time of release of the NPRM] or November 1, 1998, whichever come first.

In the meantime, we will revisit the subject at least monthly for purposes of determining if there is justification for proceeding faster than today's decision indicates. It is our intent to remain poised for quick action should we be given unexpected regulatory instruction and will remain on the established four year life of a question pool until either regulatory change or a vote by the NCVEC changes that intent. -- Ray Adams, W4CPA - Chairman, QPC, National Conference of VECs - e-mail: WCARS@kornet.org

TWO NEW AMATEUR SATELLITES -- TMSAT-1 and TECHSAT --

were successfully launched from the Baikonour Space Center in Kazakhstan on July 10 at 0630 hours UTC. TMSAT-1 has a downlink on 436.925 MHz, and TECHSAT has a downlink on 435.325 MHz. Both are carrying digital store-and-forward transponders and were launched along with the European Space Agency's "Little LEO Messaging System." Controllers caution hams NOT to uplink to these satellites until the software is completely loaded. An announcement will be made when the satellites are available for general use.

R0MIR-1 is back in operation and MIREX is now allowing "store and forward" message traffic through R0MIR-1. This means that hams are able to address messages to other amateurs via the Mir Personal Message System.

Russia decided on July 2 to retire the Mir space station next June, six months earlier than expected, in recognition of the government's financial woes, and agreement by the Energiya rocket corporation which owns Mir. NASA welcomed the decision which will allow Moscow to focus its efforts on the ISS. -- AMSAT/NASA

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #5

August 15, 1998

■ **Today's electronic test equipment is getting so complicated** that users often don't use all of the available functions. Hewlett-Packard Co.'s new "Infinium" oscilloscope removes most of the buttons and knobs from the front panel and lets software do all the work. It automatically detects what type of probe you connect to it, provides a full-color display, and you pick which features you want with a mouse. Its user interface is based on Windows 95.

■ **Automatic vehicle location (AVL) is now an expensive (\$2,000) option** on some new luxury automobiles. The device can automatically notify authorities of the site of an accident and guide them to the car, track stolen vehicles, provide navigation assistance to lost drivers, call emergency roadside assistance and perform remote engine diagnostics. More than a million automobiles will be equipped with the device within five years.

■ **By the year 2000, the average electronic content in cars will be over \$2,000**, about one-twelfth the total cost. Twenty years ago, electronics accounted for only about one-thirtieth the total cost of an automobile.

■ **The Global Positioning System (GPS) satellite network** has its own Year-2000-type problem to worry about. Each GPS satellite transmits not only location data, but also time information.

One data field contains the number of the week. This weekly counter, which began in 1980, counts up to 1023 and rolls over back to zero almost every 20 years. The next such rollover date is Sunday, 22 August 1999. When that day comes, some GPS receivers may incorrectly think that it's actually January, 1980.

The problem is not with the satellites, but the commercially available GPS receivers. Since some display date and time as well as location, this may result in incorrect navigation readings.

The problem is well known throughout the GPS industry (GPS was designed as a military navigation system, which officials say won't be affected), and recently manufactured receivers should work fine. But older receivers may not.

■ **The Federal Aviation Administration says that the aging IBM Model 3083 mainframe computers**, which make up the heart of the nation's air traffic control system, should work fine when the calendar turns to the year 2000.

Unlike most computers, these mainframes don't use a normal two-digit number to represent the real year. They instead use a two-digit number between one and 32,

using the year 1975 as a reference. That counter won't roll over until the year 2007. By that time, entirely new hardware may replace the old mainframes.

■ **Have you heard of the new SMART drive?** It stands for Self-Monitoring, Analysis and Reporting Technology. A SMART hard drive keeps track of the miscellaneous minor errors that creep in to most drives, but if too many errors occur, it sends a warning to the host computer that it's time to back up data and get a new drive.

■ The Society of Automotive Engineers predicts that the **internal combustion engine will indeed give way to the electric engine within the next 10 years**. Public charging stations will be installed at shopping malls and parking lots. The connection between the "pump" and the electric car will be a non-conductive paddle, delivering its charge through magnetic induction. This increases safety, and lets us breathe easier, too.

■ **The 3M Company recently celebrated the 50th anniversary of the invention of electrical tape**. It's now found in virtually every ham shack. Before the 1940's we used friction tape, but not without its problems: it often rotted away; it couldn't stand up to voltages as high as desired; it sometimes caused corrosion. The first real electrical tape was yellow, not black. 3M tried a white tape for a while, but found that it deteriorated in ultraviolet light. Today electrical tape comes in a rainbow of colors.

■ **As any ham can tell you, the most frequent power line malfunctions are spikes and transients**. Second on the list is under voltage (brownout); this happens when the utility decreases output voltage purposely in order to lessen the current demand on the entire power grid. If too much current is drawn, power shuts off completely, leading to the third most common electrical problem: blackout. The fourth most common problem is harmonics, where currents flowing through the neutral lines do not cancel each other out but instead add up (due to non-linear loads). This causes neutral conductors and transformers to overheat.

■ **Centurion is developing a small lithium battery** that can be conformed into any shape. One product can therefore be quickly molded into any desired compartment.

■ **Transformers, once bulky and heavy, are shrinking both in size and weight**. The new flat transformers use a

single winding with multiple cores, instead of one core and several windings. The multiple cores provide secondary voltages, which are then summed. Each core can be made very thin, resulting in low leakage inductances.

■ **Woodpeckers have not only grounded the Space Shuttle in the past**, they have also damaged thousands of wooden electric utility poles since the first line was ever installed. A company called Powertrusion has developed a new synthetic utility pole, which weighs only one-fifth as much as a conventional pole, doesn't rot, and lasts up to four times longer. The Powertrusion pole doesn't need preservative coating and is impervious to wildlife.

■ **For extreme privacy at your laptop computer**, there is a new display that looks entirely white to everyone except the user, who wears specially polarized glasses. (Standard sunglasses are polarized at a 45-degree angle). To the user the screen looks normal.

■ **You can't use the term "tape recorder" anymore**. The latest portable audio recorder by Nagra (which made some of the best tape recorders in the business) stores sounds on credit-card-size PCMCIA memory cards, not tape. There are no moving parts, no heads to clean or demagnetize, and it includes an RS-422 port.

■ **By international agreement, anyone wishing to launch a communications satellite** must first win approval from the International Telecommunication Union (ITU). There are so many "birds" already in orbit, and so few launch vehicles available to provide more, that the ITU is backlogged with satellite requests. This created the term "paper satellite." The U.S. telecommunications market alone earns about \$200 billion a year.

You may have seen a satellite slowly moving overhead from horizon to horizon during twilight while out in the country. City dwellers were almost always out of luck when it came to visually spotting these "birds" from the ground. But not anymore. You can now visually spot a satellite from any major city with the unaided eye, every day.

The new network of Iridium communications satellites whiz about the planet at an altitude of about 780 km (about 500 miles.) The 66 birds in low-earth orbit are quite small, but extremely reflective to sunlight. If a particular Iridium satellite is over your location while you're in darkness but it can still see the sun, and the bird is pointed the right way, you will see a brief "flare."

Iridium flares last for only a few seconds but easily outshine most stars (often

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #6

August 15, 1998

even the planet Venus!). Check out the web page at <http://www2.satellite.eu.org/sat/vsohp/iridium.html> to obtain a quick printout of the Iridium flares in your area for up to a week in advance. It accurately predicts exactly where to look, and how bright the flare will be.

Ever wonder why these telecommunications satellites are called "Iridium?" The original plan called for 77 satellites, and 77 is the atomic number of the element iridium. "Wait," you may be saying. "There are only 66 of those birds!" Right. Engineers found that they could get by with fewer satellites. But how popular a name do you think "Dysprosium" would be?

Two of the Iridium satellites have failed and it could impact its September 23rd launch date. Motorola will launch two more spares this month to replace them.

■ **While most of the southern U.S. is baking beneath a searing heat wave,** electric utilities in New England are totaling up the costs of the brutal ice storm they had last winter. The massive weight of ice collapsed many transmission towers.

Workers replaced approximately 84,000 insulators; 10,000 poles; 2800 km of wire; and 1800 transformers!

■ A story out of Tokyo says that **Japan's NEC is now the majority owner of Packard-Bell Electronics.** It gained a 53% ownership position by cashing in some of its convertible preferred stock in exchange for common. NEC previously had a 49% stake. France's Groupe Bull also owns about 12% of the firm. Citing differences with NEC and Groupe Bull, Packard-Bell founder, Beny Alagem has resigned and they have a new CEO.

Packard-Bell is attempting to stretch its sales promotion budget by working with an agency that is experienced in barter advertising. Packard-Bell traded cash and surplus computers for media time. Their market share is about half of what it was just a year ago and it is now the number three brand behind Compaq and Hewlett-Packard Co.

Profit margins are razor-thin and for the first time, Packard-Bell is selling non-Intel PCs. They will offer a Cyrix-chip based computer for \$699.00 retail.

■ **Yahoo! to get competition. Look for the Microsoft Network to get on the "portal" bandwagon.** Microsoft wants to be everybody's "front door" to the web. The new global consumer portal (code-named "Operation Start") will replace three existing Microsoft sites. They have yet to pick a catchy name for the new portal which will automatically be the default for PC users who download or install the Internet Explorer browser from a CD-ROM.

The portal will be advertising-supported and features will be added little-by-little.

■ **A message encoded by the U.S. Government's 56-bit data encryption standard has been broken in a computer industry contest in less than three days.** A custom-built computer tested 88 billion different combinations each second for 56 hours until it found the correct one. Previous contests enlisted computers linked together through the Internet, but took weeks or even months to complete. Three days is a new record.

The contest was intended to alert the government that the once-thought-secure standard is in jeopardy of being deciphered by enemy governments at whim.

The answer, computer experts say, is to adopt a standard with far more bits to make it more difficult for any computer to sort through the enormous number of calculations. What was the message? "It's time for those 128-, 192- and 256-bit keys."

■ **FBI says it must stay current with evolving technology.** The Justice Dept. has asked Congress to add language to an appropriations bill that would **provide police with the precise location of cellular telephone users.**

The surveillance information would be provided without a court order when there is suspicion of a felony, pursuit of a fugitive or where human safety is in jeopardy.

A triangulation scheme currently being deployed by 911 emergency centers is used to pinpoint users by measuring variances in signal strength. Civil-liberties advocates are calling it a dangerous and unconstitutional invasion of privacy.

■ **The FBI is under fire** for cutting off the ham and broadcast communications going in-and-out of the Branch Davidian complex in Waco during the David Koresh standoff. In a 1994 two-page letter to Newt Gingrich, the FBI admitted to setting up a "physical and electronic perimeter ...to avoid further loss of life and to try to bring the crisis to an early resolution."

The "electronic operations" approved by the Justice Department consisted of intentional radio interference to amateur radio communications and to broadcast radio and television. It is also charged that the FBI tapped telephones, diverted telephone lines and intercepted cellular communications ...all without a warrant.

In its defense, the FBI says that ITU law permits its "Members ...to cut off any ...private telecommunications which may appear dangerous to the security of the state or country to its laws, to public order or to decency." The FBI also said the FCC

was on scene at their invitation.

Opponents of the FBI/FCC action said "The amateur radio station was no danger to security and the operators broke no law and complied with FCC Rules."

■ **The FCC has entered into an agreement with APCO which looks toward resolving interference complaints plaguing police and public safety radio.** APCO is the Association of Public Safety Communications Officials.

Under the agreement, APCO will follow an FCC technical and administrative standard to collect all information relevant to process a compliance or interference matter.

This is the second such FCC/industry agreement that the Commission has entered into. A similar *Memorandum of Understanding* (MOU) was recently signed with the Industrial Telecommunications Association, Inc., covering interference to business band users caused by non-compliant and/or unlicensed operators.

■ **On July 29th, the FCC approved the use of stratospheric platforms as telecommunications stations.** They will operate in the 47.2-48.2 GHz band which the FCC will auction. COMSAT has been awarded the contract to provide the proprietary high-speed Internet and data system aboard the Sky Station.

The Sky Station system is a network of lighter-than-air platforms (each about the size of a football field) which are held in a geostationary position about 70,000 feet above the Earth. It is basically a repeater aboard a zero-pressure balloon hovering over major metropolitan areas. Ultimately at least 250 Sky Station platforms will be deployed worldwide over large cities.

Each 1,000 kilometer footprint is expected to provide service within three years to millions of subscribers. Internet speeds are planned to be 2 Mbps (uplink) and 10 Mbps (downlink) --more than 300 times faster than most of today's dial-up modems.

The ITU last year designated 600 MHz of spectrum worldwide for use by high altitude Stratospheric Telecommunications System (STS) platforms. Sky Station International, Inc., is headquartered in Washington, DC.

■ **A 16-year-old ham from Florida has been named "Young Ham of the Year."** Richard Paczkowski, KF4BIA is being recognized for his accomplishments in emergency service communications. As Assistant Emergency Coordinator, young Richard organized needed communications during Florida's recent wildfires.

He will receive his award on Saturday,

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #7

August 15, 1998

August 15th at the Huntsville Hamfest banquet in Huntsville, Alabama. The *Young Ham of the Year Award* is sponsored by Amateur Radio Newline, Yaesu USA and CQ Magazine.

■ **The FCC has adopted rules that protect Vehicle Radar Collision Avoidance Systems from interference by amateur stations** in the 76-77 GHz band. Amateur operation is being suspended -- at least temporarily -- in this portion of the 4-millimeter band.

To offset any potential impact on amateur service operations resulting from this suspension, the FCC has amended its rules to establish a co-primary allocation in the 77.5-78 GHz band for the Amateur and Amateur-Satellite Services.

The Commission said it recognized that amateur operators would like to maintain their access to spectrum in the 76-77 GHz band and indicated that this temporary restriction could be removed at a future time upon demonstration that safety will not be compromised from other in-band transmissions or if specific sharing recommendation guidelines do not compromise public safety.

The Commission explained that such a modification of the rules will not significantly harm the amateur services because of the limited use of the 76-77 GHz band by amateur stations and the availability of the 75.5-76.0 GHz band on a primary basis and the 77-81 GHz band on secondary basis.

The Commission also noted that inconvenience to amateur operators from this restriction should be minor and would be outweighed by the potential interference problems and related public safety concerns.

The Commission stated its intention to revisit the issue of whether the 76-77 GHz band can be shared with amateur stations or other users within five years and that if it were to become apparent that particular types of radio services or devices will not interfere with vehicle radar systems or if adequate sharing criteria can be established, the restriction could be lifted.

The ARRL filed comments opposing adoption of the temporary restriction, indicating that the record in this proceeding does not demonstrate that there is any incompatibility between amateur service operation in the 76-77 GHz band and vehicle radar systems.

■ **On July 17th, the FCC denied the Mid-America Coordination Council's (MACC) 1996 request** for a three year waiver of the rules which would allow MACC to coordinate, evaluate, and test

certain spread spectrum (SS) emission transmissions by amateur radio stations.

The FCC took issue with MACC's belief that their request was similar to the one granted to the Tucson Amateur Packet Radio Corporation (TAPR) except that participation in this STA would be extended to a larger group of persons, including all coordinators and repeater operators.

The STA rules provide for waivers by the licensee or an applicant for a station license which must not exceed 180 days. "Further, MACC's statement that it anticipates this STA would be used by 'thousands of repeater operators, and perhaps hundreds of thousands of users,' does not identify the amateur stations or licensees for whom the Commission would be waiving the rules. Thus, it is unclear to whom the STA would apply."

The FCC said that the MACC request is not similar to the STA request received from two TAPR members because two amateur service licensees, who also are TAPR members, requested a 180-day STA and waiver of certain rules for themselves and other identified amateur service licensees.

The applicants also stated they would file on a quarterly basis the names, station call signs, and addresses of any additional stations that joined in their experimental program.

The TAPR STA was initially granted on May 8, 1996, and was extended on November 6, 1996, May 8, 1997, and December 4, 1997, for additional 180-day periods. Reports outlining the finding of the experiments were submitted to the FCC as part of the extension requests.

The FCC said they were considering a *Notice of Proposed Rulemaking* to eliminate rules that restrict amateur stations to transmitting only frequency hopping and direct sequencing spreading techniques. If adopted, these proposed rule changes would render MACC's request for waiver moot because amateur stations would be allowed to transmit any SS emission type.

"Given the pendency of the proposals set forth in the *Notice* in WT Docket No. 97-12, combined with the fact that MACC's request does not comply with the Commission's rules and seeks use of frequency bands for SS emissions not identified in the *Notice*, we conclude that MACC's request for waiver of the Commission's rules should be denied," FCC said.

■ **1930s Call Sign May Be Revived.** A ham radio call sign that qualifies as a rare piece of Americana may hit the airwaves in October - if the FCC approves.

PEARL, the Putnam Emergency and Amateur Repeater League - a ham radio

club in Putnam County, New York - is awaiting clearance for a special-events station on Halloween weekend with the call sign 2X2L/W2.

2X2L is the fictional ham station heard in Orson Welles radio version of "The War of The Worlds", first broadcast on CBS on Halloween Eve, 1938. This year is the program's 60th anniversary, and the H.G. Wells science-fiction novel that inspired it was published just 100 years ago.

The paper trail to 2X2L operation began last February - not in Washington, but in London, since calls beginning with a 2 belong to the United Kingdom. A PEARL member contacted the Radiocommunications Agency, the U.K. equivalent of the FCC, and obtained temporary authorization for 2X2L.

Washington, of course, must also approve. FCC permission has been pending for several months. Use of foreign calls here is common under "reciprocal licensing" of foreign nationals, but American licensees would not normally ask to use a foreign call in their own country.

If all goes well, the 48-hour revival of 2X2L will begin Friday, October 30 at 6 p.m. EST (2300 UTC), on 160 through 2 meters. The 2X2L special event stations progress is available on the PEARL website at <http://home.computer.net/%7Epearl/>

■ **The United States is not the only nation that is trying to increase ham radio activity.** The July 1998 issue of "The JARL News" -- an English language newsletter distributed by the Japan Amateur Radio League -- tells how Japan is coping with the current decrease in ham radio interest. Their answer is to permit phone patches on the ham bands - something that has been legal in the U.S. for decades.

Here is a quote from the speech of Shozo Hara, JA1AN, JARL president presented on May 31, 1998 during their 40th General Assembly held in Nagano. Japan:

"Amateur radio is stagnating due to the prevalence of new communications tools. As a matter of fact, the number of people who take national amateur radio operator examinations, as well as people who take amateur radio operator training courses is declining. It stands to reason that the number of JARL members is decreasing. We at JARL are making every effort to stem the tide and are trying to expand amateur radio's enjoyment. Today, I would like to introduce the phone-patch system. We have been asking MPT (Ministry of Posts and Telecommunications) persistently to permit the establishment of a phone-patch system. And as a result, MPT accepted our appeal. We want to make good use of this and hope it will activate amateur radio."

[Continued from page 2]

having earned entry-level HF operating privileges, should be granted the new entry-level (Class C "General") HF license.

The ARRL said "Adoption of the simplification plan marks the culmination of 30 months of work by the Board, during which time the input of literally thousands of ARRL members and other amateurs and prospective amateurs was considered."

Following the meeting ARRL President Rod Stafford, W6ROD, observed, "The debate was at times contentious and the result was not unanimous. Some Board members preferred greater simplification; others were uncomfortable with some of the changes being proposed. However, every Board member, without exception, left the meeting knowing that each of his or her colleagues did what they believe is best for the future of Amateur Radio."

He said that ARRL members are urged to contact their ARRL directors to comment on this proposal. E-mail addresses are on page 10 of any issue of QST. Members also may comment on the proposal via the ARRL Web site.

The Board also asked Executive Vice President David Sumner, K1ZZ, to develop and implement a marketing plan to recruit new League members, using the theme of the year 2000. That motion was introduced by West Gulf ARRL Director Jim Haynie who added, "I am sick and tired of the League's spending one third of its net revenue defending amateur frequencies for all amateurs. About a million Dollars. If we don't have spectrum we have nothing! All else pales in comparison. They [non-members] are getting a free ride."

ARRL proposal submitted to FCC

General Counsel Christopher D. Imlay, W3KD was instructed to submit to the FCC without delay, a letter proposing simplification of the amateur licensing structure. Here is a copy of ARRL's Letter

July 22, 1998

Via Hand Delivery

Honorable William E. Kennard, Chairman
Federal Communications Commission

Honorable Susan Ness, Commissioner
Federal Communications Commission

Honorable Harold Furchtgott-Roth, Commissioner
Federal Communications Commission

Honorable Michael K. Powell, Commissioner
Federal Communications Commission

Honorable Gloria Tristani, Commissioner
Federal Communications Commission

Re: License Restructuring in the Amateur Radio Service

Dear Mr. Chairman and Commissioners:

It has come to the attention of the American Radio Relay League, Incorporated, the national association of amateur radio operators in the United States, that the Commission is presently considering a draft item pursuant to the 1998 Biennial Review process which relates to the Amateur Radio Service. It is our understanding from discussions with the Wireless Telecommunications Bureau staff that this item will address several varied topics of current interest in the Amateur Service.

Among these is an examination of certain licensing requirements for Amateur operators. The League's Board of Directors, which constitutes the most representative body of amateur radio operators in the country, has studied the amateur licensing structure for the past two and one-half years.

The League feels strongly that the Biennial Review process offers a timely and needed opportunity for simplification of what is now an overly complex licensing structure for the Amateur Service. Participation in the Amateur Service can be increased, and the benefits of Amateur Radio can be made available to more people.

By increased participation, Amateur Radio can provide even more service to the United States than it does currently, with a simpler licensing structure. It is possible to reduce the regulatory burden on licensees, while preserving the opportunities for technical self-training that the Service now offers. Because Amateur Radio license examinations are administered and coordinated entirely in the private sector, there will be no regulatory burden on the Commission from any changes adopted.

Therefore, the League wishes to present for your consideration a comprehensive restructuring proposal for amateur radio licensing. The purpose of presenting this to you now, by letter, is not to forestall or preclude the Amateur Radio Biennial Review item, but rather to complement the considerable work that we understand has already been performed by your Wireless Telecommunications Bureau staff. It is hoped that the instant proposal is timely in view of the draft now under consideration.

Amateur Radio License Restructuring Proposal

The League's proposal is premised on the belief that the Amateur Radio Service no longer requires six different classes of license in its license structure. A simplified structure with four classes is preferable. The plan suggests four written examination elements to establish amateurs' operational and technical qualifications instead of the present five, and two telegraphy examination elements instead of the present three.

Under the plan, the entry level to Amateur Radio would be known as Class D and would convey the privileges of the present Technician license. The written examination would be at the same level of difficulty as that of the present Technician examination, but consistent with the privileges of the license. All amateurs now licensed as Technician class would become Class D licensees.

The next step would be known as Class C and would convey the privileges of the present General license, but with telephony sub-bands expanded by 50 kHz in the 3.5 and 21 MHz bands and by 25 kHz at 7 MHz. Class C would be the

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #9

August 15, 1998

entry level to high frequency (HF) operating privileges. To upgrade from Class D to Class C, an amateur would pass a written examination on the operational and technical qualifications required for HF operation and a 5 word-per-minute telegraphy examination (instead of the present 13 word-per-minute examination required for General Class licensees). All amateurs now licensed as General, Technician Plus, and Novice would become Class C. The expansion of the telephony subband would result from "refarming" of the Novice Class telegraphy subbands that are no longer required for their original purpose.

The third step would be known as Class B and would convey the privileges of the present Advanced Class license, but with telephony subbands expanded by 50 kHz in the 3.5 MHz and 21 MHz bands and by 25 kHz in the 7 MHz band. To upgrade from Class C to Class B, an amateur would pass a more advanced written examination similar in difficulty to the present Element 4A examination, and a 12 word per minute telegraphy examination. All amateurs now licensed as Advanced would become Class B. Any current General Class licensee, having already taken and passed the 13 word-per-minute telegraphy examination, will of course not have to retake a telegraphy examination to obtain a Class B license.

The final step would be known as Class A and would convey the full privileges of the present Amateur Extra Class, with telephony subbands expanded by 50 kHz in the 3.5 MHz and 21 MHz bands, and by 25 kHz in the 7 MHz band. To upgrade from Class B to Class A, an amateur would be required to pass the most substantial written examination in the sequence. Consistent with the practice in many other countries, no additional telegraphy examination would be required beyond 12 words per minute. All amateurs presently licensed as Amateur Extra Class would become Class A.

The League's objective in proposing this comprehensive plan is to rationalize and simplify the amateur licensing structure without reducing the technical knowledge required for any class of license. Where reductions in telegraphy requirements are proposed, there is proposed a corresponding increase in substantive written examination standards.

On the other hand, the League firmly believes that simplifying the structure should not come at the expense of privileges already earned by amateurs. Therefore, present Novice and Technician Plus licensees, having earned entry HF operating privileges, would be granted the new entry-level HF license, and afforded increased operating privileges in the process.

This simplification plan marks the culmination of 30 months of work by the League, during which time the input of thousands of League members and other amateurs, and as well the input of prospective amateurs, was considered.

The League considered and actively debated a wide variety of options including both smaller and larger numbers of license classes, higher and lower qualification levels, and different privileges. While not unanimous, this proposal should be considered a "refereed" plan, which we would propose to you for consideration and adoption in its entirety.

We would be most pleased to discuss this with you or your respective staffs, and would welcome the opportunity to provide further information to your offices concerning the substantial benefit and contributions of the Amateur Service to the educational, public safety, and public service needs of the United States.

For the benefit of your Wireless Telecommunications Bureau staff, the League's web site, www.arrl.org, has a comprehensive review of this proposal and all of its details. Please consider this restructuring plan as a means of modernizing and simplifying amateur radio licensing, and a means of making Amateur Radio available to more people.

Respectfully submitted,
THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED
By: _____

Christopher D. Imlay
Its General Counsel

cc: Daniel Phythyon, Esquire
D'Wana Terry, Esquire
William T. Cross

NCI submits its plan to the FCC

The Board of Directors of No Code International had been waiting for the FCC to issue their Notice of Proposed Rulemaking before commenting. But since the League decided to get their proposal considered by the FCC prior to its release, NCI's Board voted to do the same. Here is their letter that was delivered to the FCC Commissioners:

Re: License Restructuring in the Amateur Radio Service

Dear Mr. Chairman and Commissioners:

No Code International ("NCI") is a US-based, international organization of amateur radio operators formed for the purpose of lobbying for modernizing changes in both the International Telecommunications Union ("ITU") and national rules regarding the Amateur Radio Service on a world-wide basis. NCI and its members firmly believe that such modernization of amateur rules is essential to the continued health, growth, and public service value of the Amateur Radio Service as we prepare to enter the 21st century.

NCI is administered by a ten member board of directors. Since NCI was established in 1997 in the United States, a majority of our members and directors are currently US-licensed amateurs, but we do have significant numbers of members in all ITU regions and currently have two non-American directors, one from Germany and one from New Zealand.

Like the American Radio Relay League ("ARRL"), NCI has been aware for some time of the Commission's plans to review, and likely simplify, its Part 97 Rules concerning the Amateur Radio Service as a part of the 1998 Biennial Review process.

The board of directors of NCI had felt until very recently that the most appropriate course of action for our organization was to await the release of the Commission's expected Notice of Proposed Rulemaking and to then participate in the formal, public comment process. However, the ARRL's recent submission of its "Amateur Radio License Restructuring Proposal" has caused us to reconsider that position and submit the following alternative proposal on behalf of NCI's US-licensed membership.

NCI commends the ARRL's board of directors for proposing changes intended to simplify and modernize the licensing structure and regulations governing the Amateur Radio Service. However, while there is much in the ARRL's proposal that is good, NCI feels that it stops somewhat short of what is really

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #10

August 15, 1998

required to completely accomplish the desired goals of simplifying amateur licensing and rejuvenating the Amateur Radio Service in preparation for the 21st century.

While NCI stands for the complete elimination of Morse testing as a criterion for all amateur licensing, we recognize that the United States, as a signatory to the ITU treaty, currently has an obligation to retain some unspecified level of Morse testing, since ITU regulations currently obligate signatories to require Morse proficiency (though at no specified speed) of all applicants for licenses permitting operation on frequencies below 30 MHz.

The ARRL proposal calls for a "Class C" license with privileges similar to today's General class, but with only a 5 wpm Morse test, compared with the present General class requirement of 13 wpm. NCI applauds the ARRL board for making this brave decision. However, we note that the ARRL's proposed "Class B" (similar to today's Advanced class) and "Class A" (similar to today's Extra class) license classes would require a 12 wpm Morse test.

NCI sees absolutely no justification for these two classes to require a 12 wpm Morse test and believes that there is no reason not to, and every reason to, limit Morse testing for all classes of amateur license to a 5 wpm speed until the ITU treaty obligation is lifted. The sole remaining reason for retaining any Morse code examinations at all stems from that 50-year-old regulation now called "S25.5" in the ITU treaty which requires manual Morse proficiency to be demonstrated before a license can be issued for operation in amateur spectrum below 30 MHz.

S25.5 specifies no specific speed which must be demonstrated by an applicant, thus a 5 wpm Morse examination amply fulfills the requirements of the ITU treaty obligation. In addition to removing an unnecessary, restrictive, and artificial barrier to advancement, having a single 5 wpm Morse requirement for all license classes authorized to operate below 30 MHz will reduce the telegraphy examination burden on the Volunteer Examiners and Volunteer Examiner Coordinators.

Having a single 5 wpm Morse test will also remove the necessity of processing and issuing waivers of high-speed code tests for the handicapped, which has been a subject of some contention and vague accusations of improprieties in the amateur community of late.

While NCI recognizes that many current amateur licensees enjoy the use of Morse code on the amateur bands (many of NCI's members and directors are code-tested amateurs who use and enjoy Morse code), we also recognize and accept that the time has past for Morse testing to stand as a "rite of passage" into the amateur community.

NCI does not at all oppose the use of Morse code in the amateur bands by those amateurs who choose to use that mode, we just don't believe that Morse code is an important enough factor in today's communications world that it should be a licensing criterion at any level beyond the absolute minimum required by international regulations.

NCI also believes that government regulatory agencies should regulate to the minimum extent necessary to achieve their legitimate regulatory objectives. We do not believe that the Commission's legitimate regulatory objectives include the maintenance of traditional rites of passage which strongly resemble fraternity hazing rituals and unnecessarily restrict entry

into amateur radio by otherwise competent individuals.

Given that Morse code speeds over 5 wpm should be irrelevant for amateur licensing in today's world, NCI feels that the ARRL proposal contains one license class more than is really necessary. NCI also notes that most other countries have two license classes at most and many have only a single class of amateur license. NCI sees no advantage in, or need for, such a large number of license classes and feels that three license classes are quite sufficient to provide for both an entry level and a path for advancement.

NCI therefore proposes that the FCC adopt a simplifying modification to the ARRL proposal, which would combine the ARRL's proposed "A" and "B" classes into a single Class A license class with the combined privileges of the ARRL's proposed "A" and "B" classes, a combined written test, and a 5 wpm Morse code requirement. If the Commission decides to adopt this recommendation, it follows logically that the ARRL's "C" class would become Class B and the ARRL's "D" class would become Class C, with each having the same privileges and testing requirements as was proposed in the ARRL's proposal.

NCI believes that the resulting system, with three license classes with progressively difficult written examinations on regulations, radio practices and electronics theory and a single 5 wpm Morse code test for Class A and Class B to meet the current obligations under the ITU treaty would be the best solution for the foreseeable future for the Amateur Radio Service.

NCI further notes that there is a significant movement world-wide to modify the ITU treaty to delete the S25.5 requirement for Morse tests entirely. Numerous national radio societies have stated their intent to lobby their administrations to support the deletion of S25.5 at the earliest possible World Radio Conference. Some administrations are already taking steps to reduce Morse testing requirements. Deletion of S25.5 from the ITU treaty would eliminate any obligation to require any Morse testing at all.

NCI therefore requests that the Commission also incorporate a "sunset clause" into the language of such new rules as may be enacted, specifying that all Morse testing requirements will automatically cease upon the ratification of an amendment to the ITU treaty removing the S25.5 requirement for Morse testing. This approach will not only result in compliance with treaty obligations today, it will eliminate the need for further action by the Commission at such time in the future as there is no further international treaty requirement for Morse testing.

We look forward to the opportunity to provide further comments during the formal comment period associated with the anticipated NPRM. In the meantime, we would be most pleased to discuss this matter with you or members of the Commission's staff as you deem appropriate. For the benefit of your staff, NCI maintains a web site at <http://www.nocode.org>, which contains a considerable amount of background information on NCI and the movement to eliminate Morse testing as a criterion for amateur licensing.

Respectfully submitted,
No Code International

By: _____
Fred Maia - W5YI
Executive Director