

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.

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VECs Hold Annual Conference with FCC Officials

The 1997 edition of the *National Conference of VECs* got underway in Gettysburg, PA on July 17, 1997 as NCVEC Chairman Don Tunstill, W4NO called the meeting to order. There were delegates from 12 VEC organizations in attendance representing nearly all examinations administered in the Amateur Service.

A VEC acts as the link between the volunteer examiner (VE) community and the FCC. Their function is to provide testing guidance, license examination materials and electronic filing of license applications for their accredited VE teams.

The VEC System consists of 16 VEC organizations who oversee the activities of an estimated 3000 VE teams located throughout the world. They meet annually with Washington DC and Gettysburg PA Federal Communication Commission officials to discuss Amateur Service examination and licensing issues.

The Thursday meeting was more or less a business meeting for the NCVEC. There was an extensive agreement and disagreement discussion on the Charter and By Laws of the organization and several amendments were proposed.

It was also suggested that the Conference might be moved to a different location next year due to the unavailability of the present location during many summer weekends during the tourist season in Gettysburg. The only date available -- the third weekend in July -- conflicts with the ARRL's Board of Directors Meeting. A possible date change to

September is being considered.

There was a discussion on the feasibility of "Tightening Up CW Testing." The ARRL's Executive Committee had recommended that VEs should only administer examinations that they themselves have passed and that VECs be required to obtain medical information from the applicant's doctor prior to the granting of a telegraphy waiver. Another ARRL recommendation was that the legislative cap on VE fee reimbursement be increased to \$9.00. After discussion, the VECs decided to "table" this matter for now.

The following slate of officers were elected: Don Tunstill W4NO - Chairman; Fred Maia W5YI - Vice Chairman; Ray Adams W4CPA - Treasurer; and Steve Sternitzke NS5I - Secretary. The current Rules and Question Pool Committee were re-elected. Charles Roy WS6F will head up the VEC Instructions Committee

The Conference appointed Win Guin W2GLJ to meet with ARRL Executive VP Dave Sumner K1ZZ to determine how the Conference might accommodate fuller ARRL participation in Conference proceedings. The Thursday meeting closed with a summary of recent FCC rulemaking impacting the VEC System.

The Friday meeting (July 18th) was attended by numerous FCC officials from Washington DC and Gettysburg, including several who were new to the VECs. Gettysburg Licensing Chief, Gary Stafford W4FDP started off with an overview of past and

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upcoming FCC activities, including the new Universal Licensing System. Don Tunstill presented Gary and the Gettysburg FCC staff with an award for their outstanding cooperation and service to the VECs.

FCC's Washington Report

As always, John B. Johnston, W3BE who heads up the Amateur Section at the FCC in Washington, DC had some interesting things to say at the 1997 VEC Conference. He was assisted by Bill Cross, W3TN. Here is a copy of his remarks:

"Good morning. Even though, for some of you, this may be our first face-to-face meeting, we sort of feel that we know each and every one of you personally. That's because we hear so much about you from your neighbors. They go into great detail in describing your station, your tower, and about your voice coming through television sets, telephones and stereos. That is one of the more unpleasant things that we have to do from time-to-time. We have to listen to those complaints.

The meaning of the word "Amateur"

"If you will kindly direct your attention to the word 'amateur' and reflect with me for a moment on what it means to different people, you may see how you don't make it any easier for us ... or for yourselves. To you, this word has a very special meaning. Its one of those things where you just have to 'be there.' You have to be an 'amateur' in order to appreciate its meaning to the amateur service community. I doubt if many amateurs can explain it. I do know, from the mail we receive, that a lot of them can't spell it. Most get the first two of three letters in the right order. But after that, their creativity seems to burst forth and it's everyone for themselves.

"To you, the meaning of these seven letters -- in whatever order -- must have something to do with being a part of that world-wide village of technically-inclined people who enjoy the 'hands-on,' practical aspects of radio simply for satisfying their curiosity. It must have something to do with the personal enjoyment we 'radio nerds' achieve from always being about five to ten years out in front of the other radio services. It must have something to do with the self-satisfaction that you receive when you provide -- or receive a news account about other hams providing -- the only means of communication able to function in the wake of a terrible disaster. It must have something to do with the enjoyment of viewing action movies wherein your hobby plays a pivotal role. It is probably some or all of these things -- and a perhaps a whole lot more -- that the word 'amateur' means to you. Unfortunately, it usually has a totally opposite meaning to practically everybody else.

"To your neighbor, it probably has the literal meaning: 'non-professional.' My dictionary says that it 'implies a relative lack of skill,' 'incompetence,' a 'beginner,'

and -- note this one -- a 'superficial dabbler.'

"So your irate neighbors demand that we stop you -- that self-proclaimed 'incompetent,' 'superficial dabbler' next door -- from causing interference. After listening to their complaint -- completely -- and for whatever time they take -- because just hearing them out can often help lower the tension -- I give this response:

"The FCC rules impose very tight technical standards on your stations with regard to the specific frequency bands on which your station may transmit. Your station does not transmit on TV broadcast channels. It does not transmit on AM and FM broadcast channels. It does not transmit on telephone channels.'

"I explain that in order to qualify for your license, you had to prove through a series of very carefully prepared and comprehensive written examinations that you fully understand those standards and that you have the ability to operate your station properly anywhere the FCC regulates communications.

"The FCC has great confidence in your license examination system. In fact, the FCC does not even include your apparatus under its equipment certification program that applies to the apparatus used in practically every other radio service.

"Moreover, you are authorized to design, construct and modify your own stations. Not only are you 'allowed,' you are 'encouraged,' to carry out technical investigations. You have an 'obligation' to contribute to the advancement of technology. As a matter of fact, much of today's technology can be traced back to its beginnings in amateur radio.

"It is clear, therefore, that any unregulated 'device' that becomes 'dysfunctional' as the result of transmissions from a licensed amateur station must not be properly rejecting those legitimate transmissions.

"I am able to say that - only because of the hard work carried out by you and your VEs. Your achievement is the very foundation upon which your service stands.

On 1996 Examinations

"Your VEC system added to the value of your service last year by preparing and administering some 136,000 exam elements. Chart Number 3 ranks your VEC Regions by the number of elements administered. You'll note there is a 'Region 14.' That is an unofficial region that I have added to your traditional 13. It is for the exams that your VEs are administering in foreign countries. It is approaching two percent of the total, and exceeds the number administered in three of your regions: (13) Hawaii and the Pacific Insular Areas, (12) the Caribbean Insular Area, and (11) Alaska. The number of applicants that took their exams outside of the United States last year was 723. I am a bit mystified about what it is you are up to here. I hope you will shed some light on what this is all about.

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VEC System Statistics

"Here is a summary of your vital statistics... and they are impressive: You have been coordinating almost 1,000 sessions each month for the past five years. Some 5,000 to 10,000 people are being examined each month. About 1.7 million elements have been prepared and administered since the inception of the system in 1984.

"The majority of our current amateur operator community has passed through your exam system. They include Mike Foale, KB5UAC, who - even as we speak - is in the Mir space station sweating out that predicament. They include Jim Halsell, KC5RNI; Janet Voss, KC5BTU; and Don Thomas, KC5FVF; aboard the space shuttle 'Columbia.' I noticed a report that they have resumed making amateur radio contacts with schools, including one in Beijing, China.

"At the present rate, your one-millionth examinee should exit from one of your exam sessions late this

Summer... maybe around September 15th. We can speculate if that person will be a present or future astronaut. Or a scientist like Joe Taylor, K1JT, who won the Nobel Prize in Physics for confirming, experimentally, Einstein's general theory of relativity. Or a teacher. Or a technician. Or an engineer. Or a salesman who can sell this hotel a public address system that works better than this one!

"Last year was your best showing in ten years for prompt filing. Only one-percent of your filings were late. Your rate for the first half of this year, however, has almost doubled. You'll have to try harder in the second half to avoid a backslide.

"The number of defective Forms 610 you let slip by was two-tenths of one percent of the total number filed. For the first half of 1997, that has increased to seven-tenths of one-percent. The one number on this chart that seems to hold constant is the number of elements per examinee. It has been stuck on 1.7 since early in the system.

→ → → → *Continued on page 8*

VOLUNTEER EXAMINER COORDINATOR REPORT - Amateur Radio Services

Date	No. of Sessions	No. of Persons	No. of Elements	Pass Rate	Defective 610's	Late Filed	Defective Reports	Persons/Session	Elements/Person	Sessions/VEC
1984	413	8599	12633	47.5%	n/a	n/a	n/a	21	1.5	n/a
1985	3223	41439	62589	58.2%	1.8%	4.8%	5.4%	13	1.5	n/a
1986	3784	42422	61921	59.7%	0.6%	2.4%	1.9%	11	1.5	n/a
1987	4378	49728	81042	60.6%	0.5%	1.6%	2.2%	11	1.6	n/a
1988	4903	53546	89788	61.0%	0.9%	2.7%	1.7%	11	1.7	n/a
1989	5486	57417	96092	61.5%	0.6%	1.0%	1.4%	10	1.7	305
1990	6250	64737	105763	60.8%	0.8%	1.2%	0.4%	10	1.6	347
1991	8118	103251	172061	66.2%	0.7%	1.8%	0.5%	12.7	1.7	451
1992	10016	115852	193521	65.6%	0.3%	1.4%	0.3%	11.6	1.7	556
1993	10848	113028	193911	65.0%	0.2%	2.7%	0.3%	10.4	1.7	603
1994	11638	106670	194584	65.2%	0.2%	3.9%	0.3%	9.2	1.8	647
1995	11260	97547	165330	55.2%	1.0%	1.5%	1.6%	8.7	1.7	662
Jan 96	845	6228	10353	54.0%	0.2%	0.0%	3.0%	7.4	1.7	60
Feb 96	882	7231	12355	55.8%	0.5%	0.0%	1.4%	8.2	1.7	55
Mar 96	1083	10193	17242	54.6%	0.2%	0.0%	0.9%	9.4	1.7	72
Apr 96	1087	9670	16615	53.6%	0.3%	0.0%	1.8%	8.9	1.7	68
May 96	971	7447	12664	53.7%	0.1%	0.7%	1.5%	7.8	1.7	69
Jun 96	914	6748	11266	53.1%	0.0%	2.5%	0.7%	7.4	1.7	57
Jul 96	755	5155	8710	56.7%	0.3%	1.6%	1.5%	6.8	1.7	58
Aug 96	819	5674	9435	53.5%	0.5%	2.9%	1.9%	6.9	1.7	51
Sep 96	848	5181	8844	55.4%	0.1%	1.1%	2.6%	6.1	1.7	60
Oct 96	847	5271	8892	53.4%	0.0%	1.1%	1.7%	6.2	1.7	57
Nov 96	880	6156	10510	52.8%	0.0%	2.3%	2.0%	7.0	1.7	68
Dec 96	791	5323	9053	56.2%	0.0%	0.1%	0.0%	6.7	1.7	49
1996	10724	80391	135945	54.3%	0.2%	1.0%	1.5%	7.5	1.7	670
Jan 97	810	5324	8985	54.5%	0.3%	4.3%	2.7%	6.6	1.7	58
Feb 97	920	7150	12077	53.3%	0.2%	1.7%	1.9%	7.8	1.7	61
Mar 97	1033	8881	14792	54.4%	0.0%	3.3%	1.6%	8.6	1.7	69
Apr 97	1082	9284	15714	53.5%	0.0%	2.1%	1.4%	8.6	1.7	68
May 97	990	7907	13294	53.3%	0.1%	1.3%	1.5%	8.0	1.7	70
Jun 97	1158	9273	15151	55.6%	0.0%	0.8%	1.8%	8.0	1.6	72.4
1997	5993	47819	80013	54.3%	0.7%	1.9%	0.7%	8.0	1.7	398
Totals:	97034	982446	1645193							

[Source: Federal Communications Commission, Washington, DC]

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EMERGING TECHNOLOGY

■ **A total of 17 Iridium low earth orbiting communications satellites have now been launched.** The first five satellites went up on May 5. Seven more were launched from Russia on June 18th aboard a Proton rocket. And on July 9th, another five satellites were blasted into space aboard a McDonnell Douglas Delta II rocket from Vandenberg AFB in California.

On July 17th came the bad news that one of the satellites was not working properly ...communications with the bird has been lost. The satellite is in a "parking orbit" awaiting its instructions to a final orbit with no means of receiving the code.

Iridium is the 66 satellite LEO network that will combine with land-based systems to provide global digital telecommunications using hand-held telephones and pagers. The \$3.45 billion system is being built for Iridium under contract with Motorola's Satellite Communications Group in Chandler, AZ.

Motorola said it would absorb any financial loss and the failure will not impact the scheduled date for commercial LEO service in September 1998.

COMPUTER INFO

■ **If you believe the hype, accessing the Web from the living room television screen will soon be the rage!**

Forrester Research said it expects the "Internet-enabled TV" market to grow to about 100,000 households this year, 400,000 in 1998 and 3.2 million in the year 2000. Another research firm said the percentage of TVs providing Internet access through set-top boxes will grow to 14.8 million within ten years -- about 14 percent of all television households.

The new low price Internet/TV surfing gadgets should begin appearing on retail shelves in September. The battle will be between two 800-pound gorillas: Oracle Corp.'s NC and WebTV which Microsoft recently bought for \$425 million.

Indianapolis-based Thomson Consumer Electronics (the company that built the first 18" dish broadcast satellite receivers) plans to roll out an **RCA-brand Network Computer** with an attached keyboard for \$299 -- \$349 with a wireless keyboard --

within 30 days. The cigar-box size set top boxes are based on Oracle's Network Computer standard.

French-owned Thomson is one of a half dozen companies (including Intel, Zenith and Uniden) to support the Web-based NC standard. NCs are dependent on networks or Internet Service Providers for software and most processing functions. Thomson's boxes will use NetChannel, Inc., (\$19.95 a month) ...an ISP out of South San Francisco, Calif. They call themselves a "TVSP" -- a television service provider -- because of its use of channel-like push technology and entertainment-oriented content.

RCA, the first NC to make it to the marketplace, is targeting the 60 million U.S. homes with TV sets but no personal computers, and 20 million homes with PCS but no modems for online and Internet access.

The NCs will go up against the \$249 **WebTV hardware terminals** from Phillips/Magnavox (1-888-813-7069) and Sony (1-888-772-SONY). A WebTV terminal allows you to surf the Internet from any television lashed to a regular phone line. And there is no software to load.

It will be interesting to see which concept takes hold. In any event, interactive two-way television is here!

■ **After 17 months at the helm, Apple Computer's directors have ousted Chairman-CEO Gil Amelio** and it appears that co-founder Steve Jobs is back making decisions.

Jobs himself was ousted as Apple chairman in 1985. He returned under Amelio as a part-time advisor in December when he sold his "NeXT Software, Inc." to Apple for \$425 million. One of his first duties is launching a new sales promotion direction. Although he is CEO of Pixar Animation Studio, he is seen as a strong candidate for Apple CEO.

Apple which once topped the U.S. personal computer market with a 14.1% share now languishes in fifth place (6.7%) and declining. Amelio's answer to profitability was a smaller Apple, but it wasn't working. Their stock sunk from a high of \$73.25 in its hey-day to \$13.69.

Apple is currently introducing an upgrade of its Macintosh operating system called Mac OS-8. But it isn't the "really big" upgrade (code-named "Rhapsody") that is based on Job's "NeXT technology." That operating system -- due for release next year -- has features that are similar to

"Windows" ...such as multi-tasking.

INTERNET NEWS

■ **Hormel Foods Corp doesn't like junk e-mails being referred to as Spam**

-- its famous trademarked canned meat product. Minnesota-based Hormel has asked the nation's largest bulk e-mailer, Philadelphia-based Cyber Promotions, to stop using the term and to not display cans of Spam when promoting the bulk e-mail business.

However, Cyber Promotions founder Sanford Wallace -- sometimes known as "Spamford" -- says the company will continue using the word on its Internet site. Wallace says he "...doesn't believe it's trademark infringement to use a slang word." [Reported by the Associated Press]

■ **Hello! Are you out there?** An upgrade of the "MSN" Microsoft online network scheduled for this fall will include a feature that will permit subscribers to determine if their friends are online when they are. It will also contain new e-mail and file attachment improvements ...and make better use the new upgraded Internet Explorer 4.0 browser set for release later on this year.

The service will also shifting focus away from online shows similar to television and will go with a more standard information-oriented format. And some exclusive programming previously available only to paying subscribers will be offered free.

MSN has about 2.3 million customers. Last December MSN said they would have 3.2 million by June 1997. But they did not come close. Market leader, America Online has more than 8 million.

■ **Forget about your privacy! You give that up in exchange for free e-mail** -- The Juno E-Mail Service now has some 2.4 million members. Juno offers their e-mail service "free" providing consumers complete a detailed questionnaire.

The advertising supported service then shares the user data with marketers so that they can better target their advertising. Juno has three types of "targets."

- 1) "**Maximum Reach**" (at \$25 per thousand - apparently everyone fits here);
- 2) "**Defined Segments**" (at \$50 per thousand - targets one of 10 demographic and lifestyle categories) and;
- 3) "**Custom Targeting**" (\$75 per

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thousand pinpoints specific demographic and psychographic data.)

And don't be surprised who knows about you. Juno provides the data in its files to advertisers. It's the price you pay for free e-mail. Trade magazine *Advertising Age* said Juno's advertisers include such big companies as Microsoft, American Airlines, American Express Co., Bristol Myers/Squibb Co., and Quaker Oats.

WASHINGTON WHISPERS

■ **On July 10th, the FCC's Office of Engineering and Technology issued a Public Notice warning companies that offer to modify scanners** (this includes many H-Ts with extended receive coverage) in order to receive cellular telephone frequencies that this activity prohibited by federal law and FCC rules.

The reminder noted that scanning receivers must be FCC-certified and incapable of readily being altered by the user to operate on the cellular telephone bands.

"Scanners that are capable of 'readily being altered by the user' include, but are not limited to scanners to which the ability to receive cellular telephone frequencies can be added by: installing or clipping the leads of a simple component, such as a diode, resistor and/or jumper wire; replacing a plug-in semiconductor chip; or programming a semiconductor chip using special access codes or an external device. Scanners and frequency converters for use with scanners, must also be incapable of converting digital cellular frequencies to analog voice audio."

"The modification of scanners on a substantial scale to receive cellular frequencies will be considered to constitute manufacture of such equipment" in violation of federal law and FCC rules, the Public Notice said. "Entities engaged in such activity are cautioned to cease advertising and/or performing any such activity immediately."

"The Commission will vigorously take enforcement action against parties found to violate ...these rules."

■ **The scanner hobby could be in danger of extinction!** U.S. Representative, Edward Markey (D-Mass.) introduced legislation on June 19, 1997 that would **prohibit the sale and manufacture of any scanner capable of receiving Commercial Mobile Radio Service (CMRS)**

frequencies. The bill has since been referred to the House Subcommittee on Telecommunications, Trade, and Consumer Protection.

H.R.1964 -- the *Communications Privacy and Consumer Empowerment Act of 1997* -- Section 104 proposes major changes to Section 302(d) of the Communications Act. This is the federal law that prohibits the manufacture of any scanner capable of receiving the cellular telephone bands. Markey wants the wording changed from "the domestic cellular radio telecommunications service" to "a commercial mobile service -- as such term is defined in section 332(d)." That includes any "for profit" mobile radio service that can be connected to the telephone network.

Recent legislation brought all "for-profit" mobile radio services under the CMRS umbrella. This is now an extremely broad category! Some examples of CMRS frequencies (which are auctioned to the public) include paging systems, the Business Radio Service, Specialized Mobile Radio (SMR) services, 220-222 MHz Land Mobile systems, and various other telephone-interconnected services to the public (such as paging, radiotelephone, cellular, air-ground, off-shore radio, most types of mobile satellite services and the Personal Communications Services PCS.)

Since CMRS spectrum is widely scattered from 30 MHz to 2 GHz, if H.R. 1964 is adopted, VHF/UHF scanner radios as we know them could effectively be banned from the marketplace since they could not receive FCC equipment authorization..

■ As an alternative to failed indecency legislation, **Section 103 of that same bill requires Internet service providers (ISPs) to make blocking software -- or "B-ware" (as Markey calls it) -- available to their customers.** The screening software would permit the customer to limit access to material that is deemed inappropriate for children. "Such software shall be provided either at no charge or for a fee that does not exceed the cost of such software to such provider," the bill reads.

But there is reason to believe that "parental control" screening software is not the answer! *Consumer Reports* tested five blocking software packages and found them lacking. CNN reported that in every case, at least some of 22 pre-selected adult-oriented Web sites could be

reached by children. **SurfWatch** fared best. It blocked 18 sites. **Cyber Patrol** intercepted 16 of 22 and **Cybersitter** blocked 14. Microsoft's **Internet Explorer** stopped just three and **Net Nanny** was the worst -- it didn't block any of the porno sites.

■ **The Federal Trade Commission, on the other hand, does not want any federal Internet regulations** covering privacy and children's content. They call for voluntary industry efforts. FTC Chairman Robert Pitofsky agrees with the Clinton administration position which is now opposing Internet only taxes and content restrictions.

Toward that end, **Rep. Billy Tauzin (R-La) has introduced the Internet Tax Freedom Act of 1997.** It mirrors a similar bill sponsored in the Senate by Ron Wyden (D-Ore.) Both bills have the support of the Clinton administration.

The bill notes that there are more than 30,000 taxing jurisdictions in the U.S. and precludes commerce conducted on the Internet from being milked in cyberspace as a virgin cash cow.

"Technologically neutral taxes" may be levied -- such as sales, gross receipts, property and business license taxes -- but not commerce conducted on the Internet.

■ **Radio Officers aboard large ships are saying that the new GMDSS which is to replace Morse at sea is a dismal failure.** On the other hand, the new DSC (digital selective calling) and satellite-based maritime communications system is forcing them out of a job so their opinions are certainly not impartial.

Under the Global Maritime Distress and Safety System, Radio Officers will be replaced by two (non-technical) GMDSS operators when Morse is phased out on Feb. 1, 1999. Radio watches on 2182 kHz and VHF Channel 16 (156.8 MHz) will be discontinued. The 500 kHz radio-telegraph frequency is already gone.

The biggest problem seems to be an abundance of VHF/UHF "EPIRB" false alarms. Emergency position indicating radio beacons (EPIRBs) are float free devices that facilitate search and rescue. The false alarm rate is said to be 90%, so high, that they are assumed to be false. 500 kHz Morse had less than a 1% failure rate, the Radio Officers point out. Shipowners are in favor of the GMDSS since it saves them money.

■ **If adopted, the Internet**

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Prohibition Act of 1997 will have a big impact on what you do in the privacy of your home! This bill -- co-sponsored by Jon Kyl (R-Az), Charles Grassley (R-Ia) and Diane Feinstein (D-Ca) -- seeks to criminalize all forms of gambling on the Internet. Web site operators face fines of up to \$10,000 and 2 years in jail; while bettors face \$5,000 penalties. The bill also forces ISPs to discontinue service to gambling sites. The act would not affect off-shore gambling sites. To combat the lack of jurisdiction, the Dept. of Justice would be required to chase down home gamblers in the U.S. ISPs could even be forced to turn over the identities of users that access certain sites. No one (except tax collectors) are happy with the bill.

■ **The administration's "cash cow" gets more inventory! The FCC has recouped TV channels 60 through 69 back into their spectrum arsenal.** The spectrum (746 to 806 MHz) will be allocated to public service agencies or sold to the highest bidder at auction. Forty percent of the 60-MHz spectrum slice will be used for ambulance, public safety, police radio and the like -- the rest gets sold to commercial services for mobile phone and two-way radio use.

■ **The radio spectrum is selling well. The problem is paying for it!** The FCC raised \$10.2 billion last year when it auctioned 493 licenses to offer a new form of cellular-phone service called PCS (personal communications services.)

To help bidders pay for their licenses, the FCC is expected to permit annual installments rather than quarterly payments. The amount bid, however, would not be reduced.

The objective is to ease the short-term pressure on licensees and give them time to raise the money and to build their new phone networks. Bidders had asked the Commission to postpone spectrum payments for up to eight years or to reduce the amount by more than half.

AMATEUR RADIO

■ **British Admiralty Retires Visual Morse Code** -- (Edited article by Andrew Gilligan of *The Daily Telegraph*, London, July 13, 1997)

After 130 years, the Royal Navy is turning out the lights on visual Morse code. Masthead signaling lanterns - used by warships to communicate with each

other through some of the most famous naval battles in history - have been declared redundant by Admiralty chiefs in an era of secure communications. Recruits will no longer be trained to operate the Morse buttons by which messages could be flashed to other ships, and the lights themselves will be gradually decommissioned.

The idea of flashing dots and dashes from a lantern was first put in to practice by Captain, later Vice Admiral, Philip Colomb in 1867. His original code, which the Navy used for seven years, was not identical with Morse, but Morse was eventually adopted with the addition of several special signals. Flashing lights were the second generation of signaling in the Royal Navy, after the flag signals most famously used to spread Nelson's rallying-cry before the Battle of Trafalgar.

Ships will still retain Aldis lamps either side of the bridge, however, but signaling with these is complicated, involving transmitting signals in relays. Paul Elmer, of Naval Support Command, said: "Morse is just not used operationally any more. We have got much better, cleverer and more sexy stuff."

The move, announced in a Defense Council Instruction, recognizes that the lights have not been widely used at sea "for some considerable time". But a combination of inertia and respect for tradition means that nearly all large Naval ships are still equipped with them. Mr Elmer said: "Their heyday was the two world wars when they were used a lot for close convoy work. They were quite small and you could flash to other ships in the group without the enemy seeing."

The lamps, which were omni-directional, were used to give commands to every ship in the group at once. The lamps' advantage -- and one of the reasons why they have survived so long -- was that, unlike radio communications, they could not be intercepted by enemy vessels. "They were at their best during radio silence. You had to be quite close to see them," said Mr Elmer.

Now, however, the Navy has several secure communications systems that can send vast quantities of information between ships without risk of interception -- and at infinitely higher speed than a man flicking a light on and off in dots and dashes. New-generation warships are increasingly equipped with computers that continuously share information with others nearby, and with shore bases, along invis-

ible data highways.

■ **At their July 18 and 19 meeting in Rocky Hill, CT, the ARRL's Board of Directors:**

- resolved to support legislation that would provide statutory protections for ham radio frequencies. In taking this action, the Board cited the potential threat to Amateur Radio bands from the federal policy of selling spectrum to the highest bidder.

- voted to seek primary Amateur Service allocations of 5650 to 5725 MHz and 5825 to 5850 MHz in the 5650 to 5925 MHz band that is now a secondary allocation.

- Voluntary band plans would be referenced in the FCC's rules under another Board action. Noting the erosion in the level of compliance with the various band plans, the Board voted to petition the FCC to amend the amateur rules to state that hams "should be familiar with, and should abide by" voluntary band plans that apply to the frequencies they use.

- In another action, the Board voted to volunteer the League's services as a special event call sign common data base coordinator. The Board approved a motion to submit a request in response to a recent FCC invitation. The request will "express the League's interest in serving as a special event call sign coordinator at no cost to the applicants." The League would cooperate with other groups or individuals the FCC might select to serve as coordinators. Among other things, the League would work with them to develop common guidelines to govern the reservation of special event call signs.

- Under a new policy approved by the board, ARRL Volunteer Examiners will not administer exam elements for which they have received credit on the basis of a medical exemption. The Board also proposed changes in the FCC's Volunteer Examiner rules to require that applicants attempt an accommodated Morse code exam before seeking a medical exemption, and to ensure that medical information supporting an exemption is on file before the application for exemption is forwarded to the FCC.

- Noting that no clear consensus has emerged in the wake of suggestions to restructure the Amateur Radio licensing system, the Board voted to extend the period for member comments. At its January meeting, the Board had received a committee report that offered several

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suggestions to revamp the amateur licensing system. Until further notice, members may continue to direct comments on restructuring to their ARRL directors. The Board plans to revisit the issue later.

- In other action, the Board: approved a change in Field Day rules to add non-CW digital modes as a separate mode.

- called for the convening of an industry standards conference to explore adoption of common interconnection standards for Amateur Radio equipment. The Board said that adoption of common standards "would reduce the cost and complexity of Amateur radio stations."

- authorized President Rod Stafford, KB6ZV, to appoint an exploratory committee to determine the best way for the ARRL to pursue the development of endowment funds to maintain certain essential ARRL activities "despite budgetary pressures."

- directed the introduction of a program to coordinate a nationwide effort to enlist local volunteers from ARRL-affiliated and special service clubs "to introduce young people to technology through Amateur Radio and to potential careers in technology." In approving the resolution, the Board cited the increasing importance of technological literacy and President Clinton's call for greater volunteer efforts on behalf of youth.

- approved the addition of a system of technical awards to recognize achievement in technical service, innovation, and microwave development.

- voted to have the Volunteer Resources Committee review the duties and responsibilities of the State Government Liaison and consider renaming the position. [Thanks, ARRL]

- **During mission STS-94, the ham-astronaut crew aboard the shuttle Columbia in July managed a first for the Shuttle Amateur Radio Experiment (SAREX) program.**

STS-94 marked the 24th SAREX mission. The mission -- a "refly" of the aborted STS-83 mission in April -- carried the same crew members and the micro-gravity science lab payload.

Aboard the shuttle were Jim Halsell, KC5RNI, the mission commander; Janice Voss, KC5BTK; and Donald Thomas, KC5FVF, who set up the orbiting ham shack.

On Monday, July 14, the shuttle crew spoke with students at Tsinghua University in Beijing on mainland China. The

contact was via a telebridge link with Gordon Williams, VK6IU, in Western Australia. The successful QSO marked the first SAREX contact with a school in the People's Republic of China.

On the first scheduled orbit for the Tsinghua University contact, the designated crew member, Payload Specialist Roger Crouch, was busy with primary mission duties. The SAREX ground team stayed up late and managed a successful QSO on the following orbit. There were 30 people in the Tsinghua University audience, along with Chinese television, Chinese government officials, and some Chinese IARU representatives.

David Chang, BY1QH, coordinated the contact at the university's end. Despite some rough copy, the contact went "very well" with 10 questions asked and answered, according to SAREX Principal Investigator Matt Bordelon, KC5BTL.

The Chinese contact was one of 17 scheduled SAREX QSOs the STS-94 crew members completed during their 16-day mission. Overall, ham radio had a very prominent role in the mission, which not only completed all of the scheduled SAREX contacts with school groups but made numerous random QSOs with earth-bound hams.

The Columbia crew stowed the SAREX equipment on July 16 and the shuttle landed safely at the Kennedy Space Center in Florida on Thursday, July 17, at 1047 UTC. [Thanks, AMSAT & ARRL]

- Your editor, **Fred Maia, W5YI will be journeying to New York City on November 21st** to accept an award from the **Radio Club of America** at their annual banquet. He was elevated to the rank of "Fellow" on June 7, 1997 by unanimous vote of the organization's Board of Directors. The Radio Club of America is the world's first radio communications society having been formed in 1909. Membership is by invitation only.

The Radio Club of America was founded by four teenagers who were members of a model airplane club, the Junior Aero Club of U.S. In conjunction with their experiments in aviation, the youngsters were also interested in what was known as wireless. In fact, the new idea of sending messages without wires had proved so fascinating, that they found themselves actually devoting most of their spare time to tinkering with wireless apparatus. There were at this time a small number of so-called amateur wireless

experimenters in and about New York City, so the boys decided to form a new club with wireless as an object. At a special meeting of the Aero Club on January 2, 1909, the Junior Wireless Club Ltd. was founded. On October 21, 1911 the name was changed to the Radio Club of America. It continues today as the most prestigious society devoted to the radio art. The 1997 Awards Banquet will be held at the New York Athletic Club.

- **Remember that it is no longer appropriate for the public to call their local FCC field office** to obtain information, make inquiries or to report a radio related problem. The field offices no longer have the staff to handle these inquiries. All FCC related phone calls from the public must go to the:

**CIB (Compliance and Information Bureau) Call Center at
1-888-225-5322 (1-888-CALLFCC.)**

Note that this toll-free phone number's area code is 888 (and not 800). Please give this phone number wide circulation.

- **Due to new Element 2 and 3A question pools, the number of first time licensed Technician amateurs has nose-dived!** The license examination questions changed on July 1st. The revision not only included new and updated questions - but an increase in the total number of pool questions from 632 to 924 - including 176 questions on the new RF Safety topic.

The average weekly number of new Technician amateurs normally runs around 500. The last week in June it jumped to 1047. June 28th (a Saturday) was a very heavy testing day for all VECs as applicants rushed to get under the June 30 deadline. It took a couple of weeks into July for all June Form 610 applications to be processed. For the week July 15-21 (the first full week reflecting the new pool) only 80 applications for new Technician licenses were issued by the FCC -- the smallest amount ever since we have been keeping records! This is undoubtedly a temporary situation and the number of new Technicians (which account for 85% of new licenses) should eventually return to normal. We will keep you posted. Our licensing information is developed by scanning the FCC database by date range for new licenses by license class. The software that performs these calculations was written in-house.

FCC Rulemaking Issues → → → *Continued from page 3*

"Since we met here last summer, a number of things have happened that affect your VEC system. Your 'sundry' rules were adopted and became effective. This rule making modernized your exam administration requirements. They are intended to provide your VEs with the flexibility to tailor their activities in ways that allow them to administer examinations most efficiently, yet retain the safeguards that you believe are necessary.

"There was the 'RF exposure safety' matter. I owe you an apology for not being able to give you a 'heads-up' on this one at your Conference last summer. I didn't learn about it myself until after your conference. So, I ask you to accept my sincerest regrets for that... along with my admiration for the way you have responded to the new requirements.

"There was also the 'Order' waiving certain rules to allow you to file electronically non-exam related Forms 610 on behalf amateur operators. There was the Universal Licensing System initiative. You're to receive a briefing on the 'ULS' later this morning. Let's take a quick look at these matters in a bit more detail.

VE Teams and Session Managers

"We have discussed at several of your Conferences the organizational evolution that was obviously taking place. Your VEs were forming themselves into 'teams' and relying upon a 'VE session' manager to make the testing process run smoothly.

"The rules for the VEC system, however, were based upon the 'three-VEs-on-one examinee' model. It envisioned that the same three VEs would simultaneously carry out all aspects of administering an examination to each examinee. Consequently, the rules did not provide for teams and managers. That situation was becoming more and more awkward. Your VEs were asking us questions about things that did not comport with the 'three-VEs-on-one examinee' model.

"With an average of seven or eight examinees per session where a dozen or more elements must be administered, it is not surprising that many of your VEs find it more efficient to function as a team. Nor was it a surprise that they designate one VE in the team to organize the activities and to provide liaison with you.

"Some of you pointed out that several groups of VEs are required to administer test elements at examination sessions where there are large numbers of examinees. Some VEs find it more efficient to call upon still other VEs to administer test elements for them. What is the all-time record for the number of examinees at a one-day exam session? *[WCARS holds the record! They recently examined 300 applicants at a hamfest.]*

"Also, while I have this opportunity, I would like you to record in the minutes your best estimate of the number of VEs that you have accredited currently. From time-to-time, I use the number '30,000 VEs' as a gauge of the scope of the volunteerism that is going on. That

30,000 is a number that I obtained here from you a few years ago. *[The VECs agreed that the figure was probably around 35,000 to 37,000 now.]*

"Here's a summary of the highlights of the new provisions:

- (1) Each examination element for an amateur operator license must be administered by at least three VEs at an examination session coordinated by a VEC.
- (2) The three VEs who sign the certification statement are jointly and individually accountable for the proper administration of each examination element reported on the examinee's license application.
- (3) Your VEs may -- but are not required to -- delegate to other qualified VEs the actual administration of test elements. The certifying VEs may delegate their authority, but not their accountability.
- (4) Your VEs may -- but are not required to -- form themselves into teams.
- (5) A VE team may -- but is not required to -- select a VE session manager to organize activities at an examination session and conduct liaison functions with the coordinating VEC.
- (6) The VE session manager must be accredited as a VE by the same VEC that coordinates the examination session. The VE session manager may serve concurrently as an administering VE.
- (7) The administering VEs or the VE session manager must ensure that prior public announcement of the sessions is made.
- (8) The coordinating VEC is responsible for resolving discrepancies appearing on the license application document and verifying that the VEs' certification statements are properly completed.

On RF Safety

"The FCC has adopted new guidelines and methods for evaluating the environmental effects of RF radiation from FCC-regulated transmitters. The FCC found it to be your duty to prevent your station from transmitting from any place where it could cause human exposure to levels of RF radiation that are in excess of the guidelines.

"You VECs didn't waste any time. You came out with a new question pool, including RF safety questions, for your element 2 written exam. Your VEs are already asking five questions about the things the operator of every amateur station needs to know about basic RF safety.

"You also came out with a new question pool, including RF safety questions, for your element 3(A) exam. Your VEs are asking five questions about the things the operator needs to know about RF safety at your VHF and UHF stations.

"You are now working on a new element 3(B) exam question pool. You're going to be asking five questions about the things the operator needs to know about RF safety at your MF and HF stations. I understand that

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your schedule for that is next summer.

"The FCC also adopted your suggestion that all amateur operators be required to certify that they have read and that they understand the rules regarding RF safety and the OET Bulletin Number 65 at the time of filing a license application.

"Some of you are helping out with the preparation of the OET Bulletin. Please keep it simple! Remember, it must be understandable to children who are -- or who want to be -- amateur operators. I hope you will not make it so complex that it excludes them from participation in amateur radio.

VECs and Non-Exam Activities

"We had received a request from Fred Maia to authorize you VECs to file, on behalf of amateur operators, applications for non-exam related license modifications and renewals. The *Communications Act*, however, only authorizes the FCC to utilize the voluntary and uncompensated services of amateur operators in 'preparing and administering examinations' for amateur operator licenses.

"That is the basis for the FCC reliance on you to coordinate the efforts of the VEs. As part of that coordination process, you receive the examinees' application forms from the VEs, screen them and -- for qualified examinees -- forward electronically the data thereon or forward the application document to the FCC.

"There is available -- as a result of the VEC system -- software, hardware, procedures and know-how that can also eliminate delays in non-exam related license renewal and modification. While the capability for everyone to electronically file non-exam related transaction is evolving, there is a proven capability already in place.

"As a result, an Order was adopted to authorize -- but not require -- any of the 16 organizations that are VECs to file amateur service license renewal and modification applications electronically on behalf of amateur operators.

"This Order waived Section 97.21 -- which requires application documents for non-exam related transactions sign to be submitted to the FCC address -- to the extent that the requirement is considered satisfied when the Form 610 document is received by your organization, screened, and the data contained therein is forwarded electronically to the FCC.

"Because license renewal and non-exam related modification transactions are not examination preparation or administration functions, this activity is separate from your responsibilities as VECs, to be provided at no cost to the Government. Any fees or compensation that you receive from providing this service must come from the users. You are not required to perform this service. The applicants are not required to use your service.

"All-Electronic" Licensing

"Since the very beginning of the VEC system, we

have looked toward the day when we would have an all-electronic licensing system... one where 'paper' played no part. Your electronic filing initiative was the opening kickoff toward that goal. The vanity call sign system is providing a huge gain. The Universal Licensing System project will be another gainer.

"The amateur service, however, is carrying some baggage left over from previous eras. It can lighten up. You don't want to load up the ULS with any unnecessary requirements. Let's review the license processing work the FCC does for the amateur service.

"There is Form 610-A. You have operators here from countries that have a reciprocal operating agreement with the U.S. These include Canada and a lot of other countries. The rules authorize a Canadian citizen holding a Canadian amateur service license to operate here. Canadians don't obtain a reciprocal permit.

"But amateurs from every other reciprocal country must obtain a Form 610-A... '*Application for Alien Reciprocal Permit*'. That sometimes is not so easy to do in places like Cape Town, Port Moresby and Osaka. Then they have to fill it out, mail it off to Gettysburg, and hope the permit arrives before they depart on their trip to the U.S. Does this complicating requirement serve a useful purpose? Can't the amateur operators of all reciprocal countries -- not just Canada -- be authorized by rule to operate here?

"Then there is Form 610-B. You have clubs that want to operate their stations under a unique call sign. They have to obtain a Form 610-B... '*Application for Club Station License*.' Then they have to fill it out, mail it off to Gettysburg, and wait for the listing to show up on the data base.

"*The Communications Act*, however, authorizes the FCC to use the voluntary, uncompensated and unreimbursed services of amateur radio organizations that are tax-exempt for purposes of providing club and military recreation station call signs.

"Several organizations have volunteered their services for this work. Unfortunately, a minor disagreement arose amongst these organizations. Has the tension subsided to a level such that any tax-exempt amateur radio organization that completes one of Judy's (*Judy Dunlap/FCC Gettysburg, PA/Licensing Division*) pilot electronic filing projects could be authorized to handle club and military recreation station applications?

"Then you have that license document. For several years now, the rules have provided that operation is authorized when the licensee information appears on the data base. The rules use the term 'license grant'. Your authority is dependent upon your 'license grant' appearing in the data base.

"From the number of E-mails I receive asking for the path to the data base, I think you may have already turned the corner on this. But we still get inquiries from hams who just can't believe that they no longer must wait until a license document is in hand before getting on the air with their new call signs.

"I carried my paper license in my wallet for over forty years. During all that time, no one ever asked to see it. I once tried to trick a ham into looking at my license. I worked out a diabolical plan to sneak up on him from the rear and flash it before his eyes. But he caught on to what I was trying to do just in time to cover them and turn his head. There's no room in my wallet for paper that no one wants to see.

"How many of you have recently modified your license grant by changing your license class, your name or your mailing address? How many of you have modified your license grant by obtaining a vanity call sign? Among those who raised their hands, how many of you still have your former license document? There's nothing on that document indicating that it has been superseded, is there?

"There must be thousands of superseded license documents floating around out there that appear on their face to be current. Perhaps the private sector could offer certificates attesting that the data appeared on the data base as of a certain date. I have heard that some may already be doing that.

"Then there is the sequential call sign system. Has its time in history passed with the arrival of the vanity call sign system? In most regions, there are no more 'never-before-assigned' call signs in Groups A, B and C. Maybe all new hams should get a Group D. Then they can obtain a call sign more to their liking under the vanity system.

Other amateur service issues

"Here are some of the things that could possibly affect your activities.

- We have a petition from the League to allow Advanced Class operators to administer your 13 words-per-minute telegraphy exam.
- We have had complaints of lack of exam opportunities where the exams are administered in the Spanish language. One party claims this warrants establishing additional VECs for this purpose. Some of you have noted a demand for exams administered in Spanish. You have been successful in developing that capability at least somewhere. How many of you VECs coordinate any sessions where the exams are administered in the Spanish language? Of those raising their hands, how many will coordinate a session anywhere where the exams are administered in the Spanish language? The need for a Spanish language capability in connection with more and more activity seems to arise more and more frequently. I notice in your magazines that some of your '800 number' suppliers advertise that they have developed this capability. This Conference provides you VECs who have developed a Spanish language capability with the opportunity to share information with those who haven't.

- Another development is that there is a lot of interest in the capability of the amateur service in providing emergency communications. We seem to be receiving more and more inquiries from local governments about the types of communications for which your frequency bands can be used. In fact, I placed a 'FAQ' sheet on that topic on the FCC's amateur service home page. There have also been several petitions filed that relate to the topic of providing emergency communications:
 - In RM-9113, the petitioner wants to permit retransmission of emergency weather information.
 - In RM-9114, the petitioner wants amateur operators at amateur stations engaged in disaster relief to be allowed to accept pay.
 - In RM-9115, the League wants to relax the limits on RACES stations.

"Ladies and gentlemen, that is your report from Washington. We'll be here to contribute to your Conference in whatever ways we can. We want you to have another highly successful conference."

Gettysburg's Larry Weikert then took the podium and discussed several VEC related issues.

Universal Licensing System

The Wireless Telecommunications Bureau (WTB) is in the process of replacing its ten separate licensing/application processing systems with a single integrated licensing system and database -- the Universal Licensing System (ULS). The goal of ULS is to expand electronic filing, speed licensing, and provide a simple method to obtain data concerning the wireless spectrum.

The FCC's Karen Wrege and Tom Dombrowski (with the assistance of three other people) gave an interesting presentation on the upcoming Universal Licensing System. The Commission currently uses 65 different forms. The objective is to have one system and an absolute minimum of forms. Each service will use the same form ...together with a different "schedule" pertaining to that particular service. This is the same work group that also developed the interactive Vanity Call Sign Form 610-V application form and the Amateur station information Query System that is on the Internet.

Special Event Call Sign System

Fred Maia, W5YI demonstrated an interactive on-line "real time" relational database system which is being maintained by the VECs to facilitate the efficient issuance of "One-by-One" format Special Event Call Signs in the amateur service. The system -- located on the Internet's World Wide Web at <http://ncvec.spindle.net> -- permits FCC approved coordinators to post "1x1" special event call sign reservations. It is also accessible from the W5YI Group's web page (<http://www.w5yi.org>). The FCC will begin accepting coordinators on Aug. 1, 1997. One-by-One call signs will be available shortly thereafter.