W5YI

Nation's Oldest Ham Radio Newsletter

REPORT

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★ *In This Issue* ★

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FCC Adopts Rules to Implement Vanity Call Signs

It took a month for the FCC to release the text of a news bulletin notifying the amateur community that on Dec. 23, 1994, it took final action on PR Docket No. 93-305. That proceeding seeks to make available personalized amateur service call signs chosen by the ham operator. The *Notice of Proposed Rulemaking* looking toward vanity call signs was adopted more than a year ago ...on Dec. 13, 1993.

Up until recently, the FCC did not have the capability to issue specific call signs. The Commission's new amateur service computer process which came on-line during the final quarter of 1994, however, had this feature built into it.

When the FCC issued the NPRM, it said in the press release "In the future, this new automated processing system might allow amateur radio operators to check for call sign availability on their own, through an on-line system and ultimately, amateur license applications might be processed electronically. This would further ease the process for both the operators and the Commission."

We understand the FCC is considering putting a read-only copy of its amateur data base on the Internet.

Applicants for a vanity call sign must use a new application form, FCC Form 610-V - which has yet to be released by the Commission. The FCC proposed that each applicant for a Vanity Call Sign would list a maximum of ten call signs, in order of preference and then file the form with the Commission. The requested call signs had to be within the framework of the existing Group A, B, C and D call sign assignment procedure.

That meant that a Novice operator who is normally assigned a Group D (2x3 format) call sign could not apply for a Group A (1x2 for example) call sign. The FCC's new amateur processing system electronically compares this list to available call signs and issues an unassigned call sign that is highest on the list.

Still unanswered (at press time) is how the public will have the capability to check for call sign availability. The FCC said in the NPRM, (seemingly in conflict with the press release) "Even with our enhanced licensing system, we do not currently envision on-line access by the public to check for call sign availability." They asked for comments on how this service could be made available.

The Commission added, "...the amateur service is on the cutting edge of information technology. ...Our goal is to accept eventually applications for licenses or call signs electronically. We may even be able to issue the licenses electronically at some future date."

The Vanity Call Sign System is in addition to the current sequential call sign system already in place. Amateurs will be able to select a call sign of their choice only after first being assigned a regular call sign. The sequential call sign gets traded in for a user selected call. The FCC

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initially did not propose that Vanity call signs would be issued on a preference class basis. But that is not what the American Radio Relay League (and many other NPRM commenters) wanted.

Surprise number 1: Yielding to the comments, the FCC established a system of four different application priorities.

Here is the text of the *News Bulletin* issued by the Commission on January 24, 1995. (The actual *Order* stating the exact rules concerning Vanity Call Signs should follow within a week or so. Hopefully, they will be included in our next issue.)

COMMISSION AMENDS AMATEUR SERVICE RULES TO IMPLEMENT A VANITY CALL SIGN SYSTEM

(PR DOCKET NO. 93-305.)

In recognition of the strong sense of identity among amateur operators that is grounded in the call signs of their stations, the Commission has decided to offer a vanity call sign system to the amateur service community. The Commission will also resume issuing new club and military recreation station licenses. The Commission said these actions are fundamental to its commitment to putting the needs of people first in providing the services that they want.

Each new amateur station licensed by the FCC is assigned a unique call sign. An automated process selects the call sign in accordance with the sequential call sign system. Until recently, the Commission was unable to accommodate the many thousands of requests for call signs of the licensee's choice. The Commission stated that one of its many steps in reinventing Government is to implement new licensing processing capabilities that make it practicable to grant such requests.

The Commission will implement the new system by using a series of four "starting gates."

- Gate One: would allow a previous holder of a call sign to apply for that call sign or, where the holder is deceased, a close relative could apply.
- Gate Two: would allow the 66,000 Amateur Extra Class operators, who have passed the most difficult license examinations, to apply.
- Gate Three: would allow the 112,000 Advanced Class operators, who have passed the second most difficult license examinations, to apply; and;
- Gate Four: would open the system to any licensee, including a club station license trustee applying for the call sign of a deceased former holder.

The Commission will announce the opening of each gate by a *Public Notice.* The first gate will open as soon as the new application form, FCC Form 610-V, is available and the Commission's licensing facility is prepared to begin processing the applications.

With respect to new club station licenses, the Commission stated that persons not already holding a club station license must first apply for and receive a license before filing an application with the fee collection contractor requesting that the license be modified to show a vanity call sign.

However, the Commission will begin accepting applications for new club and military recreation station licenses on the date the Report and Order in this proceeding becomes effective.

FCC SEEKS TO REVISE ITS REGULATORY FEES

Surprise number 2: Vanity call signs won't be free! Contrary to what you have heard, vanity call signs originally got their start when a Texas amateur told Congress that ham operators would be willing to pay for specific arrangements of call letters.

Congress was considering regulatory fees at the time and approved a $7 annual fee - or $70 for a ten year term. The ARRL wanted a one time $150 application fee for a vanity call sign and apparently convinced Congress. But the massive telecommunications bill to which it was appended failed to pass the rad Congress.

Regulatory fees (covered under Section 9 of the *Communications Act)* reimburse the government for their enforcement and regulation of radio and wireline communications ...and for user services and international activities. Application fees cover the cost is issuing a license or permit. The assignment and collection of fees is handled by the FCC's Managing Directors office.

On January 12th, the Managing Director's Office released a *Notice of Proposed Rulemaking* that looks towards revising its Fiscal Year 1995 Schedule of Regulatory Fees. FY-1995 actually started last Oct. 1st, so the NPRM has been put on the fast track! Comments close on February 13, Replies only 15 days later.

The FCC proposed new adjustments that would recover $116,400,000 in FCC costs. Many of the new proposed regulatory fees are higher. And well they should be since the FCC only had to recover $60 million in FY 1994.

Four FCC bureaus account for all of the regulatory fees. (Private Radio, Mass Media, Common Carrier and Cable Services.) The Managing Director's Office wants $8.5 million of the $116 million to come from Private Radio ...or as it is called now, the Wireless Telecommunications Bureau. This amount is based on FTE's (FCC *Full Time Equivalent* employment.)

Section 9 requires that fees take into account the benefits provided to the user. Exclusive use licensees pay a higher fee. Shared frequency use services (such as the Amateur Service) are charged less.

There were no changes proposed over the current $7 annual fee for exclusive (frequency) use in the Land Mobile, Microwave or the Interactive Video Data Service. IVDS is the new 2-way television communications system that is just now in the process of being developed and implemented.

The shared use services changes, however, were all drastically reduced! The Marine (ship and coast station), Private Land Mobile (Part 90/95 communications between vehicles, persons or to fixed stations on a shared basis - including radiolocation and paging), Aviation (aircraft/ground), General Mobile Radio Service (GMRS) and Amateur Radio Vanity Call Signs were reduced to a $3.00 annual regulatory fee. Cellular telephone providers are to be assessed 13¢ per subscriber.

The Managing Director's Office said in the NPRM, "Our FY 1995 cost allocation to Amateur Vanity Call-Signs is $60,000... Payment units for Amateur Vanity Call-Signs are estimated to be 2,000 licenses. Dividing this service category's cost allocation by its estimated payment units and license term of ten years results in a fee of $3.00 per year per licensee. Thus, we are proposing that applicants for amateur vanity call-signs be subject to a $3.00 annual regulatory fee per call-sign, payable for an entire ten year license term at the time of application for a vanity call sign. The total regulatory fee due would be $30 per license for the ten year license term. ..."

A footnote reminded the public that amateur radio operator licenses are exempt from user fees, but that "...section 9(g)'s fee schedule explicitly includes 'Amateur vanity call signs' as a category subject to the payment of a regulatory fee."

So, assuming that the Commission's NPRM is adopted (and we assume that it will be), a vanity call sign goes down (from $70) to $30 for a ten year term. That certainly was not anticipated!

Strangely, no mention whatsoever was made in the NPRM of the Regulatory Fees that apply to the FCC's Commercial Radio Operator program! We assume that the $7.00 per year annual fee still applies to licenses that are issued for five years (i.e. Marine Radio Operator Permit, 1st/2nd/3rd Radiotelegraph and the new GMDSS Operator/Maintainer licenses.

The lifetime term Restricted Permit and the General Radiotelephone Operator License (GROL) currently have no regulatory fee associated with them since Congress never told the Commission how many years a lifetime represents. And they still have not so we assume the RP and GROL will still have no regulatory fee associated with them. The FCC staff wanted to use an arbitrary 15 year figure for lifetime licenses, but the Commissioners would not go along with it.

AMATEUR RADIO CALL SIGNS

...issued as of the first of January 1995:

Radio District	*Gp."A" Extra*	*Gp."B" Advan.*	*Gp."C" Tech/Gen*	*Gp."D" Novice*
Ø (*)	AAØVB	KGØSL	(***)	KBØQDK
1 (*)	AA1LQ	KD1YQ	N1TYE	KB1BMP
2 (*)	AA2VD	KF2ZP	(***)	KB2SZC
3 (*)	AA3JO	KE3QT	N3UDE	KB3BGA
4 (*)	AE4BG	KS4KC	(***)	KE4UEJ
5 (*)	AB5ZL	KK5HL	(***)	KC5LSC
6 (*)	AC6IR	KO6NL	(***)	KE6PQB
7 (*)	AB7HD	KJ7HC	(***)	KC7HWL
8 (*)	AA8RS	KG8NW	(***)	KB8WEE
9 (*)	AA9NM	KF9ZO	(***)	KB9JCB
N.Mariana Is.	KHØO	AHØAN	KHØDP	WHØAAX
Guam	WH2J	AH2CZ	KH2LP	WH2ANG
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii	(**)	AH6NS	WH6ZY	WH6CRY
Kure Is.			KH7AA	
Amer. Samoa	AH8M	AH8AH	KH8BJ	WH8ABB
Wake W.Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska	(**)	AL7PW	WL7ZY	WL7CJD
Virgin Is.	WP2Q	KP2CD	NP2HV	WP2AHV
Puerto Rico	(**)	KP4YH	(***)	WP4MVN

*=All 2-by-1 "W" prefixed call signs assigned.
**=All Group A (2-by-1) format call signs have been assigned in Hawaii, Alaska and Puerto Rico.
***=Group "C" (1-by-3) call signs have now run out in all except the 1st and 3rd radio districts.

[Source: FCC, Gettysburg, Pennsylvania]

ELECTRONIC APPLICATION FILING NOW A REALITY

On January 13th, the FCC gave the go ahead to the ARRL-VEC and the W5YI-VEC to electronically submit all Form 610 Amateur Service applications for new and upgraded licenses. This new computer-to-computer procedure is dramatically speeding up the granting of amateur radio operator licenses!

The new procedure had been in software development and testing since last summer. Neither the ARRL-VEC or the W5YI-VEC will now submit any paper Form 610 documents to the FCC's Gettysburg, Penna. licensing facility. All Form 610 applications are now retained in VEC Office files once the application data is transmitted to the FCC over the phone lines.

Previous amateur licensing

Due to budget and manpower constraints, it was not unusual for it to take up to 3 months for a ham ticket to be issued. These days are apparently gone forever. Or at least we hope so! Ham call signs are now being issued shortly after the VEC transmits its

applications. For example: thanks to electronic filing, two astronauts at the Johnston Space Flight Center have quickly joined the Amateur Radio ranks. Both will fly aboard the Space Shuttle Endeavour during mission STS-67 in March. Pilot William G. Gregory was issued call sign KC5MGA and Payload Commander Tamara E. Jernigan is KC5MGF. Both took examinations with ARRL Volunteer examiners on January 19 and were issued call signs on January 25.

Amateur licensing speeds up

Several policy changes had to be made before electronic filing could become a reality. For one thing, Congress had to enact legislation rescinding the requirement that the FCC see an application signature before issuing a radio license.

And the FCC's old circa 1970 Honeywell mainframe had to be retired and a new PC-based data processing system installed. New capabilities were added such as a provision for issuing Tech Plus licenses. special user-selected "Vanity" call signs and electronic filing. (Even a provision for Amateur Service license fees was incorporated - should the need for such a capability exist in the future.)

After running in parallel with the new system for several months. The old Honeywell was turned off for the final time last September. The new system was now on its own.

Licenses are electronically "granted"

Two very important procedural changes were adopted by the FCC Commissioners last fall. First, the FCC said that, for enforcement purposes, they really did not need to see an original license or photocopy. They referred to their data base to verify license status.

That set the stage for abolishing the rule that required a ham operator had to have the original or a copy of their license in his possession when operating on the ham bands. Effective December 20th, an amateur license is considered "granted" once it appears in their data base. This meant that an Amateur licensee would not have to wait until a license was physically received to operate their equipment provided they had a call sign. A new ham could get on the air once their call sign was learned.

The FCC also went to a toll free consumer assistance line (1-800-322-1117) line and agreed to give call signs out over the telephone until such time as a system could be developed (hopefully by the end of 1995) that would make their Amateur Service data base publicly available. The FCC is now considering distributing a "read only" copy of their Amateur Service data base (or recent licensing information) over the Internet ....or perhaps the Amateur packet system.

Electronic Filing of Applications

There are eighteen VE Coordinators, and while none are required to file electronically - most want do so. Paper applications or computer disks containing application information may still be submitted to he FCC.

Since the ARRL-VEC and W5YI-VEC account for 85% of all applicants examined for Amateur Service licenses, they were selected to be first to participate in the development, testing and implementation of electronic filing. Once the testing of electronic filing was complete, both the ARRL-VEC and W5YI-VEC were given the green light to file all of their Form 610's electronically.

How does electronic filing work?

Electronic filing consists of transmitting two data files over-the-telephone lines from the VECs PC directly into the FCC's computer. One of the files contains various examination session records. The other file is the associated Form 610 applications.

The FCC hired an outside programming service to develop the new Amateur system. They also wrote the Windows-based VEC's input software. This is a huge program and takes up about 9 Mb of hard disk space just to install. This is the software that the ARRL-VEC is using.

The W5YI-VEC, however. wrote their own streamlined input software which has the capability to include the VE team in the electronic filing process. Our program focuses on getting the first time licensee on the air as fast as possible since it is they who "suffer" the most in the licensing process. They can not operate until they have a call sign..

Basically, the VE team enters the session and application data of first time licensees, saves the data to a file and transmits this information to the VEC Office via modem. After screening for errors, the W5YI-VEC forwards the application data electronically to the FCC. Call signs for new amateurs are normally issued within a day or two of VE-to-VEC-to-FCC electronic filing. For paperwork purposes, the single sitting is treated as separate sessions: first time amateurs and those who upgrade.

The VEC Office keys in the data of all upgrading amateurs and transmits it to Gettysburg. The exam session's "new amateur" paperwork is compared to the electronic filing from the VE team to insure that all is in order.

Filing electronically

To participate in VE-to-VEC-to-FCC electronic filing, VE teams need an IBM/compatible 286 AT or higher personal computer, 512K of free RAM, a 3½"

floppy disk drive, 4 Mb of disk space on the hard drive, a serial communications port and at least a 1200 baud modem. Almost every VE team has the needed PC.

Transmitting the new amateur application file to the W5YI-VEC Office is accomplished by accessing a toll free "800" number. The file is simply carried -- or attached to -- an MCI electronic mail message.

Once received, the VE filing is loaded into the VEC software for screening by the W5YI-VEC Office. The file can be rejected or edited. If accepted, the VEC software appends the file to those of other VE teams. Once the received files have been inspected, the VEC file is transmitted via the MCI network to the FCC's computer located at an Internet address.

MCI Mail is being used as the communications medium due to its managed, password-protected security and easy file-transfer features. MCI has also granted the amateur community a special discounted cost and supplies the communications software free!

No VE team is required to file electronically to the VEC but we already have over 150 teams who have committed to the program.

VE-to-VEC-to-FCC filing

The first VE submissions included new amateurs from examination sessions conducted on Saturday, January 14th in Bucksport, Maine, Chesapeake, VA, Sheffield, AL, Logansport, IN, Radcliff, KY, Jefferson, NC, Reno, NV, Findlay, OH and Nitro, WV.

The W5YI-VEC transmitted these new amateur files into the FCC's computer on Monday, Jan. 16th - which turned out to be a government holiday. The applications were almost immediately granted by the FCC's computer. VE's began notifying us of their new applicants' call signs on January 18th. Four days after their Saturday testing, and two days after the file was received by the FCC. Twenty-two new amateurs tested at the Hammond (Louisiana) Hamfest on Saturday, Jan. 21st got their call signs by mid-week!

Not all licenses can be granted immediately

Some applications, we have found, can not be immediately filed with the FCC. This is particularly true when an applicant has more than one application "in the pipeline" at the same time, or when other problems exist ...such as illegible or incomplete information. Only errorless Form 610's may be transmitted to the FCC.

The FCC has asked that the amateur community be patient when calling for a new call sign over the telephone. This is a new procedure for Consumer Assistance and they advise it might take some time to access their toll free number if many people are calling for at the same time.

ANTENNA STRUCTURE REGISTRATION PROPOSED

On Jan. 12th, the Commission has proposed new rules to streamline the FCC's antenna structure requirements and to make it easier to identify approved towers and their owners. The proposals reflect updated recommendations by the Federal Aviation Administration. About 70,000 antenna structures in the United States are subject to FAA notification.

The FCC and the FAA have joint responsibility to ensure that antenna structures do not present a hazard to air safety. In 1992, Congress amended the Communications Act to make antenna owners as well as FCC licensees jointly responsible for antenna structures. Non-licensee antenna owners may now be fined by the FCC for violations.

Currently, each applicant constructing or altering an antenna that is (1) more than 200 feet in height or (2) may interfere with a nearby airport runway must notify the FAA. The FAA determines whether a potential hazard exists and recommends special painting or lighting.

Basically, the new rules provide for registration of antenna structures by owners rather than the current "...clearance process." This would allow the Commission to maintain a single database which would focus on antenna tower owners who would be primarily responsible for compliance with tower painting and lighting specifications. (In many cases, however, the antenna owner is the licensee.)

FCC Form 854, "*Request for Antenna Height Clearance and Obstruction Marking and Lighting Specifications*" will be revised to become a new "*Application for Antenna Structure Registration.*" The registration will indicate the antenna's coordinates, height, painting/lighting specifications and a unique FCC assigned registration number.

The number must be conspicuously displayed at the antenna site and a copy of the Registration (Form 854R) must be provided to all licensees leasing space on multi-use towers. The Commission emphasized that an antenna structure registration does not constitute authorization to transmit radio signals from the structure ...or relieve the antenna or tower owner from compliance with local or State laws.

All FCC radio services are included in the proposal including the Part 95 (Personal) and the Part 97 Amateur Radio Service. The new registration procedure is scheduled to begin on January 1, 1996.

New proposed Part 97.15(d) rules refer amateurs to Part 17 regulations which cover the construction, marking and lighting of antenna structures. FAA notification is required when an antenna structure exceeds the height limits (§97.15(a)(b)&(c.) The tower owner must register the structure using FCC Form 854.

■ **AT&T will be introducing a new "digital gateway" gadget that connects a standard TV set to the public switched telephone network.** The AT&T TV Information Center ($329.) looks like a set-top cable converter and is activated through an infrared remote control. It will allow consumers to pay their bills via electronic banking. The device will also allow "...other interactive services" but AT&T is not saying just what. Reports are that weather bulletins, traffic alerts, news headlines, stock quotes, sports updates, online shopping/bill paying, audio messaging, E-mail and FAX are in the works. Cost to the consumer will be less than $10 per month. Long term, AT&T wants their technology imbedded in TVs and all types of TV set type boxes. The AT&T system will be introduced in the northeast during the late Spring -- Broadcasting & Cable, Multichannel News - Jan. 16, 1995

■ **Radio Frequency Identification (RFID) tags are gaining popularity.** These are devices which are very small and inexpensive. They rectify RF energy and store it in a small capacitor, and can re-transmit RF without batteries. Digital circuits can modify a transmission to identify an RFID tag with a unique address. Some tags are so small that they are injected into livestock for location and vaccination-record keeping. Security badges use them to keep someone in or out. Most of these devices work in the 900-MHz band, with some in the works for 2.45 GHz. -- EDN, Dec. 22, 1994

■ President Bill Clinton signed a new policy last March, which **allows United States companies to sell satellite images with resolution as good as one meter.** Excellent photographs taken by the Landsats offer only 30-meter resolution. Such high-altitude photographs with such detail are in great demand. Some TV news organizations look forward to the day where they can use computers to assemble satellite pictures into three-dimensional animated movies, allowing them to "look" into areas forbidden to the press. They wouldn't even have to send crews. But the government still has the right to shut down such advanced photography during national emergencies. -- Aviation Week & Space Technology 5 Dec. 1994

■ **A downconverting hearing aid?** It's in the planning stages. Since the high end of our hearing spectrum tends to degrade as we grow older, most hearing aids amplify all frequencies in the speech spectrum or just parts of it.

This new method would simply receive a spectrum of frequencies and change them all into another "band" of frequencies at which the ear is still sensitive. -- NASA Tech Briefs, Dec. 1994

■ **A company called CD Radio wants to launch a subscription-based service** that will deliver 30 channels of digital music to customers with small S-band receiving antennas. Currently, the company is using NASA's Tracking and Data Relay Satellite transponders to test signal reception on the roof of a car. The idea is to test new methods for preventing signal loss by listening to two signals simultaneously, then avoiding dropouts when one signal vanishes. -- Broadcasting & Cable, 5 Dec. 1994

■ **The object of virtual reality is to make you believe you're somewhere you're not, and doing something you really aren't.** And you can't fool all of the people all of the time. What are some of the obstacles in the development of virtual reality?

1) The heavy head-mounted displays make it difficult to move your head quickly. And making your eyes think you're moving when the rest of your body doesn't agree makes you dizzy and seasick.

2) A virtual environment doesn't feel real unless you can really touch something. If you guide a robotic arm and the display shows you're touching a table, then the arm's motors must stop and make you feel like you're touching something solid. That can be dangerous if you're moving fast and the software has some bugs in it.

3) You need extremely fast computers and graphics systems, running at least 10 frames of video every second for the illusion of motion. That amounts to 800 million polygons per second.

4) If the sight, sound, and feel of something are out of sync by just a few milliseconds, the brain won't accept it as real. -- Scientific American, Dec. 1994

■ **The transistor radio is 40 years old!** The original TR-1, developed by Regency, was announced on October 18th, 1954. It went on sale during the Christmas rush for $49.95. It's a collector's item today: a green one can bring as much as $600, with red, gray, ivory and black ones worth about $250. The radio could fit in the pocket of an expensive dress shirt, but not the pockets on most shirts at the time. All four transistors in the rig were made by Texas Instruments. -- Electronic Design, 16 Dec. 1994 and IEEE Spectrum, Dec. 1985

■ **DBS is apparently catching on in the United States!** Thomson Consumer Electronics, Inc., says it will spend $40 million to open a third production line in Juarez, Mexico to build the **RCA Direct Broadcast Satellite TV** receiving equipment. Nearly 600,000 DBS decoder boxes were produced last year -- 350,000 of which were sold to consumers. Thomson wants to build 1.5 million boxes this year and more than 2 million in 1996. DirecTV expects to have 1.5 million subscribers by the end of the year ...and 3 million by 1996. DBS systems start at $800 plus $30 to $50 a month for programming. About mid-year, Sony will introduce its version of the receivers now being built by Thomson under an exclusive arrangement for the DirecTV and USSB DBS services. -- Multichannel News, Jan. 16, 1995

■ **"Before you Cruise the Internet, Get the Right Road Map"** is not the sort of story you would expect to find in the *Wall Street Journal.* That gives you an indication of the Internet's widespread interest! Tapping into the World Wide Web is currently not cheap or easy. But this should change within a year.

Currently you need a SLIP Internet access account and you must type in "complex computer codes" to get to a To call up Time magazine on the Web you type: "HTTP://www.timeinc.com:80-/time/timehomepage.html". To call up Time magazine on American On-Line,(800-827-6364) you type "time". The Prodigy on-line service (800-776-3449) is currently the cheapest and easiest way to access the best portion of the Net, the World Wide Web. It does not offer all Internet services, however. The Delphi on-line service (800-695-4005) offers more features but can't display Web graphics.

The author concludes the best way to tap into all features of the Internet is through two competing products called NetCruiser and The Pipeline

Membership in The Pipeline (212-267-3636) is $20 a month for 20 hours on-line, plus $2 an hour for extra time. There is an addition $2.50/hr (off peak

time) cost if you live outside of New York City and access must be through a nationwide system of local phone numbers.

"NetCruiser (offered by Netcom, San Jose, CA at 800-501-8649) is the bargain alternative." The software is free (or $5 or less in stores) and easy to use "...but isn't as sophisticated as Pipeline's..." Cost is only $19.95 a month for 40 hours during peak weekday hours plus unlimited time on weekends and off peak (after midnight) periods. "Netcom maintains direct dial phone numbers in about 50 cities and is adding more rapidly." -- Wall Street Journal, Jan. 19. 1995

■ **Hazards on the Information Highway!** Hoax messages are pointing out a serious Internet failing. A supposed Associated Press news release was recently distributed on the Internet carrying the startling announcement that: "Microsoft had agreed to acquire the Roman Catholic Church in exchange for an unspecified number of shares of Microsoft common stock." Rush Limbaugh even read it on his national television program! The completely false story was the work of "...an untraceable anonymous mastermind."

Computer experts see the episode as part of a larger trend. The use of identity-disguising techniques, like electronic messages sent anonymously or under a pseudonym, is on the rise in the on-line realm known as cyberspace.

The White House computer network, for example, has received death threats against the president, both unidentified and under fake names. And untraceable bootleggers at the Massachusetts Institute of Technology have illegally traded copyrighted software through a computer bulletin board.

Computer networks give masked messengers a nearly instantaneous means for reaching thousands of people around the world. The growing use of unsigned messages over computer networks is creating a debate about how best to prevent abuses without stifling the right to speak freely and even anonymously.

It is easy to disguise one's identity in cyberspace and only slightly harder to slip into total anonymity.

"...the surest way to achieve virtually untraceable anonymity is to route a message through a computer known as an anonymous remailer. Such companies are set up to receive incoming electronic mail which automatically strip the messages of the sender's identifying information and forward them anonymously to recipients."

Remailing computer messages is offered as a public service for people presumed to have legitimate reasons for wanting to maintain privacy when communicating over the Internet. Many sexually-oriented messages go through remailers.

"...corporate and individual computer users have begun stamping their electronic documents with an encoded 'digital signature'. These signatures, which require both the sender and recipient to know the key to the electronic code, provide assurance that people who send messages are indeed who they say they are." -- New York Times News Service, Jan. 6. 1995

■ **We probably then should not be surprised at the following W1AW Bulletin sent out by the League:**

"NOTICE OF FALSE W1AW/ARRL SPECIAL BULLETIN

A message purporting to be official W1AW Bulletin ARLX004 falsely claimed that the American Radio Relay League, ARRL, plans to petition the Federal Communications Commission, FCC, to drop all Morse code requirements for Amateur Radio licenses in the U.S. An authentic ARRL Bulletin apparently was altered and re-posted on an internet news group as a practical joke. The League plans no such petition. The actual bulletin ARLX004 concerned a balloon launch from Iowa. The League views any dissemination of forged messages as an extremely serious matter.

■ **The "big three" commercial consumer on-line computer services claim 6-million subscribers. CompuServe** now tallies 2.5 million, **Prodigy** 2 million. Fast-growing **America Online** has more than 1.5 million subscribers. Prodigy will de-emphasize advertising in April by eliminating billboard-type ads that cover the bottom 20% of every screen.

AT&T has paid $50 million to acquire the Ziff **Interchange Online Network.** It joins the **ImagiNation Network** (an entertainment oriented service), and **PersonaLink** (a handheld personal communications system) in AT&T's online portfolio.

AT&T plans to roll-out **Interchange** as a platform for outside content providers later on this year. Consumers will pay a low fee to access the service and each online publication will have its own additional subscription price. The unanswered question is whether online services will emerge as an advertising or content-driven business. -- Advertising Age, Jan. 9, 1995

■ **Englewood, Colo.-based Tele-Communications, Inc. said the it will invest $125 million in "The Microsoft Network."** TCI wants to deliver an interactive on-line computer service over its cable plant to generate new revenue streams for cable operators.

The cable giant's TCI Technology Ventures unit will acquire a 20% minority interest with a eye toward "harnessing and using the high data rate speeds inherent with broadband cable networks" ...that is, carrying complex forms of entertainment (such as full motion video) over telephone and cable wires.

"The Microsoft Network" access software also will be bundled free with "Windows-95," the next version of its graphical user interface now due out in August. -- Multichannel News and Broadcasting & Cable, Jan. 2, 1995.

■ **Time Warner has unveiled its long awaited "Full Service Network" in Orlando, Florida.** So far they have pumped $5 billion into the project! The advanced interactive television service offers videogames and video-on-demand movies with all the functions of a VCR including pause, fast-forward ...reverse.

In the virtual shopping mall, users can wander through stores -- stopping at displays of interest. Orders are placed at the touch of a remote control button. The set-top box stores credit card and mailing information. Video telephoning, a ShopperVision grocery and other services will also be added. "The Internet is wonderful ...it's also very slow," said Time Warner Chairman-CEO Gerald Levin. "The most exciting medium is full-motion video."

The biggest sticking point to the service is the high cost of building a network of video file servers, ATM switches, fiber-optics and set-top boxes. The objective of the Orlando test is to determine which services consumers want and how much they are willing to pay for them. -- Advertising Age, Electronic Media, Broadcasting & Cable, Dec. 19, 1994

CONGRESSIONAL TELECOMMUNICATIONS LEADERS

Out: Senate Democrats: Hollings and Inouye
In: Senate Republicans: Pressler and Packwood
Out: House Democrats: Dingell and Markey
In: House Republicans: Biley and Fields

It is anybody's guess what the ultimate impact will be on the nation's telecommunications infrastructure now that Congressional power is in the hands of the Republicans. The early line is that Republican leaders will scale down the authority of the House Energy and Commerce Committee (of which the Telecommunications Subcommittee is a part) and the Federal Communications Commission itself.

In any event, it is a brand new ball game on Capitol Hill ...and at the FCC. The Republican takeover is considered good news for telecommunications companies. FCC Chairman Reed Hundt will now face tough scrutiny from the Republicans now chairing the Congressional Committees who oversee the FCC. Up until the last election, they were all Democrats.

Telecommunications reform has been made a top priority. Eleven of the twelve House Commerce Committee members not returning are Democrats. (The lone Republican retired.) The House Commerce Committee is now headed by Tom Biley (R-Va) who replaces Rep. John Dingell (D-Mich.)

"Deregulation" has become a very popular buzzword for the 104th Congress. That, and "Get the federal government out of corporate America." The Republican Party's report, "Listening to America," concluded that Americans want less government. "All telecommunications markets should be simultaneously open to full competition for all telecommunications services," the report says.

Toward that end, you can expect legislation that will set a time table to unleash the restraints which currently preclude widespread telecommunications competition. Broadcast/cable video and local/long distance telephone service providers will all be jockeying for their position on the information highway.

If it all comes about, consumers will be able to choose from an assortment of companies that will basically provide the same services. This generally means few monopolies, efficient companies ...and lower consumer prices. 1996 being an election year, the Republicans want to get it done now.

Tax cuts equal reduced spending

With the pressure on for tax cuts and an eventual balanced-budget, the 104th Congress is looking for ways to reduce spending. The new Senate Commerce Committee Chairman, Larry Pressler (R-S.D.) already is on the FCC's case. Pressler (who replaces Ernest Hollings (D-SC) says their budget is too big and their performance, poor. For one thing, Pressler (a Harvard graduate and Rhodes scholar) thinks the Commission moves too slow. Hearings on a simpler telecommunications bill he is championing will begin within a month. Last year's S.1822, Pressler believes, was too regulatory ...and too complicated.

Jack Fields (R-Tex), is the new chairman of the House Telecommunications Subcommittee. He replaces Rep. Ed Markey (D-Mass) who lost out in the Republican sweep of the elections. Fields also wants market oriented telecommunications reform and says he will send a "deregulatory and pro-competitive" bill to the floor within 90 days. He believes the FCC budget could be tightened and even plans to shrink his own staff as well. Fields counterpart in the Senate is Bob Packwood (R-Or.) who replaces Daniel Inouye (D-Hi.)

In a recent interview, incoming House Speaker Newt Gingrich (R-Ga.) said that "Had we had an FCC, FDA or an FTC in Silicon Valley, we'd be about 150,000 or 200,000 jobs short. And we would be back with mainframe computers, because you'd still have bureaucrats studying whether or not to allow PCs to even exist."

Gingrich is well aware the impact that the "grass roots" broadcast media played in the November elections. He plans to meet monthly with twenty talk show hosts whom he refers to as "...the alternative media.".

Along that line, a tongue-in-cheek petition has been filed with the FCC requesting that critics of talk show host Rush Limbaugh be granted equal response time on stations that carry his program. The petition wants an FCC ruling that "...candidates explicitly or implicitly identified and opposed during Limbaugh's broadcasts are entitled to notification, transcripts and an opportunity to respond to Limbaugh's program length political commercials." It stands no chance of acceptance.

Vice President Al Gore has already been courting Republican congressional leaders in an attempt to get the administration back on the Infohighway.

National Empowerment Television (NET) was launched a year ago with a start-up grant of $1 million. No one thought the 24 hour ultra-conservative public affairs channel would last. But when the Republicans took over Congress, NET became the only cable network with a live call-in talk show hosted every Tuesday night by Newt Gingrich, the incoming speaker of the House of Representatives. Reportedly, Gingrich paid $125,000 for an entire year of weekly one-hour programs.

According to a January 13th newspaper story that ran in the *Washington Times,* Gingrich, wants to get rid of the FCC since due to new digital and spread spectrum technology, they are no longer needed. The article from the Times appears on the next page.

GINGRICH'S "CABINET" PUTS FCC ON "HIT LIST"

Capital Business by Jeff Nesbit - Washington Times 1/13/95

The Federal Communications Commission is history, if House Speaker Newt Gingrich and his intellectual ground forces have anything to say about it in the next few years.

The Progress and Freedom Foundation -- better known these days as Mr. Gingrich's think tank -- wants to make the FCC "obsolete." And it doesn't mince any words about it, either.

In the new climate that has descended on Washington, this is no idle threat. The FCC had better pay close attention. The issue is also crucial to the high-tech community in Washington, which is now second only to Silicon Valley in the number of high-tech firms it has (1,206 here vs. 1,845 there).

With Mr. Gingrich's ascension to power, the work of his foundation will obviously find receptive audiences in Congress -- especially on such cutting-edge issues as "spread spectrum" technology and the digital revolution.

In fact, says the chairman of the foundation -- George A. Keyworth II, who was President Reagan's science adviser -- the discussions about the FCC's role in regulating the brave new competitive world of telecommunications are well under way.

"We've been talking to Newt and others in Congress who are interested in this. Many of them agree ...that the role of the FCC has to be fundamentally less," Mr. Keyworth said in an interview with The Washington Times on the foundation's FCC reform project.

"We want to put forth a new approach, a regulatory scheme that would make the FCC obsolete," Mr. Keyworth said. "All the signals say the same thing to the government -- get out of the way."

The Progress and Freedom Foundation, in case you haven't been paying attention, is rightfully known as Mr. Gingrich's intellectual brain trust on a number of key economic and domestic policy issues.

The foundation, which is supported in part by corporate sponsors that include AT&T, Cox Broadcasting, IBM, Bell South and Intel, produces Mr. Gingrich's TV show on National Empowerment Television (NET). In addition, the foundation's president, Jeff Eisenach, helped establish Mr. Gingrich's PAC and is one of the House speaker's closest confidants.

Mr. Gingrich recently lambasted the FCC on his NET show and spoke of his hopes for substantial market-oriented deregulation of telecommunications in the new Congress.

So, for those reasons alone, the foundation's work on telecommunications reform will be taken very, very seriously in Congress. And its concepts are revolutionary.

Mr. Keyworth's basic contention is that the United States has already won the telecommunications war, through entrepreneurialism; risk taking and very limited government involvement.

The government's job now, he said, is to stay out of the way as the next two major revolutions hit -- "spread spectrum" and digital technology.

"The FCC exists because of scarce spectrum ...and because they can block the pipeline" for new products, Mr. Keyworth said.

But there will soon be plenty of spectrum. Digital will mean that companies will compete to get the products through the pipes to consumers."

Spread-spectrum technology, for instance, would allow 10 companies to essentially share the same location on the spectrum and provide 10 different products to 10 different customers.

"It's like 10 people screaming in a room, but you [the customer] can only hear one of them," Mr. Keyworth explained. With the advent of such technology in the next two to five years, he said, "the FCC won't need to dole out the spectrum."

The shift from analog to digital will similarly revolutionize the consumer marketplace, and the FCC will be hard pressed to find a role for itself as firms race to get products to consumers who will want the same high-quality products for different mediums.

"A digital communications system is so fundamentally different than an analog system. Most importantly, the consumers will own most of the infrastructure [digital TVs, phones, faxes, stereos, computers and the like]," Mr. Keyworth said.

Because digital will allow cross-fertilization across so many product lines -- for instance, CDs could fundamentally work the same way for computers, stereos and TV sets -- there will be fierce competition to get the same product to every conceivable outlet.

"Competition is inherent in the digital technology world," Mr. Keyworth said. "The government's only role would be to block the pipeline. And [FCC Chairman] Reid Hundt has said as much . . . that it's the government's responsibility to manage the competition."

Mr. Keyworth believes that approach is wrong, and his foundation will flood Congress with policy papers, briefings and reports in the coming months to argue the case.

"Ronald Reagan would say it's un-American to build for the government and not for the people," Mr. Keyworth said. "If somebody doesn't take a look at how we won the war in telecommunications, we're going to lose the momentum."

Firms like IBM and Microsoft are "distinctly American" and "won the competition hands down. . . without the government's help," Mr. Keyworth said, and the future should be no different.

REPLY COMMENTS ON 2400-MHz ALLOCATION

On January 6, both AMSAT and the ARRL filed massive reply comments on the Government's plan to redistribute 50 MHz of spectrum to innovative technologies. The 1993 federal budget requires the Dept. of Commerce to identify 200 MHz of federal spectrum for private use with 50 MHz to be immediately moved from NTIA to FCC jurisdiction. The Federal Communications Commission administers non-Government spectrum.

Identified for reassignment were 25 MHz at 2.4 GHz (13-cm band) and 25 MHz at 4.6 GHz. According to the Commission, the allocation to commercial providers would allow new mobile services and create business opportunities and jobs. The FCC must make a final decision on the spectrum by Feb.10, 1995.

Amateur interest in the reallocation stems from the fact that although the spectrum is primarily allocated to Government, half the identified spectrum is also shared by the amateur service. The U.S. Table of Frequency Allocations specifically permits 13-cm amateur satellite service operation on a secondary non-interference basis. The band (2.4 to 2.5 GHz -- centered on 2450 MHz) is also designated for ISM, industrial, scientific and medical applications.

The bottom line is the amateur service has long been invited guests of the federal Government at 13-cm. We now face the possibility of being evicted since Congress wants the spectrum reassigned to new emerging radio services. Congress did, however, ask potential users to consider the needs of the amateur service. The FCC makes the final determination.

Amateur-Satellite Corp. Reply Comments

AMSAT is a non-profit organization of approximately 7,500 amateur satellite enthusiasts, Together with more than 30 affiliated groups throughout the world, AMSAT has constructed, launched and operated over two dozen amateur satellites. The majority are still with us today. AMSAT wants the:

- amateur radio and amateur satellite service to retain access to 2390-2400 and 2410-2450 MHz and
- to be granted primary access to the 2400-2410 MHz band. The only sharing partners would be existing ISM and Part 15 spread-spectrum devices.

AMSAT believes that most firms commenting on the proposal did not respond to the mandate of Congress:

- to avoid excessive disruption of existing use of government frequencies by amateur radio licensees,
- and that commercial users should consider sharing spectrum with amateur radio licensees.

AMSAT said some commenters did not mention amateur operation at all. Others, such as Southwestern Bell Telephone, had reservations on spectrum sharing with the amateur service. Their accommodation of amateur "...falls far short of providing the protection of amateur radio intended by Congress...."

Responding to AT&T's contention that sharing spectrum with the amateur services at its current occupancy level was possible, AMSAT told the FCC that it could expect 13-cm amateur use to dramatically increase with the launch of the Phase 3D satellite scheduled for April 1996.

AMSAT commended Apple Computer for its acknowledgement of the potential impact on amateur radio. It also agreed with IBM that it made "...little sense to destroy Part 15 use ...in order to allocate the band to possible users for which technology has not yet been -- and may not be -- invented."

ARRL Reply Comments

In earlier comments, the ARRL asked that the Amateur Service be given primary allocation status at 2402 to 2417 MHz, at least co-primary status at 2390 to 2400 MHz, and said it would be desirable to make the entire segment 2390 to 2450 MHz amateur primary.

In its reply comments, the ARRL said that most of the comments filed by others in December didn't respond to FCC questions regarding the compatibility of the proposed commercial services with the Amateur Service. The League said that the bulk of comments filed were "absolutely silent" on the effect of a new proposed use, either from 2390 to 2400 MHz or from 2402 to 2417 MHz, on the Amateur Service, with the exceptions of comments by In-Flight Phone Corporation and Apple Computer, both of whom suggested ways of coexisting with amateurs. The League said that while they would have liked to have explored sharing opportunities with these firms, they lacked sufficient time.

The ARRL called the use of competitive bidding in this case "a means of avoiding specific allocation planning by the Commission" and said it was inappropriate. The FCC's "flexible allocation" plan would be, on its face, the League said, "in lieu of making any public interest determination at all as to the highest and best use of the spectrum." That highest and best use, the League said, was Amateur Radio.

"...given the Commission's obligation under the Budget Reconciliation Act to protect amateur uses, there is no alternative but to reject these proposals for new uses," the ARRL said. They again asked that the Amateur Service be given a primary allocation status at 2300-2310 MHz, 2390-2400 MHz and that the Amateur and Amateur-Satellite Service be given co-primary status at 2400-2417 MHz for the present. The Amateur Service remains the highest and best opportunity to promote 'new and innovative technologies' for the benefit of the public," they said.