

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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FCC Reduces Cost on "Vanity" Amateur Station Call Signs!

The vanity call sign regulatory fee will drop to its lowest cost ever effective September 14, 1998. A vanity call sign is an amateur station call sign selected by the FCC from a list of up to 25 call signs requested by the licensee.

According to Terry Johnson, N4ECF in the FCC's Office of Managing Director, the new fee will be \$13.00 which will be payable in advance for the ten-year term of the license. The current vanity call sign application fee is \$50. This represents a reduction of nearly 75%!

Earlier this year, the FCC had proposed dropping the fee to \$12.90. But the actual fee was "rounded up" to the nearest whole dollar.

Important! The FCC says it has no plans to refund the difference between the current fee and the new fee for applicants who submit applications before the new fee schedule goes into effect in September.

Background of Vanity call signs

The history of "Vanity" call signs in the amateur service goes back to June 1990 when Jim Wills, N5HCT -- a retired Extra Class amateur from Tyler, Texas wanted to reclaim his long expired WA5EHQ call sign. In the Spring of 1990, Jim filed a *Petition for Rule Making* requesting that amateurs be allowed to specify three call sign choices in order of preference and attach a \$30.00 check made out to the FCC to cover the administrative cost. That petition

was denied because of the statutory exemption of amateur service applications from fees.

In 1991, Jim contacted his Congressman who shared the idea with the staff of the House Telecommunications Subcommittee who were already working on a way to make the FCC at least partially self-supporting. The goal was for the FCC to collect enough "regulatory" (user) fees to help pay for itself.

Congress agreed to add Amateur vanity call signs to the list of other regulatory fees they were considering. The fee would recover the total cost associated with the Amateur call sign program. This action also gave the FCC permission for the first time to collect fees associated with ham radio. The ARRL had no idea the program was coming since Jim Wills had worked directly with Congress who dealt directly with the Commission.

On December 13, 1993, the FCC issued a *Notice of Proposed Rulemaking* looking toward implementing vanity call signs ...and approved the final rules almost exactly a year later (on December 23, 1994.)

While the ARRL played no part in getting the vanity call sign program through Congress and enacted into law, they were very active in developing the guidelines under which amateurs would be able to obtain a call sign of their choice. And in the end, the FCC basically followed their suggestions.

Under the new system which got underway on May 31, 1996, "vanity" amateur station call signs:

1. would be phased in by the opening of different starting gates.
2. may only be requested from your (or a lower) call sign group.
3. would cost \$30.00 (\$50.00 effective September 15, 1997) for a ten year term and are renewable indefinitely.
4. must be ordered using a new paper or electronic (interactive) FCC Form 610-V application form.
5. are assigned from your list of 25 choices in order of preference.
6. can not be assigned unless an operator already has a call sign.
7. All licensed amateurs qualify for this new program.

For fiscal year 1997, the FCC estimated that 10,000 Amateur Vanity Call Signs would be issued at a cost of \$50 per call sign for the ten-year license term.

By the way, Jim Wills N5HCT who got the vanity call sign program off and running, never did get his old WA5EHQ call sign back. He requested and received W5JIM!

Vanity Call signs for Fiscal Year 1998

Section 9(a) of the *Communications Act of 1934*, as amended, authorizes the Commission to assess and collect annual regulatory fees to recover the costs, as specified each year by Congress, that it incurs in carrying out enforcement, policy and rulemaking, international, and user information activities.

The FCC released its revised schedule of regulatory fees for all radio services for fiscal year 1998 on June 16, 1998. The Commission is being required by Congress to collect almost \$163 million during FY 1998 to help cover its operating budget. (FY-1998 actually started October 1, 1997.)

This amount is \$10,000,000 or nearly 7% more than the amount that Congress designated for recovery through regulatory fees for FY 1997. Thus, as a general rule, the regulatory fees increased somewhat. But not for the Amateur Service.

The FCC again calculated the new fee based on an expected 10,000 vanity call sign applicants during FY 1998. But due to more efficient automated "vanity" call sign processing, the cost was reduced to \$1.29 a year ...or \$13.00 for the full ten year license term (rounded up to the nearest dollar amount.)

The Commission said that the new \$13.00 Regulatory Fee for Vanity Call Signs in the Amateur Service will be effective with all call signs issued on or after September 14th.

Obtaining a Vanity station call sign

To obtain a vanity call sign, you must file your request on one FCC Form 610-V using either, but not both, the interactive electronically-filed Form 610-V or

the paper document Form 610-V. To facilitate the processing of requests for vanity call signs each workday, electronically-filed Forms 610-V for which the filing fee has been received will be processed first followed by document Forms 610-V.

The fee effective September 14, 1998 is \$13.00. The fee is \$50 until then. Payment may be made by check (payable to "FCC"), bank draft, money order or credit card. Do not send cash.

Using the interactive electronically-filed Form 610-V

The interactive electronically-filed Form 610-V is available via the FCC Internet homepage at: <<http://www.fcc.gov/wtb/amateur/>>. To access the instructions, click your mouse button with the pointer on the highlighted portion of the item for which you need assistance. Press your <enter> key to submit your application.

If you have provided the required information, the screen will prompt you with a *Fee Remittance Advice*, FCC Form 159, that you must complete, print and mail together with the fee to Federal Communications Commission, POB 358994, Pittsburgh, PA 15251-5994. The Form 159 and the fee must be received within ten (10) days of submitting your application or the application will be dismissed. "Frequently Asked Questions" about the Vanity Call Sign System is also available on the web site.

Using the document Form 610-V

The document Form 610-V is available for downloading at <<http://www.fcc.gov/formpage.html>>, from the Fax-on-demand system by calling (202) 418-0177 from the handset of a facsimile machine, or from the FCC's forms contractor by calling (800) 418- FORM (3676).

Mail your application package, including your completed Form 610-V with a copy of your license attached, Form 159 (Remittance Advice) and the fee to Federal Communications Commission, Amateur Vanity Call Sign Request, POB 358924, Pittsburgh, PA 15251-5924. [Important: Note this address is not the same as that for the interactive electronically-filed Form 610-V.]

Legibility is critical. If the information on your application is not legible, you could experience a delay in processing, lose the opportunity to obtain a requested call sign or even obtain a call sign different from what you want.

You must hold an unexpired amateur operator/primary station license grant of the proper operator class, as described below, to request a vanity call sign for your primary station. To request a vanity call sign for a club station, you must also hold an unexpired club station license grant listing you as the license trustee. Your name and mailing address as shown on your current license grant must be correct.

If your license grant has expired, or if your name or address has changed, you must first request modification of your license grant to show the correct information by

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filing FCC Form 610 or, in the case of a club station, FCC Form 610-B. Refer to the licensee data base to verify that the call sign you are requesting is not already assigned.

The license grant of the former holder now deceased must be deleted from the licensee database. This is accomplished by submitting a signed request for license grant cancellation accompanied by a copy of an obituary or death certificate to the FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245 prior to filing the application for a vanity call sign. Even where a call sign does not appear on the data base, it may not be available for assignment.

For additional information on the assignment status of call signs, contact the FCC's copy contractor, International Transcription Services [1-717-337-1433]. You may also contact the FCC's National Call Center [1-888-225-5322]. It will provide information free of charge, with a limit of five call signs.

A call sign is normally assignable two years following license expiration, surrender, revocation, set aside, cancellation, void *ab initio*, or death of the grantee. See Fact Sheet PR5000 No. 206-V AMATEUR STATION VANITY CALL SIGN SYSTEM.

Where a vanity call sign for which the most recent recipient was ineligible, is surrendered, canceled, revoked or voided, the two year requirement does not apply. For explanations of Groups A, B, C and D and the geographic Regions, see Fact Sheet PR5000 No. 206-S, AMATEUR STATION SEQUENTIAL CALL SIGN SYSTEM. (All Fact Sheets are available on FCC web site.)

Request by list - (Primary or Club station)

Most amateurs will be submitting a list of desired station call signs. This is done by completing the back of the FCC Form 610-V to provide a list of up to 25 call signs in the order of your preference. The first assignable call sign on your list will be assigned to your station. When so requesting for your primary or club station:

- The call sign must have been unassigned for at least two years.
- If you are an Amateur Extra Class operator, each call sign must be in Group A, B, C or D. [*Gate opened September 23, 1996.*]
- If you are an Advanced Class operator, each call sign must be in Group B, C or D. [*Opened August 6, 1997*]
- If you are a General, Technician Plus, or Technician Class operator, each call sign must be in Group C or D. (1-by-3 and 2-by-3 format) [*Opened December 2, 1997*]
- If you are a Novice Class operator, each call sign must be in Group D (2-by-3 format) [*Opened December 2, 1997.*]
- Certain prefixes (AL, KL, NL, WL, KP, NP, WP, AH, KH, NH, and WH) are reserved for stations whose mailing address is located outside of the continental U.S.

Request by former call sign holder (Primary station) - Opened May 31, 1996.

For your primary station, you may request a call sign that was previously assigned to your primary, secondary, repeater, auxiliary link, control or space station. When so requesting for your primary station:

- You may request your former call sign even though it has been unassigned for less than two years. The two year requirement does not apply to an otherwise eligible primary station if the call sign was previously assigned to a station of the requestor.
- You do not have to hold a class of operator license required for the Group (A, B, C, or D) for the call sign requested. A call sign request by former holder may be from any Group in the sequential system.
- Your mailing address does not have to be in the Region designated in the sequential system for the call sign requested. A call sign requested by a former call sign holder may be in any Region.

Request by close relative of former holder now deceased (Primary station) - Opened May 31, 1996.

For your primary station, you may request a call sign that was previously assigned to the primary, secondary, repeater, auxiliary link, control or space station of your now-deceased spouse, child, grandchild, stepchild, parent, grandparent, stepparent, brother, sister, stepbrother, stepsister, aunt, uncle, niece, nephew, or in-law. When so requesting for your primary station:

- You may request the former call sign of a close relative now deceased even though it has been unassigned for less than two years.
- Upon the death of the holder, a call sign is assignable immediately to an otherwise eligible primary station of a close relative.
- You must be an Amateur Extra Class operator to request a Group A call sign.
- You must be an Amateur Extra or Advanced Class operator to request a Group B call sign.
- You must be an Amateur Extra, Advanced, General, Technician Plus, or Technician Class operator to request a Group C call sign.
- You must be an Amateur Extra, Advanced, General, Technician Plus, Technician or Novice class operator to request a Group D call sign.
- Your mailing address does not have to be in the Region designated in the sequential system for the call sign requested. A call sign requested by a close relative of former holder now deceased may be in any Region.
- You must show your relationship to the deceased person exactly as listed in the instruction, i.e., child, niece or in-law.

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Request by former holder - (Club station) - Opened May 31, 1996.

For the club station for which you are the license trustee, you may request a call sign that was previously assigned to that station. When so requesting for a club station:

- You may request your club station's former call sign even though it has been unassigned for less than two years. The two year requirement does not apply to an otherwise eligible club station if the call sign was previously assigned to the club station for which the requestor is the license trustee.
- You do not have to hold a class of operator license required for the Group (A, B, C, or D) for the call sign requested. A call sign request by former holder may be from any Group in the sequential system.
- Your mailing address does not have to be in the Region designated in the sequential system for the call sign requested. A call sign requested by a former holder may be in any Region.

Request "In Memoriam" - (Club station) - Opened July 22, 1996.

If you are the license trustee for your club station, you may request in memoriam for your club station the call sign previously shown on the primary, secondary, repeater, auxiliary link, control or space station license of a deceased person who was a member of the club. When so requesting in memoriam for your club station:

- You may request the call sign even though it has been less than two years following death of the club member. Upon the death of the holder, the call sign is assignable immediately to an otherwise eligible club station.
- You must have in your station records a written statement (do not send to FCC unless requested) from a spouse, child, grandchild, stepchild, parent, grandparent, stepparent, brother, sister, stepbrother, stepsister, aunt, uncle, niece, nephew, or in-law of the deceased confirming the deceased person's association with the club and showing consent of the relative to your request.
- You must be an Amateur Extra Class operator to request a Group A call sign.
- You must be an Amateur Extra or Advanced Class operator to request a Group B call sign.
- You must be an Amateur Extra, Advanced, General, Technician Plus, or Technician Class operator to request a Group C or D call sign.
- Your mailing address does not have to be in the Region designated in the sequential system for the call sign requested. A call sign requested in memoriam may be in any Region.

- You must enter the relationship to the deceased person giving consent exactly as listed in the instruction, i.e., child, niece or in-law.

If you need further information about the vanity call sign system, visit the Internet site at <<http://www.fcc.gov/wtb/amateur/>> or contact the FCC's National Call Center at 1- 888-225-5322 (CALLFCC)

AMATEUR RADIO STATION CALL SIGNS

...sequentially issued as of the first of July 1998:

Radio District	Group A Extra	Group B Advanced	Group C Tech/Gen.	Group D Novice
0 (*)	AB0HT	KI0NM	(***)	KC0DUK
1 (*)	AA1TW	KE1JX	(***)	KB1CZN
2 (*)	AB2FK	KG2OP	(***)	KC2DUO
3 (*)	AA3RD	KF3BW	(***)	KB3CUG
4 (*)	AF4KN	KU4TF	(***)	KF4ZCR
5 (*)	AC5QQ	KM5RJ	(***)	KD5EQC
6 (*)	AD6FS	KQ6VWV	(***)	KF6RUE
7 (*)	AB7YL	KK7ON	(***)	KD7CET
8 (*)	AB8CW	KI8GG	(***)	KC8KOG
9 (*)	AA9WD	KG9OA	(***)	KB9TBZ
N. Mariana	NH0F	AH0BA	KH0HE	WH0ABJ
Guam	(**)	AH2DH	KH2TL	WH2ANX
Hawaii	NH7S	AH6PM	KH7MK	WH6DER
Am.Samoa	AH8R	AH8AH	KH8DM	WH8ABF
Alaska	AL0L	AL7RD	KL0PG	WL7CUU
Virgin Isl.	(**)	KP2CN	NP2KD	WP2AIJ
Puerto Rico	NP3W	KP3BI	NP3XG	WP4NNU

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

Note: New prefix numerals now being assigned in Puerto Rico (KP3/NP3), Hawaii (KH7/NH7) and Alaska (AL0/KL0)

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

NEW AND UPGRADING AMATEUR STATISTICS

For the Month of June 1996, 1997 & 1998

License Class	New Amateurs			Upgrading Amateurs		
	1996	1997	1998	1996	1997	1998
Novice	72	86	58	4	0	0
Technician	1551	*3142	1330	15	0	0
Tech Plus	146	213	171	317	412	297
General	18	28	27	294	359	380
Advanced	4	4	2	235	239	239
Extra Class	1	2	3	244	215	146
Club/Empty	52	135	68	0	0	0
Total:	1844	3610	1659	1917	1119	1062
Decrease:		*95.8% (54.0%)			(71.3%)	(5.1%)

*=Increase due to approaching Question Pool change on July 1, 1997.

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CUTTING EDGE TECHNOLOGY

■ **A new type of audio speaker material** can be painted or covered with wallpaper. It is driven by magnetic shape-change material that the U. S. Navy originally developed for high-power sonar transducers.

■ **Automobiles are getting so complicated** that some manufacturers advise against jump starting. Others add protective engineering so that you can even hook up a battery backwards without damaging the car's electrical system.

■ **Los Angeles County is installing roadside help terminals** that use touch-screen technology. If you need police, just press a button. The on-screen displays come in 10 languages and even the deaf can use it.

■ **The industry goal for battery life** in notebook computers is 12 hours. Today's average is only two to five hours.

■ **Panasonic offers a full-size, dry-erase marker board with a built-in paper printer.** It prints whatever you write.

■ **In order to speed up microprocessors, manufacturers are lowering the bus voltages.** 5 volts DC was common in the electronics world, but that value is continually shrinking. Expect bus voltages as low as one volt soon. You cannot change the laws of physics, though; current demands go up as voltages go down. A Pentium II microprocessor running at 266 MHz pulls nine watts. Intel plans on a 1 GHz microprocessor, named Flagstaff, in the year 2000.

■ **Light-emitting diodes (LEDs) are often used to transmit data** through fiber-optic cable. But LEDs are good only to about 300 MHz, then they run out of steam. That's why you need lasers for ultra-fast communications..

■ **Analog telephone lines limit how fast you can transfer digital data** -- about 56 Kbps (kilobits per second). Need more speed? There is now a modem that uses two phone lines and only one serial port on your computer. The Gemini 112K Modem is due in August.

■ **With the high cost of paper, it is now more economical for book pub-**

lishers to simply print books as demand requires, rather than print a huge batch and store them -- hoping that they will eventually sell. Regular printing used to require massive print runs to make each book sell at a reasonable price. Today, If a book sells out, the publisher simply prints more to meet the demand. If the book doesn't sell well, the few printed copies do not take up much money and the master copy can be stored in a computer for possible future print runs.

■ **Today, most textbooks come with a CD-ROM. And CD-ROM encyclopedias are already overtaking print editions.** The massive (deluxe edition) Encyclopedia Britannica sells for \$125. The print edition starts at \$1,250. The top six are Britannica, Colliers, Comptons, Encarta, Grolier and the World Book Encyclopedia. Microsoft (which owns Encarta) just bought out Collier.

■ **CB for truckers giving way to the Internet** -- Park 'N View, a Coral Gables (Florida) telecommunications company, is developing a private high speed broadband network for truck drivers. Over one hundred truck stops have been wired with T-1 connections that relay voice and data through the company's headquarters. And plans are to have 700 wired within three years. Monthly cost of \$30 includes one hour of long distance calls. At present, about 20% of the nation's truck drivers have personal computers in their cabs.

■ **The first transistor was developed in 1947.** Fifty years later, there were 200 million billion of them -- 40 million transistors for every human being on the planet. You can now hold a billion transistors on the tip of your finger.

■ **The city of Auckland, New Zealand was blacked out for weeks** when a couple of underground electric cables -- nearly 30 years old -- failed. The power company was blamed for not anticipating the blackout during the scorching summer. New cables are now in place, with more safeguards included.

In same hemisphere, electromagnetic interference is wreaking havoc with new automobiles in Sydney, Australia. The RF-saturated city is prone to car doors locking and unlocking, brakes screeching cars to a halt (without the driver's say-so), sudden bursts of speed and even air bags firing unexpectedly. Engineers blame the problem on the cars themselves, saying they do not include

adequate shielding.

■ **Overhead power lines are almost impossible to see at night.** Interestingly, they remain practically invisible even through night-vision goggles. Pilots can now fly safer after dark thanks to a new type of line marker approved by the FAA.

During the day, it looks just like a standard red-ball marker attached to the power line. At night, however, the glow from neon tubes inside the marker becomes visible from nearly a mile away. The high voltage from the power line itself ionizes the neon gas, so the utility never has to change batteries.

COMMUNICATIONS UPDATE

■ **Long-distance telephone companies spend about \$15 billion a year** just to keep their systems running. Local phone companies spend even more money to keep their equipment up: \$25 billion a year!

■ **Another "work-around" telephone service has emerged.** By dialing 10-10-998 before the "1" plus area code and four digit number, all continental U.S. out-of-state long distance telephone go to 10¢ a minute. All calls appear on your local phone bill. That is about a third of what LD cost just a couple of years ago. AT&T has answered with a 10¢ a minute long distance service of their own which requires no "work around" number.

■ **TreeCell is a camouflaged antenna.** It makes a cellular telephone tower look like a palm tree!

■ **Most telephone users expect a certain amount of noise on the line.** Since a digital connection doesn't produce noise, pauses in speech result in total silence. This is disconcerting to the listener, so artificial noise is added at the receiving gateway to make the connection sound more natural!

■ **By the year 2002, there will be approximately 1,700 satellites in orbit** serving the telecommunications industry.

■ **Radio interference has plagued us since the first receiver was invented.** Leona Marshall Libby, one of the scientists who developed the first atomic bombs, writes in her book "The Uranium People"

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about what happened during the critical days before the very first test firing in the New Mexico desert in July, 1945:

"The bomb was now on the tower and the base camp was crowded ... The frequency allotted by security for the short-wave radio to that site from base camp turned out to be that of *Voice of America*, and the allotted frequency for the FM radios at the base camp, the guard stations, and jeeps and cars was also the frequency being used by the railroad freight yards in San Antonio, Texas.

"Consequently, base camp could hear San Antonio shifting freight cars, and San Antonio could hear Los Alamos testing the plutonium bomb."

■ **Larger stores are beginning to use pocket telephones for each employee.** They can act as pagers, are easy to stuff into pockets, and the P.A. system doesn't annoy everyone.

COMPUTERS & SOFTWARE

■ **The fact that Microsoft's Bill Gates is the world's richest man is not news.** He has topped the 12th annual Forbes list for four years in a row. What is news is that Gates -- who doubled his net worth (to \$36.4 billion) last year -- has now added another 40% on top of that. The July 6th issue of Forbes says Gates has now increased his worth to \$51 billion ...an increase of some \$50 million a day during the prior year.

Gates predicted that 60% of all U.S. homes will have a PC within 3 years and 85% will be connected to the Internet.

■ **Taiwanese computer maker, Acer Group has unveiled a new line of low price "XC's"** -- X Computer devices -- that will list for \$200 to \$1,000. A computer aimed at kids will retail for only \$199. A two pound notebook computer will sell for \$600 to \$700. XCs will be more like appliances with only one use.

■ **A new type of backup software** doesn't use floppy disks, or even disk drives. It uses the Internet to store your data in another company's vault.

■ **Software is a growth industry.** Microsoft Windows NT 3.1 contained 6.1 million lines of code. Its upgrade, NT 4.0, contained 16.5 million lines of code.

Can you guess how many lines of code roar through version 5? About 26 million!

■ **The year 2000 is not the only potentially dangerous date for computers** around the world. Because of the way computers store data, several more upcoming dates could trigger some glitches. Here are some examples.

September 9, 1999. Many times a dummy date, such as 9/9/99, is entered into a program. Another test date is 1/2/34.

January 10, 2000. Just nine days after The Great Year 2000 begins, this day marks the first day of that year which requires three digits for the month and day. Later, on October 10th, dates require four digits (two for the day, two for the month).

February 29, 2000. The year 2000 is a leap year, but the year 1900 was not. If a computer interprets /00 as 1900, software packages could skip that entire day for financial or other calculations.

Because of the year 2000 rollover on computers, a telephone call started on New Year's Eve 1999 and ending on January 1, 2000 might be billed as 52 million minutes!!!

Dates are not all that computers sometimes have trouble interpreting. Who knows what will happen when the Stock Market hits 10,000? At least we can sleep in on January 1st, 2000. It falls on a Saturday.

Lloyd's of London, the famous insurance agency, estimates total Year 2000 computer litigation costs to approach \$1 trillion before order is restored to the market.

■ **The Toshiba Equium 7000 series of Pentium PCS** let you slide the motherboard through the side of the chassis. You don't even have to remove the monitor to tinker with the CPU.

■ **Studies show that if a document is more than a few paragraphs long,** people prefer to read it on paper than on a computer screen.

INTERNET NEWS

■ **Taming the Internet is a big job.** There are over 5,000 registration requests for new Internet domain names every day,

and over 10,000 requests each day to change them. More than a million web sites go up every year. Estimates are that the Internet will have 1 billion users within two years.

■ **Push technology is "out" ...portals and "robots" are in.** Robots are automated helpers ...personal agents that scour websites to find wanted information.

Pointcast, Inc., the Internet "push" news service based in Sunnyvale, Calif., started by two ham operators is now looking for a buyer.

The *Reuters News Service* said, "Pointcast, once a darling of Silicon Valley that created the concept of 'push' technology lost subscribers amid complaints that the service was delivering too much unwanted content and slowing down internal corporate networks." Pointcast reportedly turned down an offer of \$450 million last year from Rupert Murdoch's News Corp., Ltd., a big mistake!

■ **Big media firms are seeking a foothold in the Internet. And the value of so-called "Internet portals" is skyrocketing** as large communications companies merge with them. The term "portal" refers to entrance or "start pages" ...the Internet services first visited by web surfers.

The biggest portal players are Yahoo, Excite, Lycos, Infoseek, America Online and the Microsoft Network. All are now public companies. Most have no bottom-line earnings. But that hasn't stopped investors. Yahoo - which started out as a couple of college kids who developed a search engine - now has 90 million page hits a day and a market capitalization of more than \$6 billion!

A portal's worth lies in the number of people that regularly tie in to their service. Most web users will eventually be tapping into the Internet through wireless, cable, satellite and other innovative high speed lashups. Once there, a media company wants you on their network.

Walt Disney recently paid \$70 million for a stake in Infoseek. Time Warner is also contemplating a similar investment in Infoseek. Disney owns ABC and ESPN. General Electric (which owns NBC) paid \$32 million for a stake in CNET and its "Snap" front door service.

AT&T tried to buy America Online and even offered to throw in its faltering WorldNet Online service, but was turned down. AT&T already has marketing

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alliances with Yahoo, Excite, Infoseek and Lycos. AOL recently entered into a \$100 million deal with Tel-Save to provide long distance telephone service to its members.

A leading research company said American Online, with 14 million subscribers reaches 25% of all PC-owning homes. Yahoo has 31.4 million regular monthly users, Excite 19.4 million, Lycos 13.7 million and Infoseek, 13.3 million.

The U.S. Commerce Dept. said that electronic commerce would reach \$3 billion within 5 years with 70% of American consumers shopping online.

■ **Think of Internet years in terms of dog years.** That is, a ratio of one to seven. As much happens in one year of Internet development as happens in seven years of regular business development.

■ **AT&T's detour around "the last mile" means high speed Internet access for the home!** Deep pocketed AT&T has purchased Denver's Tele-Communications, Inc., the nation's largest cable television operator for \$48 billion in a deal that will sharply increase its ability to provide local telephone service and Internet access to TCI's 22 million cable ready homes in dozens of states.

Local phone service would be through TCI's existing residential cable hook-ups rather than the twisted-pair copper telephone line. AT&T also shelled out another \$20 billion for TCI's programming arm, Liberty Media Corp.

AT&T agreed to pay more than \$50 a share to acquire all of TCI's outstanding shares - a 30% premium over its \$38.69 NASDAQ Stock Market closing price. The deal must be approved by stockholders and government regulators. It is unclear whether the FCC or the Justice Department will get to review the merger.

AT&T's long-distance and wireless services and TCI's cable and telecom business will be merged into a new subsidiary to be called AT&T Consumer Services. When the merger is complete, AT&T Consumer Services' wholly owned and affiliated cable systems will pass 33 million homes.

It will provide the broadest set of consumer communications services -- including local, long distance, Internet, wireless and international communications -- all under the AT&T brand name. Service to consumers is scheduled to begin by the end of 1999.

TCI recently spent \$500 million to upgrade its network to handle two-way digital services. AT&T made it clear that it is primarily interested in obtaining the cable systems as a way to reach the consumer.

AT&T will have to invest another \$10 billion to adapt the cable lines to carry two-way communications. The on-line programming portion of the business will continue to be run by TCI Chief Executive John C. Malone.

AT&T also gains control of TCI's stake in the "@Home Network", the leading provider of high speed Internet access and content. "@Home" currently has agreements with TCI and other major cable companies that together pass nearly half of all U.S. households.

The FCC has been trying to open up local phone markets to new competition since 1996. Local phone companies, however, have been charging high access fees -- about 40¢ of each long distance call dollar -- to lease local wirelines to competitors -- too high to make a profit.

To solve that dilemma, AT&T turned to the other wireline entering the home. By using cable TV lines, AT&T bypasses the local telephone company. Both wires going into the home will now be able to carry voice and other high speed digital services. In short, the advantage that the local telephone systems had now appears gone. Copper wire ADSL will compete against coaxial cable TV access.

AT&T ends up with three different "tracking stocks" - one for Liberty Media - the programming business run by TCI. Another for its newly purchased cable TV and consumer phone business. A third would cover AT&T's business customers.

The Telecom Act of 1996 cleared the way for the Baby Bells to enter the long distance market once competition existed at the local level. With the purchase of TCI, AT&T has now cracked the \$100 billion-a-year local phone monopoly. They already control 60% of the \$80 billion-a-year long distance market.

The financial community liked what they saw and ran the stockmarket up more than 2% for the week. The AT&T/ TCI merger news seemed to help everyone ...that is everyone except AT&T. Their shares had a huge loss after warning that the TCI acquisition will hurt its earnings for three years.

■ **Want a bird's eye view of what**

your neighborhood looks like from a high-resolution spy satellite? The images are available on the World Wide Web by either pointing and clicking on a U.S. map or entering your latitude/longitude coordinates into Microsoft's Terra-Server at: <<http://terraServer.microsoft.com>>.

It is billed as the world's largest database on the Web. The site contains more than a trillion bytes of compressed satellite Earth photos. If printed on paper with 500 pages per volume, it would span 2,000 volumes. Microsoft created this site in partnership with Compaq, the U.S. Geological Survey and Aerial Images, Inc. The highly detailed images allow users to zoom in as close to 1.0 meter resolution!

Your coordinates can be found on the Buckmaster Call Sign Look Up Server <http://www.buck.com/cgi-bin/do_ham-call>. The images come from two sources, the U.S. Geological Survey (USGS) and a joint Russian/U.S. venture to market declassified satellite photographs.

At present, only 30% of the United States is available, but Microsoft keeps adding images all the time. The service is free. Microsoft derives no income from this service.

WASHINGTON WHISPERS

■ The U.S. government runs on computers and **Congressmen have now agreed to pay nearly \$4 billion** to update federal computers before the Y2K (year 2000) bug hits. Old software reads the last two digits for the year -- thus "00" becomes 1900 instead of 2000 causing crashes, corrupt or lost data. Rather than overspend the budget, Republican conservatives will cut funds from domestic and defense appropriations and redirect it to an emergency spending bug-fix program.

■ **An anti-spam bill is working its way through Congress.** The legislation would require senders of unsolicited e-mail to identify themselves, provide a valid return address and inform recipients they can stop any future mailings by simply replying with the single word: "remove." The Federal Trade Commission would enforce the system with fines. We predict the agency will have their hand full if the bill becomes law!

■ **Information should not be taxed or regulated by the FCC.** The House of Representatives has voted to impose a three year moratorium on Internet taxes except in the eight states that charge a sales tax on ISPs (Internet Service Providers.) Wisconsin, Connecticut, Iowa, New Mexico, North Dakota, Ohio, South Dakota and Tennessee will have to reenact the taxes within a year or they too will be eliminated. The bill now must be reconciled with the Senate's previously passed six year moratorium.

■ **The FCC has resolved all of the differences on the 300-MHz of spectrum** it allocated in the 5 GHz (5-cm) band last year to Unlicensed National Information Infrastructure (U-NII) devices. The 5.15-5.35 GHz spectrum will be used by wireless low (200 milliwatt) power local area networks (LANs) to tie computers together. Higher (1 watt) power and (23-dbi gain) directional antennas will be permitted for point-to-point service between 5.725 and 5.825 GHz. Amateur radio shares a portion of the 5-cm band with this new service.

AMATEUR RADIO

■ **A New Zealand ham operator has been ordered off the shortwave broadcast bands.** A Christchurch radio operator has been broadcasting his "Plains FM" programs all over the world.

Electronics engineer Bede Ives has been transmitting the community service by shortwave from his Linwood home for several years. The New Zealand Ministry of Commerce, who have been aware of his operation for several years, now want him off the air. Ives has chosen to ignore an official warning and faces a fine of \$30,000 to \$200,000 if he continues.

He says his 7.1 MHz operation is authorized by the *United Nations Human Rights Act* which provides for use of the airwaves "...to communicate, educate, inform, or impart knowledge." While the 7.1 to 7.3 MHz (40 meter) band is allocated to the Amateur Service in our hemisphere, it is used for shortwave broadcasting in the rest of the world. [Source: "The Christchurch NZ Press"]

■ **Previous subscribers to the failed "Digital Journal" are being given an**

opportunity to subscribe to "The New RTTY Journal" at \$12.00 (\$15.00 foreign.) The new publisher/editor is Bill Henry, K9GWT, from Hal Communications. The publication began in 1953 as "The RTTY Journal."

Henry says in an editorial on the ARRL Bandplan Declaratory Ruling request that it "...shows a 'packet' sub-band for each HF band, [but] no mention is made of AMTOR, Pactor, G-TOR, or CLOVER. AX.25 is a wonderful protocol for use on VHF and UHF, but few experienced users would even consider this mode on HF these days."

K9GWT said he believes "...the ARRL needs help from those of us who do know what's happening on HF. While legislated bandplan control may be necessary above 50 MHz, the ARRL has not made a good case to extend the policy to the HF bands."

The June 1998 issue contained many photographs from the 1998 Dayton Ham-Venture.

■ **Timewave Technology Restructures** -- President Randy Gawtry of Timewave Technology announced that due to excessive debt load they will be restructuring under the Chapter 11 bankruptcy laws. Timewave is a manufacturer of high quality/high performance DSP external filters for transceivers. Last year, Timewave purchased the rights to all the products in the former AEA data product line (not including antennas and antenna analyzers). Tempo Research Corporation purchased the rights to the AEA name and the antennas and antenna analyzer products. Tempo Research and Timewave Technology are not connected in any way.

Gawtry states that manufacturing is continuing and that he personally plans to keep operations going into the future at a level that can be profitably maintained. Customer service for all Timewave products including the former AEA data products will continue including upgrade service for the popular PK-232 data controller. (Thanks: Mike Lamb, N7ML, of AEA/Tempo)

■ **National ham radio society, Radio Amateurs of Canada (RAC) has petitioned Industry Canada (IC) seeking to permit holders of their "Basic" VHF/UHF license to operate in the 10 meter ham band** once a 5 words-per-minute is passed. At present, "Basic" certificate holders who pass 5 w.p.m. may only access spectrum above 30 MHz and

the 160 and 80 meter bands.

RAC said it believes "...this proposal would be an important step for the growth and stability of the Amateur Radio Service, by offering amateurs who now meet basic international requirements the opportunity to operate on a worldwide long distance (DX) high frequency band during the upcoming favorable sunspot cycle years." *Industry Canada* is the federal telecommunications regulatory agency in Canada.

Canada has only four license examinations. Two multiple choice written exams (a "Basic" qualification for beginners plus "Advanced") ...and two Morse code exams (at 5 and 12 w.p.m.) The "Basic" license permits operation above 30 MHz using commercially available transmitting equipment.

With the 5 words per minute Morse Code Qualification added to the Basic qualification you receive all 1.8 - 2.0 MHz and 3.5 - 4.0 MHz ham radio privileges at a maximum of 250 watts DC input power.

With the 12 w.p.m. Morse Code qualification added to the Basic Qualification, you receive all ham radio privileges on all the amateur radio bands below 30 MHz at a maximum of 250 watts DC input power.

The Advanced Qualification added to the Basic Qualification permits an amateur to build their own transmitting equipment and operate a high power (1 KW DC input) transmitter or repeater station.

There are no mode subbands in Canada and maximum bandwidths are specified for each band.

At present, Canadian amateurs are required to hold two "authorizations": an operator certificate and a station license. *Industry Canada* is in the process of (1) changing to a single operator-oriented authorization and (2) eliminating the current \$24.00 annual license fee. Station call signs would be issued with the operator license.

Industry Canada recently ended a program that would have turned administration of their Amateur Service over to RAC. The termination was due to the lack of needed long-term funding from IC by the Amateur Radio Administrative Services, Inc., (ARAS) -- a corporation established by RAC to manage amateur radio in Canada. There are approximately 45,000 licensed radio amateurs in Canada.

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PHASE 3D SATELLITE BUMPED FROM LAUNCHER

The amateur Phase 3D satellite will not fly on Ariane 503 this October as hoped. You will remember that the satellite was bumped from the AR 502 launch vehicle last year when the European Space Agency (ESA) imposed stricter vibration mounting requirements which could not be completed in time. It has happened again.

AR 501, the first developmental flight of the new Ariane 5 rocket, ended in a failure making a third test flight - AR 503 - a necessity. ESA agreed earlier this year to carry Phase 3D if it could not find a paying customer.

Due to a \$40 million shortfall in developmental funding, ESA then turned to Arianespace to find a paying customer for AR 503. Arianespace is a commercial, profit oriented company set up to sell Ariane launches.

Arianespace has now found a commercial satellite, (the "W-1") to launch on AR-503 and the Phase 3D has been replaced. The W-1, damaged by a fire a few months ago, has been refurbished by Arianespace and made ready for flight. It got the rights to the disabled W-1 from an insurance company. Arianespace will sell the satellite communications service itself once it is launched.

The real bad news is that AR 503 is the last developmental flight of the Ariane 5. Arianespace's cost to fly on a scheduled AR-5 launch (\$10 million) is clearly prohibitive for P3D.

"This is obviously very disappointing news," said AMSAT-NA President Bill Tynan, W3XO. "We must, however, persevere and continue our present course to get the satellite tested and ready for a launch. And we pledge to do so."

"It is important to point out that the decision was actually made by Arianespace, not ESA. As everyone should know by now, ESA is the European Space Agency. It is similar to NASA in the United States except that it is multi-national. Arianespace is the organization set up to market Ariane launches. So, naturally, its prime interest is money.

"Because of the failure of the first Ariane 5 test, AR 501 in June of 1996, and the less-than-expected performance of the second flight, AR 502 last October, all concerned have been understandably anxious to complete a fully successful test as soon as possible. Arianespace cannot begin to sell Ariane 5 launches until a successful test actually takes place.

"...The bottom line is that Phase 3D will not ride on Ariane 503," Tynan said. "While we are disappointed, Tynan continued, "crying and gnashing of teeth never accomplishes anything." He emphasized that "AMSAT is taking steps to complete the testing of Phase 3D and

have it ready for any launch that we might be able to obtain," adding, "naturally, ESA and Arianespace are still prime candidates for our presentations."

Tynan emphasized that Phase 3D was designed and built "with the then very real prospect of a launch on an Ariane 5 vehicle." It was later determined that with an appropriate adapter, it could also be accommodated by an Ariane 4 launch vehicle. "But, because it was built to go on an Ariane, it just can't be put on any rocket that's going up," said Tynan.

Continuing, he noted that Phase 3D is a "rather large spacecraft and also quite massive, in the order of 600 kilograms or about 1200 pounds when fully fueled. As such, it requires a launcher with a large volume under the shroud and a launch vehicle with substantial performance."

"The orbit that the launcher puts us into is also very important", Tynan continued. "Generally a Geostationary Transfer Orbit (GTO) is what we need. A launch into a circular low Earth orbit (LEO) would be much less than optimum. Many launches, including the Space Shuttle, go to such LEO orbits. There are, of course, other launchers that go to GTO besides Ariane, and we will be looking at them. However, nothing can be promised at this time," he concluded.

Tynan also said that he hopes that AMSAT-NA members, and all who have contributed to the Phase 3D project to such a great extent, will keep the faith and continue their support while efforts to secure a launch for Phase 3D continue.

"He also made it clear that AMSAT is beginning to embark on other projects as Phase 3D is being completed. These include assisting with a number of university satellite projects, some of which are to include amateur transponders. Effort is also getting under way in connection with developing amateur radio equipment for the International Space Station. "In addition, I'd like everyone to remember that there are several satellites preparing for launch which will carry amateur transponders," said Tynan.

The AMSAT-NA president wrapped up his statement with, "There's lot's to keep all satellite enthusiasts occupied while waiting for the launch of Phase 3D, which will come in time. Just because Phase 3D will apparently not be launched this year, AMSAT is very much alive and kicking."

Phase 3D project manager and AMSAT-DL President Dr. Karl Meinzer, DJ4ZC said he hoped "...once Arianespace has a better understanding of our environment and the constraints we work under, there will be room for negotiation." He remains optimistic that there may be a chance that P3D could be launched next year.

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JUDGE ISSUES INJUNCTION AGAINST FAMED MICROBROADCASTER, STEPHEN P. DUNIFER

Order "unplugs" Free Radio Berkeley, 104.1 FM

On June 16, U.S. District Court Judge Claudia Wilken (Northern District, California) issued a permanent injunction against Stephen P. Dunifer from broadcasting without a license. The 18-page decision reaffirms the FCC's authority to require a license before any person can broadcast on the public airwaves.

Dunifer, a broadcast engineer, had operated the community FM station Free Radio Berkeley (FRB) since 1993, without paying a \$20,000 fine imposed by the FCC for unlicensed operation. The station left the air after the judge issued her injunction.

Dunifer supports himself by assembling and shipping backpack-sized radio kits around the globe. The kits enable people to broadcast for as little as \$1,000 plus the monthly power bill -- without a license, of course. One of his customers is the United Nations. Dunifer fostered a "micro radio" movement of unauthorized stations, more than 200 of which have been shut down by the FCC in the last two years.

FCC Chairman William Kennard, who has publicly conceded some sympathy for small, low-power broadcasters, hailed the "decisive court action" that "puts to rest any doubts about the FCC's authority to manage the public airwaves to prevent interference and protect the public's safety." The injunction, he said, "should send a message to all pirate broadcasters: obey the law -- and join the FCC in our efforts to expand the legal uses of the public airwaves."

(His latter comment is peculiar, because the FCC has not proposed to expand micro radio broadcasting or to make it legal. It has expanded the flexibility of licenses in other services, but they have paid billions of dollars at spectrum auctions. The FCC has proposed to auction radio and TV broadcast licenses.)

The Commission sought an injunction against Dunifer in 1995. Judge Wilken denied the FCC request at that time so that the court could later address Dunifer's complaints that the FCC's licensing policies are unconstitutional. FRB continued to broadcast until the injunction was issued. Dunifer has defied the FCC because he claims their regulations against micro-power radio broadcasting deny citizens access to a resource they are supposed to own -- the airwaves.

"Psychologically, her denial of an injunction at that time was seen as an umbrella that protected micro stations and permitted them to continue," according to Philip Tymon of the Committee on Democratic Communications of the National Lawyers Guild. "That umbrella is no longer there. But I doubt that the micro stations have gone away forever," he said. His committee has supported legal work on behalf of FRB.

Much of Dunifer's case concerned the FCC's so-called "Class D regulations," which formerly recognized a legal class of low-power (10 W) non-commercial educational FM stations.

Many university radio stations held these licenses, but the FCC later stopped granting and renewing the licenses when it decided that they inhibited full-power FM frequency assignments. The low-power stations, the FCC said, could not be allowed to "function in a manner which defeats the opportunity for other more efficient operations which could serve larger areas, and bring effective non-commercial educational radio service to many who now lack it."

The judge's decision turned on several intricate legal arguments. For example, she concluded that because Dunifer had not asked the FCC for a license, or a waiver of the regulations against a Class D license, that the FCC's regulations had not been applied to him and therefore "he does not have standing to challenge those regulations." The judge found that the FCC's regulatory scheme "withstands constitutional scrutiny" because it specifies procedures for the FCC to follow and provides for judicial review of any improper FCC ruling.

The ordering clause of the judge's opinion states: "The United States motion for summary judgment must be GRANTED. Accordingly, Mr. Dunifer, and all persons in active concert or participation with him, are hereby ENJOINED:

- (a) From making radio transmissions within the United States unless and until they first obtain a license from the FCC;
- (b) From doing any act, whether direct or indirect, to cause unlicensed radio transmissions or to enable such radio transmissions to occur."

Stephen Dunifer's reaction was defiant. "My attorneys, Luke Hiken and Alan Hopper, will be filing a motion to challenge this extremely flawed ruling which insists that one must, first, take part in an obviously futile process before constitutional standing can be established," he said.

"For 64 years, the FCC has stood for the protection of corporate interests and profit, not the First Amendment. To hell with the FCC, National Association of Broadcasters, and corporate control. We are going to reclaim our rights and resources through an ever-increasing campaign of electronic civil disobedience and direct action. Free speech by any means necessary. No retreat, no surrender."

Meanwhile, the FCC continues to shut down unlicensed broadcast stations. On June 22nd, FCC agents and U.S. Marshals seized the equipment of WPPR (West Philadelphia Pirate Radio) after several attempts to have the station operator voluntarily discontinue transmission. About 112 microbroadcasters still remain on the air. More than 40 of those are operating in South Florida.