

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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Bill Introduced into Congress to Protect Amateur Radio Spectrum

Legislation entitled, *The Amateur Radio Spectrum Protection Act of 1999* was introduced into the 106th Congress House of Representative on February 23, 1998. HR 783 seeks "To ensure the availability of spectrum to amateur radio operators."

"Representative Michael Bilirakis (R-Florida) and Rep. Frank Pallone, Jr. (D-New Jersey) introduced the bill which was referred to the Committee on Commerce.

The bill looks toward ensuring that radio spectrum will continue to be available to the nation's amateur radio operators. The legislation is almost exactly the same as last year's HR 3572 which attracted dozens of co-sponsors but no Congressional action. That bill - also introduced by Michael Bilirakis on March 27, 1998 - was never reported out of the *House Subcommittee on Telecommunications* nor were any hearings held on the measure.

So far, the 1999 version has attracted 5 additional co-sponsors, U.S. House members: Ronnie Shows (D-Mississippi), Nathan Deal (R-Georgia), Mrs. Patsy Mink (D-Hawaii), Robert Underwood (D-Guam), and John Baldacci (D-Maine.) Co-sponsors sign on during the life of the Congressional year.

ARRL Legislative and Public Affairs Manager Steve Mansfield, N1MZA, said a major difference is that the 1999 version adds "Amateur Satellite Service" frequencies to "Amateur Radio Service" in detailing the frequencies that would be afforded pro-

tection under the act. In fact, that was the only difference -- everything else was word-for-word the same as the 1998 version.

A review of the status of last year's HR 3572 reveals that the bill received no further action whatsoever once it was turned over to the Commerce Committee. Here is an exact copy of the 1999 version. Let's hope it is better received this year:

HR 783 -- A BILL

To ensure the availability of spectrum to amateur radio operators.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the '*Amateur Radio Spectrum Protection Act of 1999*'.

SEC. 2. FINDINGS.

The Congress finds the following:

- (1) More than 650,000 radio amateurs in the United States are licensed by the Federal Communications Commission.
- (2) Among the basic purposes of the Amateur Radio and Amateur Satellite Services are to provide voluntary, noncommercial radio service, particularly emergency communications.

(3) Emergency communications services by volunteer amateur radio operators have consistently and reliably been provided before, during, and after floods, hurricanes, tornadoes, forest fires, earthquakes, blizzards, train accidents, chemical spills, and other disasters.

(4) The Federal Communications Commission has taken actions which have resulted in the loss of at least 107 MHz of spectrum to radio amateurs.

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

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

(z) Notwithstanding subsection (c), after July 1, 1999

(1) make no reallocation of primary allocations of bands of frequencies of the amateur radio and amateur satellite services;

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

(3) make no additional allocations within such bands of frequencies that would substantially reduce the utility thereof to the amateur radio or amateur satellite service;

unless the Commission, at the same time, provides equivalent replacement spectrum to amateur radio and amateur satellite service.

FCC TAKES ENFORCEMENT ACTION AGAINST AMATEUR REPEATER VIOLATIONS

The FCC has accused two hams in the North-East of interfering with the operation of a Pennsylvania repeater and have issued both some very stiff fines. Commission personnel claim that they utilized mobile radio direction finding techniques to locate Michael Gallagher, KB3DHX, of Concord, Massachusetts, and Kornwell Chan, W3CI, of Dresher, Pennsylvania.

The FCC alleges that both were maliciously interfering with the Phil-Mont Mobile Radio Club W3QV two meter repeater. The Commission says that their personnel from the Philadelphia FCC office traced the radio transmissions on multiple occasions in February to a vehicle in Willow Grove and in Hatboro, Pennsylvania. Both licensees have been issued *Notices of Apparent Liability* for \$7,500.

The FCC has also suspended for 120 days (until July 5th) the VHF and UHF operating privileges of Blake B. Jenkins, N6YSA, of Berkeley, California. Jenkins was

listed as the primary control operator for the San Francisco area K7IJ "Grizzly Peak" VHF/UHF repeaters that the Commission recently ordered off the air.

In a March 3rd letter, the FCC demands that Jenkins provide detailed information concerning alleged violations that took place over the K7IJ system while he was in control of the system. The letter also alleges that since the operation of the K7IJ repeater was discontinued, Jenkins has used his own Amateur Radio station to – and we quote – "...solicit the jamming of other licensed repeaters in your area" – end quote.

And in an unusual move the FCC letter also raises questions regarding a site on the world-wide-web apparently operated by Jenkins. The FCC asserts that the "Ham Radio Jamming" section provides circuit descriptions of jamming devices and techniques. Pages dealing with jamming hardware appear to be no longer available.

The FCC says that these are very serious issues and that they must be resolved in order to determine if N6YSA is qualified to retain his Amateur license. The FCC continues to look into the conduct of an alleged secondary control operator, Steven R. Rossi, KE6LNH.

Meanwhile, FCC's Riley Hollingsworth said he and K7IJ licensee Bruce Wachtell spoke by telephone after Wachtell – a shipboard radio operator now in the Pacific – reached port in Hawaii. Hollingsworth said the FCC still expects a written response from Wachtell addressing the Commission's concern about the repeaters' operation. (*Thanks, ARRL, Newslines, FCC*)

AMSAT-NA CELEBRATES 30TH ANNIVERSARY

In 1969, the thought of an organization to build, fly and operate amateur radio satellites was just that – a thought -- and from humble beginnings the *Radio Amateur Satellite Corporation*, known as AMSAT – was born.

Now, 30 years later, AMSAT North America, along with many worldwide partners, shares an active interest in designing, building, launching and communicating through analog and digital amateur radio satellites.

AMSAT-North America celebrated its 30th anniversary on March 13, 1999 at the *NASA/Goddard Employee's Recreation Center* in Greenbelt, Maryland. The festivities included tours of the Hubble Space Telescope Center and the NASA Deep Space Communications Network. AMSAT President Keith Baker, KB1SF, and AMSAT Chairman of the Board Bill Tynan, W3XO, were in attendance.

A special patch commemorating the 30th anniversary is expected to be available at the May 14-16 *Dayton Hamvention* AMSAT booth. Rich Moseson, W2VU, CQ-VHF editor, covered the 30th anniversary AMSAT story in this March 1999 issue.

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AMSAT SPACE SYMPOSIUM SET FOR OCTOBER

AMSAT-NA is also looking forward to the 17th AMSAT-NA Annual Meeting and Space Symposium scheduled to be held October 8-11, 1999 at the Hanalei Hotel in San Diego, California, USA.

AMSAT issued its first call to authors who wish to present papers at the Symposium. The subject matter of the papers should be topics of interest to the amateur radio satellite service.

One page abstracts are due no later than May 1. Authors will be advised by e-mail or postal mail shortly after June 1 regarding whether their paper has been accepted. Camera ready copy of accepted papers is due no later than August 1. Papers will only be superficially edited and will be printed generally as submitted.

Authors are requested to provide an electronic copy of their presentations preferably in any version of Word or WordPerfect in the event corrections are required at the last minute.

Please send abstracts to Duane Naugle, KO6BT, via e-mail to ko6bt@amsat.org or via postal service to: Duane Naugle, KO6BT, 4111 Nemaha Drive, San Diego, CA 92117-4522. Receipt of submissions will be confirmed.

Proceedings of the Symposium will be printed by the ARRL and made available at and after the meeting. Also, if you do not wish to present a paper, but have a topic of interest, please submit the topic and perhaps arrangements can be made for a presentation.

Details on arrangements for the 17th Space Symposium and AMSAT-NA Annual Meeting will soon be posted to the AMSAT web at <http://www.amsat.org>.
(Thanks: AMSAT-NA)

LOW-FREQUENCY EXPERIMENTAL LICENSE ISSUED

Washington, DC, March 6, 1999: The Federal Communications Commission (FCC) has granted a one-year experimental license to the Amateur Radio Research and Development Corporation – AMRAD – to conduct tests on the frequency 136.75 kHz using the call sign WA2XTF from twelve sites in Northern Virginia

These experiments are to gain experience in anticipation that the FCC may allocate the low-frequency (LF) band 135.7 - 137.8 kHz to the Amateur Radio Service in the United States. This band already exists in New Zealand and some European countries in accordance with Recommendation CEPT/ERC/REC 62-01. CEPT is the abbreviation for the *European Conference of Postal and Telecommunications Administrations*.

Low Frequency (LF) is that portion of the RF spectrum extending from 30 through 300 KHz. In Europe, where there are numerous broadcast transmitters between 150 and 250 KHz, it is often called "Long Wave".

The British, the Germans, the Swiss and the Australians, to name but a few, are doing great things on LF. QSOs spanning 1,000 miles have taken place recently in Europe with transmitter powers of between 250 and 700 watts, yielding ERPs around 500 milliwatts!

Participating in the AMRAD experimental operation are Glenn Baumgartner, KA0ESA; David Borden, K8MMO; Robert Bruhns, WA3WDR; Hal Feinstein, WB3KDU; Terry Fox, WB4JFI; Andre Kesteloot, N4ICK; George Lemaster, WB5OYP; Shannon Mishey, N8TBM; Paul Rinaldo, W4RI; David Rogers, K9RKH; Elton Sanders, WB5MMB; and John Seely, AA4GM. Rinaldo is the ARRL's technical relations manager.

While the list of stations is closed and new transmitting stations cannot be added, others are invited to join the project by listening and reporting results. Reception reports should be sent via e-mail to Andre Kesteloot, N4ICK, n4ick@amrad.org.

Emissions authorized for these tests are 173HF1D (frequency shift data, 173 Hz bandwidth), 100HA1A (CW, 100 Hz bandwidth) and 450F1D (frequency shift data, 450 Hz bandwidth.) The authorized transmitted power is 1 watt ERP. The 12 stations will operate experimental transmitters, antennas and receiving systems using digital signal processing (DSP) techniques.

On October 22, 1998, the American Radio Relay League (ARRL) petitioned the FCC to create two LF allocations for the Amateur Radio Service: 135.7 - 137.8 kHz and 160 - 190 kHz limited to 200 watts PEP but in no case greater than 2 watts EIRP. The petition was designated RM-9404. Additional information is available at the ARRL Web site: <http://www.arrl.org> under ARLB095 ARRL Petitions FCC for LF Allocations.

AMRAD is a worldwide club of Amateur Radio and computer experimenters. It is incorporated in the Commonwealth of Virginia and is recognized by the US Internal Revenue Service as a tax-exempt 501(c)(3) scientific and educational organization.

Further information concerning these LF experiments will be available in the *AMRAD Newsletter* mailed bi-monthly to AMRAD members and on the World Wide Web at: <http://www.amrad.org>. (AMRAD Press Release)

● **The Radio Society of Great Britain reports** that a meeting of IARU Region One societies was held in London. The possibility of a major fee increase levied against member societies was raised. The meeting was attended by senior board members of the RSGB, the German radio society DARC, French society REF, Belgian UBA and the Dutch society VERON. The gathering discussed global pressures on the Amateur Radio Service; and the need for closer co-operation between societies in combating legislation that threatens the well-being of Amateur Radio. (Thanks: RSGB)

CUTTING EDGE TECHNOLOGY

■ Is conventional X-ray film radiology on the way out? Canon-USA has introduced a new Digital Radiography System that instantaneously creates digital images without film on a silicon plate up to 17-inches square. The big advantages are that the images do not need to be developed, are available immediately, can be stored in a computer and e-mailed between doctors. The system recently received Food and Drug Administration approval.

■ **Some bar codes are literally becoming invisible.** For various reasons, some manufacturers are stamping their products with infra-red ink codes so the human eye can't see them. It helps control inventory and can help trace stolen property. Special bar-code scanners read the patterns just as easily and quickly as ordinary codes.

■ **Big brother comes to retailers** - For large stores with not enough employees, "Awareness Nodes" in the ceiling (based on infra-red technology) listen for transmitted signals from special badges the employees wear. A computer interface can match up customers with personnel, or one employee with another, and also tell all where everyone else is.

■ **It is very rare these days for software to receive a patent.** The vast majority of computer programs available do not exploit a breakthrough in technology, they just build on previous works. Most programs written in 'C', for example, make extensive use of stored libraries of tried-and-proven sub-programs. Just like the written word, there are almost no new words actually created, just new ways of putting known words together.

■ **Engineers say that electronic circuitry doesn't really become vulnerable to moisture and corrosion** until the relative humidity of the air becomes at least 60%. The hotter the air temperature, the more water vapor it can hold -- and less water forms on surfaces. Simply keeping an enclosure at least five degrees warmer than the ambient air can help protect electronic circuit boards from collecting moisture, and eventually corroding.

■ **The Temptronic Corp. offers an**

unusual environmental chamber for testing electronic circuit boards. The small device encloses the board, yet still allows you to perform tests and measurements because the plastic window can be pierced with probes and terminals. After you withdraw the probes, the plastic "heals" itself. The plastic sheets can withstand only about 100 punctures before they wear out and must be replaced.

■ **If you want to remove a surface-mount IC from a PCB without damaging it,** try the *Chip Quick* SMD Removal Kit. Rather than relying on the popular but not totally safe thermal conduction or forced-hot-air techniques, *Chip Quick* uses a special flux and a low-temperature alloy that mixes with the existing SMD solder, producing solder reflow at less than 93 degrees C. You can keep the new alloy melted safely until you can lift the SMD leads. Price: \$30. *Emulation Technology, Santa Clara, CA.*

■ **As part of virtual-reality hardware, the Immersion Corporation makes the I-Force coprocessor.** When a user is hooked up to the proper feedback devices, the coprocessor simulates the feel of liquids, textures and surfaces. It adds to the "you are there" feeling when you "handle" virtual-reality objects.

■ **Electric utilities face the problem of providing more power for more people,** yet more people means fewer places available for installing high-voltage transmission lines. Utilities often are forced to pump more current than usual through their delivery systems to make up the difference. This produces more heat, which in turn causes the cables to sag. If power lines get too close to the ground, they become a hazard. Utilities are using software to graphically display terrain and any potential line-sag problems to prevent accidents.

■ **Do you miss the days of vacuum tubes? Count your blessings.** Only 50 years ago, the avionics systems in most aircraft required replacement of their vacuum tubes after about every 100 hours of use. Today's semiconductor-based avionics can handle exponentially more work, at lower temperatures, much more quickly, and last up to 30,000 or even 40,000 hours before they require replacement.

■ **More Y2K Worries - Date stamps on e-mail messages may or may not be Y2K-compliant.** Why worry? Be-

cause most e-mail software sorts incoming messages according to date. If it thinks that a "new" message arrived in the year 1900, it may stuff it far into the back recesses of your "in" box, and you won't even know about it unless you look for it. So messages actually do get "sent," just not "received."

■ **No one relishes the thought of climbing into or cutting a hole in the wall of a large tank just to measure the thickness of its walls.** Fortunately, today's technology makes this unnecessary. Handheld ultrasonic thickness gauges require only physical contact with the outside surface of the tank wall. You tell the device what material the wall is made of, and it does the rest. A transducer on the gauge fires a pulse into the tank wall, and waits for a return echo. It measures how much time this takes, and calculates automatically how thick the wall or pipe is.

■ **Fiber-optic cables can have "SWR," just as RF coax cables do.** Any change in the light-based transmission medium (such as a poor splice or a crack in the cable) causes optical reflections. These reflections, once they bounce back to the laser diode, cause interference patterns in the lasing region of the diode, thereby causing distortion.

■ **Hams have used the 78xx series of voltage regulators for years.** They are inexpensive, simple, and easy to use, providing a number of smooth, steady DC voltages from varying inputs. One drawback to them, however, is that the input voltage must be several volts higher than the desired output voltage. That is not always possible, so several electronics manufacturers have developed "ultra low dropout" regulators that don't require inputs to be much higher than the outputs. These will be used in battery-operated devices such as laptop computers and other circuits where electricity is at a premium.

■ **The 3M Company makes comfortable static-discharge wrist straps,** for use when handling static-sensitive electronic devices, in a variety of colors.

■ **How much is too much?** UVLM's *Ultra-Lube* tells you if you're pumping too much grease into the bearings. A piezo-based sensor amplifies the sounds of the bearings and lets the user actually hear what they're doing. *Ultra-Lube* runs from a 9-volt battery and connects to a regular grease gun.

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EMERGING COMMUNICATIONS

■ **Get ready for AT&T local telephone service.** Long distance telephone giant AT&T Corp. emerged an "all distance" telecommunications company on March 4th when they finalized the \$55 billion acquisition of TCI - the nation's largest cable TV operator. The combined company will offer local and long distance wireline and cellular phone service, cable television and high-speed Internet access.

The acquisition puts AT&T back in the local phone business which they lost when they were broken up into several regional "Baby Bell" phone companies in 1984. AT&T will use cable TV wires to bypass the traditional telephone network. Their new local "AT&T Brand" telephone service will debut in ten cities by year end.

The FCC, the Dept. of Justice and state and municipal regulators approved the acquisition in the belief that it will bring competition to the local phone market. With the TCI acquisition, AT&T's reach now covers about one-third of the nation. A recent joint venture with Time-Warner, Inc., will double that coverage. Other joint ventures are planned which will extend AT&T's local telephone coverage even more.

TCI now becomes a wholly owned subsidiary called "AT&T Broadband & Internet Services." They will handle AT&T's cable TV programming and promote their high-speed Internet company, "AtHome Corp."

■ **There are an estimated half a billion radio receivers in use across America.** 99% of all households in the U.S. have at least one radio. 98% of have a color TV. 88% have a VCR. One out of every ten U.S. homes has a projection TV. (Americans have more radios and TV sets than telephones.)

■ **"Car 54, where are you?" Privacy concerns versus emergency calls.** Cellular phone users are not happy about the prospect of being constantly tracked. But it is coming!

The FCC in 1994 mandated that by October 2001 (Docket 94-102), an Automatic Vehicle Location (AVL) system must be in place that provides the exact location and identity of 911 callers to within 125 meters.

The capability is necessary because

emergency dispatchers are receiving some 60,000 calls from mobile phones daily from callers who can't accurately describe their locations. At first thought, the handsets of the more than 55 million wireless subscribers would have to be retrofitted with GPS receivers. But that is now not the case.

Cambridge Positioning Systems, Ltd (CPS), a small British company spun off from Cambridge University in 1995 is preparing to launch a revolutionary way of using mobile phones to pinpoint a caller's exact location within a few feet.

Their patented *Cursor* system is easier and less expensive to implement than competitors since it requires only a software upgrade to the handset during production and can be implemented within an existing mobile phone network using a minimal overlay of base unit equipment.

Cursor piggybacks the existing mobile phone network and requires no changes to it. Unlike the satellite-based Global Positioning System, the *Cursor* system triangulates between a fixed network of land-based stations.

A trial run will proceed in Cambridge this summer using handsets made by the Korean company, Maxon. A commercial roll-out of the service will follow. *Cursor* technology allows the phone user to decide who can track them. But turning off the location feature apparently will not be permitted in the United States. (Check out: <<http://www.cursor-system.co.uk/>>

Locating emergency number callers is just one type of application for this technology. In the longer term, the system could be used to provide location-sensitive information to mobile phone users such as navigation assistance, personal location, electronic Yellow Pages and vehicle tracking.

COMPUTERS & SOFTWARE

■ **PC prices are down, unit sales are up.** That's the bottom line from Framingham, Mass.-based research firm International Data Corp. IDC said it expects 103.2 million PCs to be shipped from manufacturers in 1999, an increase of 14.3 percent from 1998. But the dollar-volume will increase only 4.8% to \$178.4 billion due to lower prices.

In the all important 1998 fourth quarter, Compaq's dollar-volume share of the PC market increased to 15.3%. IBM

was number two with a 9.7 percent share. Pulling ahead of Hewlett-Packard, Dell was third at 8.4 percent (an increase from last year's 6.2%). HP slipped to 6.0% (from 6.2 percent a year earlier. Packard-Bell came in at a dismal fifth at 4.4% - down nearly one percent.

In units shipped, Compaq was first with 18.1 percent of the market, Dell second: 12.8 percent (up from 9.9 percent a year earlier.) Gateway and IBM both stood at: 9.1%; HP shipped 7.2% of all units. The biggest gain in PCs shipped the fourth quarter came from Dell Computer - up a whopping 56%!

■ **Microsoft is now permitting Dell Computer to delete its Internet Explorer browser icon** from the desktop on Windows-98 equipped PCs that it sells. This puts Microsoft's stated position that its browser is a key integrated part of its operating system and cannot be separated in jeopardy.

One of the charges that the Dept. of Justice asserts is that the restrictions Microsoft places on PC makers concerning the icon violate antitrust laws. We also heard that Microsoft is now looking for a way to settle the DOJ suit ...sort of an admission that their legal position may not be totally iron-clad.

■ **A small device that plugs into your computer's serial port called 'PC Caller ID Plug'** transfers the phone company's Caller ID data from the phone line to your computer. The software puts the caller's name and phone number on your screen when the phone rings.

■ **Homes, dorms and small businesses may want to look at Diamond Multimedia's HomeFree networking hardware.** It lets you link your home PCs together. You can create your own Local Area Network (LAN) among computers that are as much as 150 ft apart. Printers, CD-ROM drives, modems and other peripherals can be networked together. Each player in a multi-user game can stay at his own computer!

■ **The path to progress is seldom smooth.** With the new euro symbol unleashed on the computer world, engineers are trying to figure out where to put it - literally. Common monetary symbols are represented in the standard ASCII character set, and all the spots are already filled. Something must go to make room for the euro. Most engineers favor using the "Control-E" combination, which would

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make sense if only there were not a character symbol already there. It's called the "fada," the little accent mark used above some European letters. The Irish are not happy over this potential change, because that symbol is part of their vocabulary.

INTERNET NEWS

■ **Microsoft is pushing to be the major provider of Internet services in mainland China.** Very few of China's 1.2 billion people own a computer much less web access, - less than 2 percent. But this is expected to grow dramatically. Internet use in China is very closely controlled by the government to block immorality, subversion and political dissent. All Internet users must be registered with the authorities.

Microsoft has now unveiled a low cost way - code-named "Venus" - for the Chinese people to log onto the Internet through their television sets. A low cost set-top box running Windows CE (Microsoft's slimmed down operating system) is lashed to a television set and requires only a keyboard and a mouse. It will go on sale later on this year. A PC is not needed and the system is somewhat similar to Microsoft's WebTV product here in the United States.

■ **General Motors launched a new website March 10th** that permits consumers to do all their legwork in buying a new car on the Internet. All available "deals" are reflected and a final price quoted. You enter your zip code to access dealers that have the particular car you want in stock. Inventories at nearly 6,000 dealerships are online. Check out: <<http://www.gmbuypower.com>> Ford Motor also quotes prices on the web.

■ Texas State Senator Carlos F. Truan (D-Corpus Christi) has dropped a bill into the hopper (**SB106**) which seeks to **modify the Texas Business and Commerce code to make it a civil crime to transmit SPAM** (unsolicited business advertising) by telephone, fax or over the Internet.

Under the proposed legislation which is to take effect September 1, 1999:

Sec. 42.011. CERTAIN ADVERTISEMENTS PROHIBITED.

"(a) A person may not initiate a telecommunication (see definition below) for the delivery of an advertisement if the de-

livery causes the recipient of the advertisement or a service provider who stores or transfers the advertisement to incur a fee, expense, or other damages.

"(b) It is a defense to an action under this subchapter that the plaintiff, in writing or electronic format, requested or consented to the initiation of the telecommunication.

Sec. 42.012. CIVIL ACTION.

"A person damaged by a violation ... may bring an action against the person who initiated the telecommunication for one or more of the following:

- (1) an injunction;
- (2) damages in the amount provided by Section 41.013.
- (3) restitution of any property acquired as a result of the violation;
- (4) court costs and reasonable attorney's fees; and
- (5) any other relief the court considers proper.

Sec. 42.013 AMOUNT OF DAMAGES

"A plaintiff prevailing in an action for damages under this subchapter is entitled to the greater of \$500 for each violation or the person's actual damages, except

"(1) if the trier of fact finds that the defendant committed the violation knowingly, the plaintiff is entitled to the greater of \$1,500 for each violation or three times the person's actual damages; or

"(2) if the trier of fact finds that the defendant committed the violation intentionally, the plaintiff is entitled to the greater of \$3,000 for each violation or six times the person's actual damages.

Sec. 42.014. GROUNDLESS ACTION; HARASSMENT.

"If the court finds that an action brought under this subchapter is brought for the purpose of harassment or is groundless and otherwise brought in bad faith, the defendant is entitled to recover court costs and reasonable attorney's fees.

Sec. 42.015. FAILURE TO SATISFY JUDGMENT.

"Failure of a defendant to satisfy a judgment against the defendant under this subchapter before the expiration of three months after the date the judgment is final is grounds for revocation of the defendant's license or other authority to do business in this state or for appointment of a receiver to take over the defendant's affairs."

The anti-SPAM bill would apply to all unsolicited telephone and facsimile messages as well as e-mail since the word "Tel-

ecommunication" is specifically defined as:

- (a) a telephone call, including a call made by an automated dialing announcing device;
- (b) a transmission to or from a facsimile device or other telecopier; or
- (c) a communication made over the Internet or a similar public computer network.

The bill has been referred to the Subcommittee on Technology & Business where it is stirring up a hornet's nest! Telemarketers are fiercely lobbying against it.

■ **The American Civil Liberties Union is already planning to challenge** a February anti-spamming bill passed in Virginia on constitutional grounds.

The law makes illegal spamming a misdemeanor punishable by fines of up to \$500. "Malicious" spamming, defined as causing more than \$2,500 in losses to the victim, could be prosecuted as a felony.

Under the new law, America Online (which is headquartered in Virginia) and other Internet service providers could sue the sender for damages of \$10 a message or \$25,000 a day, whichever is greater. A spammed Internet subscriber could seek similar damage amounts.

The ACLU said there was little evidence that spamming was enough of a problem to justify constraints on free speech on the Internet. "Expression is protected in the commercial context as well as in a noncommercial setting."

■ **The last (105th) Congress had a national anti-spam bill under consideration, but failed to pass it.** The *Netizen's Protection Act* (H.R. 1748) would have prohibited the use of an electronic device to send an unsolicited advertisement to an electronic mail address of an individual unless that person had a preexisting and ongoing business or personal relationship. Even then all ads would have to contain the sender's identity, the date and time the message is sent, and their return electronic mail address.

■ **E-mail addresses change as often as your underwear.** Companies that produce mass transmissions of electronic advertising ("spammers") don't want to tie up their hardware with defunct e-mail addresses, so they try to weed them out. One way they do this is to include with their messages instructions on how to remove your name from their list. Don't follow them! Any form of response the spammers receive will only inform them

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that your e-mail address is active. Just trash the message.

■ **New SPAM threat! Internet Service Providers are up in arms** over new "GeoList Professional" software that cleverly "collects" the valid e-mail address lists of their customers.

The program's value is enhanced by its capability to target people in a specific geographical region or state - something that software collection routines based on user group participants or analyzing web pages for e-mail addresses can not do.

GeoList comes with a built-in list of 4,200 smaller regional ISPs. The program was originally developed for use in local and state political campaign mailings.

Aided by 400 to 500 MHz PC microprocessors, it works by going all possible alphabetical, numerical and character combinations and lengths that might make up an e-mail address prefix.

ISPs complain that a simultaneous mailing to every one of its customers will choke traffic and could crash its mail servers..

■ **So far there is no "Don't Spam" list that legally prevents unsolicited e-mail.** But a new website does let users sign up for the *Direct Marketing Association's* "don't call" and "don't mail" lists. The site - which started less than a month ago - has already signed up more than 100,000 people! The site's address is: <<http://www.populardemand.com>> The site is financed by a feature that permits users to register for free items that they do want...such as the *Victoria's Secret* catalog!

■ **Competition in the online prescription drug business is heating up!** Walgreens is set to offer full-service ordering and delivery of all prescriptions over the Internet this fall. The firm currently only handles web ordering of refills. They join such Internet-based pharmacy retailers as Drugstore.com and PlanetRx.com. One of the big advantages to consumers will be the ability to easily compare prescription prices - something you can't easily do at a drug store. With \$15.3 billion in sales, Walgreens is the nation's largest drug chain - selling more than 200 million prescriptions at its 2,600 stores.

■ According to Internet trade publication, *"Industry Standard,"* the **Top 10 Internet Service Providers** by number of subscribers are:

America Online: - 15 million
CompuServe: - 2 million

MSN Internet Access:-1.5 million (est.)
AT&T WorldNet: - 1.4 million
IBM Internet Connection: - 1 million
EarthLink Sprint: - 1 million
GTE Internet Solutions: - 824,000
WebTV Networks: - 700,000+
MindSpring: - 650,000
Prodigy: - 643,000 (estimate)
America Online has more customers than all of the others combined!

WASHINGTON WHISPERS

■ **It looks like a key talking point in next year's presidential election will be the success of the Internet.**

And Al Gore is taking complete credit for it. The coiner of the term "Information Highway" now claims to be the "Father of the Internet"

During a recent CNN interview, Gore boasted that "During my service in the United States Congress, I took the initiative in creating the Internet..." Actually, the Internet actually began in 1969, when the Defense Department began funding the project. Gore didn't even join Congress until eight years later.

■ **Hundreds of thousands of DirecTV (direct broadcast satellite) customers** have already lost CBS and Fox TV network programming because of an ongoing dispute between satellite and traditional broadcasters. And NBC and ABC could disappear from satellite screens in April which would bring the total to 1.5 million customers.

CBS, ABC, Fox and NBC filed suite in a Miami federal court to block DirecTV from picking up network feeds. Broadcasters say that satellite distribution of these feeds would mean that DBS customers would not be watching to their local affiliates which would hurt local ratings and ultimately advertising revenue.

The law requires that consumers must be able to receive local programming which generally means a separate antenna and a switch to change the satellite programming to over-the-air broadcast.

The House Commerce Committee has now approved a fast-tracked bill that would ensure that satellite television customers get network TV - at least for the next six months - while Congress works on a permanent fix.

The legislation seeks to impose a 180-day moratorium on the court order requiring satellite providers to stop including FOX, ABC, CBS, and NBC in their pro-

gramming. At press time, the bill was in the process of being approved by the full House and Senate.

The bill would delay the court-ordered shutdown and require satellite providers to compensate local network affiliates for any revenue they lose because their local advertisements are not carried on the satellite feed.

Legislators are considering various remedies to permanently end the dispute including a way for DBS providers to carry local programming. Sen. Orrin Hatch, R-Utah, has introduced legislation that would make it legal for satellite operators to offer local stations. It would take 400 channels to cover local programming in the top 50 markets alone!

■ **FCC closes unlicensed Texas FM pirate** - The FCC, in conjunction with the US Marshals Service and the United States Attorney's Office, seized radio transmission equipment used in the operation of an unlicensed FM radio station in Canyon Lake, Texas, on 2nd March 1999. The illegal radio station, identifying itself as "Canyon Lake Radio" was operating on FM frequency 105.7 MHz. The seizure of the equipment followed FCC warnings to the operator about the penalties for unauthorized operations, and attempts by FCC agents to have the station voluntarily discontinue transmissions.

■ **The FCC has ruled that calls to the Internet are long-distance instead of local.** The commission's ruling exempts local the local Bell phone companies from pay fees to competitors who become local telephone service providers.

Under the *1996 Telecommunications Act*, local phone companies must pay one another for completing competitors' local calls. For example, if a Southwestern Bell customer calls a business that uses MCI for local phone service, SBC pays MCI for "terminating" the call.

The fee, called "reciprocal compensation," is supposed to help phone companies maintain their networks so that they are capable of receiving calls from other phone providers.

Many competing local phone companies, such as MCI, provide phone service to Internet Service Providers. Because the traffic to ISPs is one way - from the caller to the ISP - the incumbent local phone companies have been paying millions of dollars to their competitors for terminating those calls.

But the same rules don't apply to long-distance calls, so the FCC's decision

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would prevent companies like MCI from collecting money from incumbent local phone companies.

■ **"The FCC has no plans or desire to regulate the Internet."** Those are the clear words of FCC Chairman William Kennard who is constantly bombarded with e-mails and letters from users who are worried that the agency is about to impose far-reaching Internet regulations. "Ain't gonna happen," Kennard said March 11th during a Washington, DC meeting with Internet analysts.

"As long as I am chairman of the FCC, we will not regulate the Internet. ...Anyone who knows anything about the Internet knows that its freedom is its strength," he said.

"And anyone who knows anything about me knows that I am committed to creating a telecom marketplace that is free from unnecessary regulation and full of robust competition."

■ **The House Commerce telecommunications subcommittee Chairman, Rep. Billy Tauzin (R-La) wants changes in the FCC's mission and structure.** He feels that the FCC needs to have more of a competitive ...rather than regulatory mission.

FCC Chairman Bill Kennard said he has a blueprint for restructuring the agency that would be open to public comment. He said that by the fall he would like to have a final plan, some of which the FCC could implement on its own and other parts that would require congressional action.

Kennard says his goal is to refocus the FCC on three main areas: consumer services; enforcement of regulations to keep competition open; and allocation of spectrum. The restructuring could include a shakeup in the FCC's bureau system but would not include the creation of any separate Internet bureau.

Republicans in the GOP-controlled Congress have criticized the FCC for acting too regulatory, particularly in its implementation of the 1996 telecom law freeing cable, local and long-distance companies to get into each other's business. Kennard said his blueprint also deals with how to speed up FCC decisions.

■ **Reed Hundt - who was FCC chief from 1993 to 1997 - believes that within a few years consumers will be receiving one monthly bill of \$30 to \$40 for all of their telecommunications services.** Competition, not regulation, will make that possible, said Reed Hundt.

One change, Hundt predicted, is that the Internet will alter the way business does business. "Government policy needs to be in favor of change, not against change,

"Near the end of the 19th century, after the telegraph made communications almost instantaneous, a writer predicted it would "wrap the world in one nerve," Hundt said. That did not happen then, but it could come to pass with the convergence of technologies on the Internet, he said. "The Internet is absolutely certain to penetrate every part of the globe. The number one rule about the Internet is that it makes the impossible inevitable."

■ **It is going to be interesting to see what happens to cable rates beginning April 1st.** That's the first day that federal controls over cable TV rates, except for the most basic service, will end. Our guess is that you will shortly be receiving a letter - and some kind of a price increase - from your friendly cable company.

Supposedly there was supposed to be all sorts of competition to cable TV by now, but it hasn't happened, so there is still a monopoly wire coming into your home. One that AT&T has bought and is in the process of exploiting.

Eventually, all of your communications needs - cable TV, phone service, burglar alarm systems, and Internet connection - will be provided by a single company, through a single wire to your home.

Even with regulation, cable rates have risen at four times the rate of inflation since 1996. The major competition comes from satellite operators, but they have failed to catch more than five percent of the market.

■ **So far there are no comments posted to the FCC's Electronic Comment Filing System on MM Docket 99-25, a Notice of Proposed Rulemaking that explores the creation of Low Power FM Radio Service for local communities.**

On January 28, 1999 the FCC proposed to license new 1000 watt and 100 watt low power FM (LPFM) radio stations, and also sought comment on establishing a third "microradio" class at power levels from 1-10 watts.

The Commission's goals are to provide new opportunities for community-oriented radio broadcasting, foster opportunities for new radio broadcast ownership and promote additional diversity in radio voices and program services, while protecting the integrity of the spectrum.

New LPFM stations could provide a

low-cost means of serving urban communities and neighborhoods, as well as populations living in smaller towns and communities. The Commission is seeking comment on the concept which are due April 12, 1999 ...with Reply Comments due on/before May 12, 1999.

■ **There is a tiff going on between Commissioner Harold Furchtgott-Roth and FCC Chairman William Kennard.**

In a letter to key Commerce Committee and Telecommunications Subcommittee members, Furchtgott-Roth accused Kennard of restricting his access to information and of trying to control the commission.

He said Kennard told his bureaus not to give information to the commissioners, who were to obtain it from the chairman. "I have even less access to information about ...actions than does the average American," Furchtgott-Roth wrote.

"With all due respect, it is not for the chairman to decide whether my inquiries of the bureaus are legitimate or otherwise deserving of their answers. I would not make a request of staff that I did not believe was both reasonable and in furtherance of my official functions."

Kennard shot back a letter to the same congressmen, explaining that his actions allow the commissioners to participate in the FCC's decisions without bogging them down in administrative and bureaucratic details.

"I have asked that such requests, particularly if they involve dedication of significant staff resources that may need to be diverted from other matters, be coordinated through my office so that they can be handled in an efficient manner that does not interfere with the overall responsibilities of the commission and the staff."

AMATEUR RADIO

■ **Australian hams are concerned about forthcoming RF exposure limits.** On February 1, the Australian Communications Authority (ACA is their FCC) introduced its first new regulations which set human exposure limits to electromagnetic energy from transmitters. The ACA initially set exposure limits for the general public from mobile phones and mobile phone base stations.

Australian RF exposure limits will be progressively extended to eventually cover all types of transmitters including ham radio. Responsibility for compliance with

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the new mandatory standards falls on manufacturers and importers as well as holders of ACA radio communications licenses.

■ This from Australia's "QNews" edited by Graham Kemp, VK4BB.

"At the recently held VK5 meeting of the Divisional Council, a motion was suggested that the WIA (*Wireless Institute of Australia*) pursue a policy with the ACA such that the Morse Code qualifying requirement for operation on the HF bands be reduced to a speed of 5 words-per-minute. VK5/8 President Ian Hunt says "The ramifications of such an approach can quite obviously be seen" and adds his personal comment "I understand that both the RSGB and the ARRL have headed in this direction."

■ **The Hurricane Watch Net and the operators of W4EHW at the National Hurricane Center** have been selected as 1999 recipients of the National Hurricane Conference's Outstanding Achievement Award. The awards committee cited the Net's outstanding efforts in providing critical lifesaving information on hurricanes Georges and Mitch. The award also recognizes the Net's 33 years of valuable service to storm-threatened residents of the Caribbean and Central America.

The Outstanding Achievement Award to the 30 W4EHW operators comes on the heels of Certificates of Commendation presented in late January by National Hurricane Center Deputy Director Max Mayfield. "The operators of W4EHW are very proud and honored to receive this award from the National Hurricane Conference," said W4EHW Amateur Radio Coordinator John McHugh, KU4GY. "This is a perfect example of how a small group of dedicated volunteers can achieve great things."

Hurricane Watch Net Manager Jerry Herman, N3BDW, congratulated net members. "This is a major award, and to the members of the Net, this is your award," he said. "You should be extremely proud to be recognized for your accomplishments by such a prestigious group."

The National Hurricane Conference is comprised, primarily, of emergency management and meteorological professionals involved in hurricane preparedness, response and mitigation.

The awards will be among several presented April 1 during the 21st annual National Hurricane Conference meeting in Orlando. (Thanks: ARRL)

■ **The annual NAB Ham Radio Reception will be held Wednesday evening April 19th** at the Las Vegas Conven-

tion Center during the 1999 National Association of Broadcasters Convention. More than 500 hams who also work in the broadcasting industry are expected to attend.

The local ham frequencies are 146.94 and 449.700 MHz, the repeater frequencies of the Las Vegas Amateur Radio Club. These two repeaters are located on the Las Vegas Strip on top of the Tropicana Hotel & Casino. (Thanks: LVARC)

■ **Guan BY4BHP reports that there was a major meeting** of all Chinese "BY" Amateur Radio section leaders (BY0 to BY9) held in Shanghai between March 15th and 20th to discuss ways to further improve and develop Ham Radio in mainland China.

■ **An ex parte presentation is generally an in-person meeting with FCC regulators concerning rulemaking under consideration.** The VECs Win Guin W2GLJ and Fred Maia W5YI made an oral ex parte presentation to the Private Wireless Division in Washington, DC last October.

The American Radio Relay League made one before the FCC's Wireless Telecommunications Bureau on March 1st.

No Code International's Carl Stevenson WA6VSE and William Sohl K2UNK made an oral ex parte presentation on March 19th.

The subject in each case was the FCC's *Notice of Proposed Rulemaking* which looks toward restructuring the Amateur Service.

■ **SUNSAT, South Africa's first Amateur Radio and Scientific satellite** was successfully launched on February 22 aboard a USAF Delta II launcher. The concept of SUNSAT was born in 1989 at a conference at the University of Stellenbosch when a proposal to launch a mini-satellite was accepted. The original name for the satellite was "Kleinsat" - "klein" being the Afrikaans for small.

Prof. Garth Milne ZR1AFH became project leader, and spent some 18 months defining the project and seeking industry sponsors. In June 1991, an Advisory Board was established and the program officially launched under SUNSAT.

The name SUNSAT closely associates the program with the University (Stellenbosch University SATellite. SA AMSAT has been represented on the Board since its inception.

The University of Stellenbosch is situated in Stellenbosch the second oldest city in South Africa, not far from the southern

tip of the African continent some 50 km east of Cape Town. The University has in excess of 14 000 students and is the oldest University in the country with an excellent academic record.

SUNSAT was built by students who did the detailed design and software development while system level design was carried out by lecturers, some of whom have studied at the Universities of Surrey, Stanford and MIT. It is therefore not strange that there is a strong resemblance between SUNSAT and satellites built by the University of Surrey in England.

South Africa has an innovative electronics industry that wishes to benefit from new opportunities. It also needs competent technically trained people to establish and operate systems. The SUNSAT program is a means of both increasing space segment knowledge in the country, establishing a satellite training capability and exposing the industries' capabilities. The SUNSAT program has delivered over 50 students with Master of Engineering Degrees.

SUNSAT has several payloads with two of the focus areas on Amateur Radio and School Science projects. In addition SUNSAT carries NASA experiments and an experimental imager. Test images taken of the moon are on its web site.

The basic Amateur payload includes a two metre FM parrot repeater operating on 145,825 using NBFM, 1200 Baud packet radio capability AFSK store and forward and 9600 Baud (G3RUH) packet capability AFSK store and forward.

During the selection of the payload particular attention was given to meeting the following criteria:

- To provide an alternative to the SAREX and the Dove programs to bring Amateur Radio into the class room. SAREX has been particularly successful in getting the attention of the younger generation, but due to the many constraints imposed by the scientific programs of Shuttle and Mir - access to the SAREX program has been very limited.
- To provide the general Radio Amateur Community an easy access to satellite communication as a primer for more serious satellite work

The operating schedule has not been finalized and depends on a complex time-varying power budget, and software timing. Details will be communicated via the various AMSAT channels and also be available on the SUNSAT Web site at: <<http://sunsat.ee.sun.ac.za>> (Hans Van De Groenendaal ZS5AKV)

AMATEUR RADIO EXAMINATIONS IN CANADA

Industry Canada (their federal telecommunications agency – similar to our FCC) has just released a new "**Guide for Examiners Accredited to Conduct Examinations for the Amateur Radio Certificate**" in Canada. Issued just last month, the "Radiocommunication Information Circular" is numbered as RIC-1. Here are some of the features of Canada's ham exam program:

- Any recognized Canadian educational institution, amateur radio club or individual may be authorized to administer Amateur Radio Operator examinations.
- Delegated examiners must be 18 years of age and hold Canada's top qualification – which requires passing a basic and advanced theory (written) examination plus 12 words-per-minute (wpm) Morse code.
- Only one examiner is required and examiners may not conduct examinations for immediate family members. As a general rule, examinations may only be administered to applicants residing in the province or territory of the examiner.
- Educational institutions must offer training courses in Amateur Radio theory, station operation and regulations and – where appropriate – Morse code. Course instructors may administer the examinations. Amateur clubs are not required to offer training but must provide examinations to non-members. Recommended individuals are appointed as examiners on a case-by-case basis.
- Industry Canada issues a "*Letter of Authority*" – valid for three years – to accredited examiners and provides them with needed application forms and examination material. Examiners in good standing will have their "*Letter of Authority*" renewed.
- Application forms and examination materials are provided by Industry Canada and are available from their district offices.
- Candidates are informed of examination results upon completion. Results must be forwarded within 10 working days of the examination. Industry Canada issues the Amateur Radio Operator Certificate.
- All completed written examinations and Morse code test material must be retained by examiners for three years and made available to Industry Canada upon request for audit.
- Canada's regulations provide for a \$20 examination fee when the examination is conducted by Industry Canada. Accredited examiners are free to negotiate the payment of a fee with candidates in order to recover the cost of administering examinations. No payment is made to Industry Canada and "...the department will not arbitrate any disputes between the candidate and examiners."
- Accredited examiners may provide accommodated testing to candidates with physical handicaps and medical evidence of disability may be requested by the examiner. Oral exams are permitted where warranted. The sending portion of the Morse examination can be completed by orally reciting the exam text in Morse code. A sending test may be substituted for the receiving portion and the code characters verbalized. Code speed is not taken into consideration when administering examinations to the disabled. Examinations are graded on the basis of errors.
- There are four qualifications associated with the Amateur Radio Certificate: Basic theory, 5 and 12 wpm Morse code and Advanced theory. A new question bank will be issued April 1, 1999 which must be used after September 1, 1999. There is no time limit for examinations. The Basic Qualification (100 multiple choice questions) focuses on "systems", the Advanced Qualification (50 multiple choice questions) emphasizes "circuits and components."
- There is only one Amateur Operator's certificate available in Canada which has four levels of qualification. The **Basic Qualification** – which does not require code – allows operation with up to 250 watts input power on all amateur frequencies above 30 MHz using all classes of emissions. Basic holders may not build "home made" transmitters. Additionally passing **5 wpm** permits operation on all bands below 4 MHz. Passing **12 wpm** permits all band, all mode operation. Additionally passing the **Advanced** (written) **Qualification** permits holders to build and operate transmitting equipment, a maximum transmitter power of 1000 watts input and the right to sponsor repeaters, club stations and remotely control fixed stations and remote links.
- The pass mark for a written examination is 60%. At the option of the examiner, a candidate who fails a written or Morse code test may be retested using a different examination materials as often as necessary.
- Examinees must send by hand or receive by ear plain language Morse text for a minimum of three minutes at 5 or 12 wpm.. A Morse code word consists of five characters, letters are counted as one character, numbers and punctuation are counted as two characters. Test may only use letters, numbers, and punctuation: period, comma, question mark, dash and the fraction bar. Examiners shall allow two minutes at the end of the examination for review and to make changes or corrections. Only five errors are allowed.
- Random audits of examiners will be performed – or may be performed as a result of complaints lodged. In cases of fraud or negligence, the accreditation of examiners and Certificates issued may be revoked.