

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

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Vol. 22, Issue #23

\$1.50

PUBLISHED TWICE A MONTH

December 1, 2000

QCWA Files Petition for Rulemaking with FCC ...wants privileges lost through 'Incentive Licensing' restored.

The Quarter Century Wireless Association, Inc. (headquartered in Eugene, Oregon) has filed a *Petition for Rule Making* with the FCC requesting an amendment to the Part 97 Section 97.505(a) "Element credit" Rules for the Amateur Radio Service.

The requested change seeks "restoration of those privileges withdrawn from Advanced and General Class operator licensees on November 22, 1968." The amended rule would do this by requiring administering volunteer examiners to give examination Element 4 (Extra Class) credit to current Advanced and General Class licensees also holding an FCC-issued Advanced, General or Conditional Class operator license granted before November 22, 1968. (The Conditional Class was later incorporated into the General Class.) By doing such, the person would become eligible for a Amateur Extra Class operator license, the privileges of which include those withdrawn on November 22, 1968.

QCWA contends that as of that date, "...amateur operators holding Advanced, General and Conditional Class licenses lost significant operating privileges as a result of rules adopted by the FCC in implementing a system of incentive licensing. Every Advanced, General and Conditional Class operator was affected adversely. To regain the privileges withdrawn, a licensee had to upgrade to Amateur Extra Class by traveling to an FCC office and passing difficult high-speed telegraphy and written ex-

aminations."

What did Incentive Licensing do?

The idea behind the 1967 *Incentive Licensing* proceeding was to "provide motivation" for some 100,000 General and Advanced Class amateurs to upgrade their tickets. Adopted August 24, 1967, FCC Docket No. 15928 reestablished the Advanced Class license (which had not been available since 1951) and introduced choice "reserved frequencies" available only to the Advanced and Extra Class.

The "incentive was new 25 kHz segments at the beginning of the HF phone and CW bands ...spectrum that was already available to the General and Advanced Class. To get the spectrum back, amateurs had to pass more comprehensive written exams. They weren't happy!

QCWA believes that no useful purpose is being served by continuing to deny the privileges withdrawn to those amateur operators who still suffer from that action. "The single issue addressed in the petition is the need to restore to these operators the privileges they have not enjoyed for some 32 years," QCWA said.

"In sharp contrast with the compassionate 'grandfathering' provisions recently adopted for the amateur service, the transition to incentive licensing imposed an injustice on all amateur operators holding an Advanced, General or Conditional Class

operator license grant on November 22, 1968. It brought serious disruption to the amateur service and created ill will within the amateur service community. Although many, if not most, of the licensees affected have since upgraded to a higher operator class, there is a widespread belief within the amateur service community that the abrupt withdrawing of privileges was unjust to all Advanced, General and Conditional Class operator licensees of that era."

"There remains today, at most, a few thousand amateur operators so affected who have not chosen to upgrade. Some do so as their statement in protest to having been affected so adversely. Clearly, these licensees lost significant privileges for which they had previously qualified by examination before FCC examiners. Moreover, for many years -- in some instances for many decades -- these licensees had been using those privileges at their amateur stations. Most certainly, they had proven conclusively their proficiency in operating an amateur station properly with those privileges. Then, in that instant of time, those very privileges were withdrawn."

"As the organization whose purpose is to promote cooperation and friendship among amateur operators of at least 25 years of service, the QCWA seeks a prompt ending of the injustice being suffered by those within its constituency. The QCWA is committed to promoting interest in the amateur service and the advancement of the electronic art, making use of the reservoir of knowledge and experience among the nearly 10,000 members of the QCWA for the benefit of all amateur operators and the furtherance of the public welfare through amateur service communications."

The *Petition for Rulemaking*, submitted by Gary Harrison, K0BC (Bolivar, Missouri), QCWA President was received by the FCC on October 25, 2000.

Text of proposed rule

The Quarter Century Wireless Association wants Section 97.505 of the Part 97 Rules amended to read:

§97.505 Element credit

(a) The administering VEs must give credit as specified below to an examinee holding any of the following documents:

(1) *****

(10) An expired FCC-issued Advanced, General or Conditional Class license document granted before November 22, 1968: Element 4

(b) *****

Another petition for rulemaking

On February 4, 2000, Guy A Matzinger W1GUY of Cheney, WA wrote FCC Chairman William Kennard complaining that "Amateurs licensed as Technician operators before March 21, 1987 may upgrade to the new General

Class operator license after April 15, 2000 without further examination having passed the 5 wpm code test and all parts of Element 3 ...while current Tech Plus licensed operators ...cannot automatically upgrade to the General Class ...unless those Element 3 Certificates (CSCE, Certificate of Successful Completion of Examination) are dated within 365 days of applying for the upgrade."

Matzinger proposed "...that the FCC allow all Technician Class amateurs licensed before March 21, 1987 and all Tech Plus license holders who can show proof of having passed all parts of Element 3 ...regardless of the Certificate's date ... be allowed to automatically upgrade to the new General Class..."

On February 16, Matzinger again wrote Chairman Kennard stating that the version of the new Amateur Service Rules published in the *Federal Register* on February 10th allows Element 1 (5 wpm code) credit when an amateur previously held a Novice license "expired or otherwise."

"With this ruling, two license classes - Novices and those Technicians licensed prior to March 21, 1987, can utilize CSCE certificates more than a year old to upgrade their licenses," Matzinger said.

On May 25th, Matzinger wrote the FCC's Wireless Telecommunication Bureau asking "...why can some amateurs use documentation 'years old' to upgrade their licenses, while others ...who have also passed equivalent FCC approved tests ...are being denied corresponding opportunities? I believe a fair and equitable solution to this discrepancy, would be ...to allow any amateur with a valid current license to use any document that shows they have passed any test ...at anytime ...in order to satisfy any requirement for any other license."

[*Editor's note:*] Volunteer Examiners are also being asked by previously licensed General Class amateurs with old expired licenses why they do not receive 5 wpm code credit unless they formerly held a Novice ticket ...or a Technician license before March 21, 1987.

Strangely, an amateur who began his ham career at the General Class level (where the code speed requirement was 13 wpm) ...even those licensed before March 21, 1987 do not get Element 1 (5 wpm) code credit. A quirk in the rules. The FCC tried to accommodate as many amateurs as possible, but there are exceptions for which the new rules do not apply.

We do not like to editorialize, but it appears to us that Morse code examination credit should be extended to anyone who has ever passed a 5 wpm or higher speed examination. The current Rules permit permanent HF *operating* authority once an amateur passes a code exam. But *examination* credit is only extended for 365 days from the date the code test was passed. Our understanding is that the FCC is now in the process of reconsidering certain facets of the WT Docket No. 98-143, *Amateur Service Restructuring*.

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CUTTING EDGE TECHNOLOGY

■ **File patents electronically.** The U.S. Patent and Trademark Office is upgrading its computer system so patents can be filed through E-mail and the office's Web site. To speed up the time it takes to process a patent (which usually takes years with paper-based applications), files can be submitted in the Microsoft Word format. The P.T.O. wants to have at least 80% of all patent applications filed electronically within three years.

■ **"Low Earth Orbit" (LEO) also means "Low Life Span."** Satellites placed in low orbits don't last as long as "birds" in the much-higher geostationary earth orbit (GEO). The biggest problem is thermal stress; LEO puts a satellite through the Earth's shadow several times a day. This means it faces the full brunt of solar heat and radiation, followed by the whopping thermal shock of the cold, dark vacuum of space... as often as 16 times every day! This means an LEO bird lasts only about five to seven years, on the average. GEO satellites also go through the Earth's shadow, but not nearly as often -- fewer than 90 times a year. GEO birds often last at least 12 years. Low Earth Orbit satellites also face much stronger radiation exposure, due to anomalies in the Van Allen radiation belts. Electronic circuits tend not to last long in such a hazardous environment.

■ **3-D microscope focuses on all points.** A ceramic control device, controlled by the piezoelectric effect, adjusts the optical properties of a lens to change its depth of field and focus by changing the shape of the lens. This lets every point of an object be seen in total focus. Denso Corp.'s dynamic lens changes its shape very quickly, allowing for quick digital inspections by video cameras attached to quality-control computers.

■ **If you don't want to paint, you can polish.** Electropolishing metal surfaces is done in a way similar to electrostatic painting. In this operation, a metal object is given a positive electric charge while hanging on a rack. The object is then lowered into a rubber-lined tank that contains an electrolyte solution. The difference in voltage creates an electrochemical reaction, and ions are removed from the metal part. After removal, the metal object has a much cleaner, shinier surface than before -- free of contaminants. Electropolishing guards against corrosion and

metal fatigue. Metals such as copper, aluminum, brass, nickel and stainless steel are often cleaned in this manner.

■ **Theater equipment communicates digitally.** Modern light dimmers and other special-effects controllers for theaters and concerts rely on computers to operate in tandem. Lights can be switched in color, panned back and forth or up and down, and turned on and off in sequence thanks to their own special digital communications protocol: DMX515. Similar to RS-232, the communications standard was developed about 15 years ago. Some of the newest devices accommodate both protocols, making computer control even easier and more universal.

■ **Keeping track of firefighters.** Nothing is more frightening to an incident commander during a fire than not knowing exactly where all of the firefighters are. It's easy to lose track of people during the confusion and noise of a huge fire, particularly at night. The Touch 'N Track Accountability System, by Biosystems, lets the supervisor know exactly who has checked in, and when. Each firefighter carries an ID button, with name, company, and medical information. When the card touches the Touch 'N Track console, it immediately logs in that person. It helps incident commanders know if someone hasn't come back out of a burning building.

■ **Biodegradable smart cards.** Unless you cut up or otherwise shred your old credit card, it can remain in a garbage dump, as is, for decades. The same goes for billions of other plastic-based cards. In an attempt to eliminate this mess, the University of Nebraska developed a material based on corn products that can be made into credit cards; when its life is over, the card quickly decomposes when it's buried in the ground.

■ **No video system is perfect.** Each type of video viewing has its own little idiosyncrasies, and even the latest advances are no exception. The Digital Micromirror Device (DMD) chips by Texas Instruments, which contain about a million tiny mirrors inside an integrated circuit, project images into a lens system. But the matrix of mirrors, each controlled individually, creates a slight error with certain scenes. In particular, one notices a "breaking up" along diagonal edges during pans or other movements. Another error creeps in during scenes displaying large areas of the same color, such as blue sky or water; rather than appearing flat, the areas appear to have some sort of digital "noise" in

them.

■ **When is white light not white?** When you're going shopping for light-emitting diodes. Ledtronics makes several "flavors" of white LEDs as drop-in substitutes for incandescent bulbs in a variety of applications. These incorporate internal resistances, as well as different screw threads or bayonet connectors. They are available in true white, warm white and incandescent white. It all depends if you're backlighting a menu panel, illuminating a switch cover, etc.

■ **Light-pipe actuators.** To save space, engineers are incorporating surface-mount chip LEDs inside panel switches. To make the light visible, they need something to deliver that light to the outside world. On circuit boards, this is done with transparent "light pipes" -- solid, clear plastic rods or tubes that glow when illuminated with the LED. With the new switches, the light pipes perform double duty: they not only deliver the light, they also act as the actuator for the switch.

■ **New EPROM programmer easier to use.** If you've played with EPROM programmers, you know how bulky the stand-alone units can be and how awkward it is to connect the PC-based units. Sunrise Electronics has incorporated their EPROM reader/programmer into a tilted panel that fits in the front of an ordinary PC 5.25" disk drive panel. This makes the chips easier to drop into the socket and frees up desk space.

■ **Dog tags.** A smart card, containing medical information for pets, is being distributed by some veterinarians. Pet Log lets any vet download a pet's complete medical history.

■ **People who suffer from Alzheimer's disease sometimes wander off.** It's usually impossible to monitor someone all the time, and in a nursing home or other care center, staff members are usually too busy to keep track of everyone. New tracking devices, based on RF technology, equip each patient with a one-ounce transmitter and each exit with a sensor. If visitors or staff members approach an exit, no alarm is generated. But if a patient gets too close to an exit, a light flashes on the staff's console. If a patient should open a door, an audible alarm is triggered and someone can bring the patient back inside quickly. Such an event can also alert other staff members through the use of pagers. Some systems even allow "foxhunting" for patients who stray

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too far outside the building. Exit doors may or may not have self-locking devices linked to these transponders; but fire-alarm systems bypass these, allowing everyone to exit the building in an emergency, but still recording that a patient has left. Events can be recorded and stored in a computer, allowing managers to keep track of response times and those patients who may require closer care. Tracking devices for home care are also available.

■ **Digital barometers show trends.** Chemical and pharmaceutical laboratories require tight environmental controls, including temperature and humidity. Digital barometers show the atmospheric pressure in graphical form on a liquid-crystal display, such as with a bar chart. This shows people how the barometric trend is progressing. Readings can be stored in memory and altitude automatically compensated for.

■ **Never have lost children, pets or luggage again!** "Digital Angel" is a miniature digital microchip transceiver (about the size of a dime) that can be worn close to the human body. It sends and receives data and can be continuously tracked by GPS (Global Positioning Satellites.)

Its developer, Applied Digital Solutions (Palm Beach, FL) believes the potential global market for this device - in all of its applications - could exceed \$100 billion. This microchip contains biosensors that can monitor and store biological parameters of the body. Doctors could access and analyze their patient's vital signs remotely.

Digital Angel™ will remain dormant most of the time. It will only be activated by the wearer or by commands from the ground station. The purpose is to save battery energy and to avoid interference with other devices, such as medical equipment or airplanes.

The unit can be turned off by the wearer, thereby making the monitoring voluntary. Designed for use with humans, Digital Angel™ can also track household pets, monitoring livestock, and tracking the location of property. See: <<http://www.adsx.com>>

■ **Animated switches.** Indicator lights and switches that contain liquid-crystal displays have been on the market for a few years now. Alphanumeric messages can change from "ON" to "OFF" automatically, for example. The newest switches from NKK Switches can also show animation and graphics. They can be used in radios, medical equipment, cockpit displays, you name it. Matrixes of such

switches can be grouped together to create a "moving wall" of graphics..

EMERGING COMMUNICATIONS

■ **A worldwide consumer satellite network may be on the way!** The *Wall Street Journal* reported that Bill Gates' (Microsoft Corp.) and Rupert Murdoch (News Corp.) are in talks about the software giant investing \$1 billion in Sky Global Networks, Inc. News Corp (which also owns the FOX TV network) operates various consumer satellite networks around the world including Asia, the United Kingdom and Latin America. Sky Global Networks would tie all of these together. Supposedly Murdoch wants Microsoft to anchor the worldwide satellite network because of its interactive TV and technology capability. Already being considered as strategic partners in the venture are DirecTV and EchoStar (U.S. Direct Satellite Broadcasters), mobile phone giant Nokia (wireless technology) and Yahoo (which would distribute Sky Global content over the Internet.) U.S. cable TV tycoon John Malone (who owns Malone's Liberty Media Group) already has taken a stake in Sky Global. An investment by Microsoft may make Sky Global more attractive to investors as it prepares to take Sky Global public next year.

■ **If you want to get the exact time but can't hear WWV because the bands are dead, log on to <<http://www.time.gov>>.** It's a Web site maintained by the National Institute of Standards and Technology and the U.S. Naval Observatory. Once it loads, it displays the exact time for your time zone -- accurate to within one second (due to the thousands of pathways its signal must take to get to your computer). As a bonus, you can also see a real-time simulation of sun and shadow on the Earth's global surface, as visualized from space.

■ **"What did I watch today?"** The Arbitron Co., for decades the prime source of viewer and listener audience data for radio and TV stations, is using a new type of measurement system. The Portable People Meter (PPM) is a pager-sized device that users wear; it records sub-audible tones embedded in radio and TV signals that the user is exposed to throughout the day. At night, the user places the PPM into a charger that also downloads the information about which stations he or she watched or listened to, and sends that data to Arbitron for more

accurate statistical evaluation.

■ **Smaller is better.** Intel recently announced that they have developed 0.13-micron technology for integrated circuit manufacturing. These transistors are so small that it would take 1,000 of them to span the width of a single hair. Such smaller transistors mean shorter times in exchanging data, meaning chips made with this technology can run even faster. Intel says they will start large-scale manufacturing of I.C.'s using 0.13-micron technology next year.

■ **Building for technology from the ground up.** About half of all new homes being constructed have high-speed communications wiring built in. Category 5 (Unshielded Twisted Pair) and coaxial cable don't add much to the overall cost of a new house and the benefits are incredible: room-to-room networking, high-speed distribution of voice, data, or music throughout the house, remote control of appliances, etc.

■ **Safety for antenna masts in news trucks.** Specially equipped vans (or "mobile news units" as TV stations like to call them) contain antenna masts that can be extended as high as 30 feet for better transmission access to the home studio. But it's often dangerous for the people inside because they may raise the mast without checking to see what's overhead. Power lines are almost impossible to see in the dark. But the D-TEC Safety Unit from Will-Burt provides an AC field sensor on the mast, alerting crews in the van below when power lines are too near. It also illuminates the mast, making it easier to be seen. And an obstruction sensor prevents the mast from being elevated into overhanging objects, which could damage the antenna and the mast.

■ **"Fire one." "Fire two." "Fire three..."** So many satellites are expected to be launched over the next few years (mostly for telecommunications) that Boeing has strengthened its Delta IV rocket program. They've built a new rocket plant in Alabama to keep up with the demand for launchers.

■ **"Don't bother Bob; he's on the phone."** Walk into an office full of cubicles today and you may be surprised to find out who's really talking on the telephone. The newest headsets use a swing-down boom microphone, and even then the headset can be invisible to the casual observer who happens to see the user at the wrong angle. That's why a new product has come into use: the

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"BUSY" light. Just like "ON THE AIR" signs in a radio studio, the headset user turns on a "BUSY" light for all to see. It indicates that the worker is actually talking on the telephone, so please do not disturb him (or her). More expensive models automatically turn on the "BUSY" light when the user answers the phone.

■ **Read the manual!** When people buy a cellular telephone, they often don't read the manual well enough to learn that "1" is sometimes pre-programmed to dial 911 automatically. Drivers or other mobile users hit "1" by accident while trying to dial something else, not realizing that they've just accessed the emergency number. Police officers are supposed to investigate each 911 call, whether it's genuine or not. Police are grumbling now about the vast increase in "fake" calls to 911, which may take them away from genuine emergencies.

COMPUTER INFO

■ **Kmart is famous for its Blue Light specials ...limited-time promotions offered by turning on a flashing blue light. It is certainly not known for selling personal computers.** In fact they haven't sold them in 2 decades. That is about to change.

Kmart Corp. just introduced its BlueLight True Blue PC at \$499. Features include an Intel 633 MHZ processor, 32MB of RAM, 56.6k modem, 7.5 GB hard drive, Windows 98, "Microsoft Works" (application software) and totally free Internet service.

The "BlueLight PC bundle" (additional \$150 after a \$20 rebate) adds a Lexmark ink jet printer and a 15" hi-res monitor. (Strangely, the printer cable is not included ...another 60 bucks.) Available online at Kmart's www.bluelight.com website and at 1,600 of Kmart's 2,163 stores.

■ **Is free advertising-supported Internet access the way of the future?** It just may be. Free Internet service is also offered by (search engine) Altavista Free Access, Freei.net, Freewwwweb, iFreedom and NetZero.

The free BlueLight internet service claims to have some 4 million subscribers making it the fastest growing (and second largest ISP after AOL.) The downside is that you get a constant banner ad at the top of the screen.

Available only since December, some

150,000 customers are signing up weekly for BlueLight service which is reachable from a local call! More info available at: <www.bluelight.com/freeinternet/>

■ **More people working from home.** Almost 20 million people in the U.S. who hold a dedicated job with a company use their computers to work from home at least one day per week. Within three years, that number may jump to over 60 million. (Though you'd probably never know it from the traffic jams on the highways.)

■ **It isn't easy to make an LCD panel.** Standard cathode-ray tube (CRT) video monitors have been manufactured for so many years that manufacturing engineers worked all the bugs out long ago. The yield rate from the factory for CRT monitors is about 99.9%. But making liquid-crystal displays (LCDs) for high-performance computer video is still not an exact science; it takes only one bad row or column to ruin an entire display, and currently the yield rate for LCDs is only about 65%. This means that one-third of manufactured LCDs gets reworked or thrown into the trash.

■ **Electric power companies say that about 14% of the electricity consumed in the U.S. goes to operate computers.**

■ **Hard-drive space for rent.** At least two companies have started business on the premise of renting on-line data storage. Rather than go to the time and trouble of setting up your own expensive file server, you can rent or lease the data storage from another company through the Internet. This gives you more office and data space. Let someone else worry about upgrading equipment. Data can be retrieved at any time through high-speed links such as T1.

■ **Computer connectors built into clothing.** Computers you can wear are becoming more and more popular, but connecting the various components together can get a bit inconvenient. That's why the Autotime Corp. developed their Electrical Snap Patch Connectors. These can be sewn into clothes to make computers more comfortable to wear. One device that takes advantage of this technology is a combination speaker headphone and sweatband.

■ **Too fast!** To pack more information into a smaller space, computer hard-drive manufacturers design the disk platters to spin faster -- on the order of several thousand revolutions per minute. The speeds keep increasing, so much so that ball bear-

ings are just about on the verge of being phased out of disk drives; they just can't keep up. Fluid bearings may take over for this application.

■ **"Microprocessor" now a misnomer?** It's just about routine these days for a microprocessor to be far more than just a processor core. Internal memory caches, timers, serial-to-parallel converters, instruction decoders and other peripherals take up the vast majority of space inside a microprocessor. The core itself can be as small as 10% of the entire structure. The rest is interface logic.

■ **Inventor of the integrated circuit wins 2000 Nobel Prize!** Few people today can truthfully say that they have brilliantly created an invention and lived to see it benefit mankind the world over. Jack Kilby is one of them. For creating the integrated circuit over 40 years ago, which led to the development of the microprocessor, space travel, the Internet, advanced medicine, etc., Jack St. Clair Kilby has won a share of the 2000 Nobel Prize in physics.

Jack St. Clair Kilby, who invented the integrated circuit while working for Texas Instruments in Dallas, demonstrated the first working model in the lab on September 12, 1958. He later helped to develop the hand-held calculator and the thermal printer used in portable data terminals. In all, Kilby holds over 60 patents. He remains a director of several corporations and has won just about every award the scientific world can bestow.

The worldwide semiconductor market has long been over \$100 billion a year and on ly continues to expand. Many of the devices we use in Amateur Radio never would have made it to our benches without Kilby's work.

The other half of the 2000 Nobel Prize was awarded to two scientists, Zhores I. Alferov of Russia and Herbert Kroemer of the U.S., for their work in fast transistors and laser diodes.

■ **"Please identify yourself."** Microsoft recently announced that future versions of Windows operating system software will include biometric authorization technology. This means it could be possible to provide user security for computer networks through the use of fingerprint scanners, voice recognition technology, and retina scanners.

■ **How's your memory? Not your computer's memory -- yours.** Hundreds of years ago, troubadours carried the news from place to place without

writing any of it down. They could recite pages and pages of information from memory without a single mistake. Since most of us now write down information, we don't rely on our memories nearly as much as we once did. Computer searches are now so powerful that five seconds on the Internet can retrieve entire volumes of information on virtually any topic. Albert Einstein himself once said, "If it's written down, you don't have to remember it." Will school kids tomorrow be able to memorize the long poems we had to? Or will they forget how to remember?

■ **"Forest through the trees" Department** -- Where is the best place to hide a CD-ROM disc or a floppy disk? How about the computer itself? Cove Manufacturing offers a locking drawer that installs inside a standard 5.25" drive bay in your PC. It can store as many as 10 CDs or 20 3.5" diskettes.

■ **"So what did I pay for?"** At least one study has concluded that today's software is so complicated, and handled by so many people, that it's impossible for one solitary person to keep track of everything in it. That's why programming errors (or "bugs") continue to grow in number, even in commercially available software. The study says that even the best testing procedures reveal only about 85% of all "bugs." The rest eventually get discovered by end users, who report them to the manufacturer (who, hopefully, will correct them in the next version of the software... with its own set of bugs).

INTERNET NEWS

■ **Coming to a desktop near you!** Microsoft Corp. has released the first beta test version of a new consumer Windows operating system that will combine the user-friendly features of the consumer version with the more secure, stable and reliable corporate "Windows 2000" product.

Code-named "Whistler 2001," the new "update to Windows Me" (for Millennium Edition) is being widely distributed to testers, as well as to tens of thousands of developers, for evaluation before final release in the second half of next year. We understand it has new handwriting and voice recognition capabilities.

Microsoft plans to incorporate Whistler 2001 into digital television set-top boxes -- dubbed Microsoft TV -- which is due to be released in the second half of next year. Microsoft sees Whistler as the

heart of a broad home-based system that could control everything from PCs to digital televisions to heating and lighting systems.

Next up after "Whistler 2001" is another major Windows release, code-named "Blackcomb," that's due out in the second half of 2002.

■ **Cybercriminals are using public access Internet terminals to post menacing and bogus information to the Internet.** These machines could be at a library, Internet café, or Internet kiosk. The users are difficult -- if not impossible -- to track down.

All a cybercriminal needs to do is set up a fictitious Web-based e-mail account to gain instant anonymity. At least one expert believes it will not be long before video cameras, routine ID checks, thumbprints and credit card-operated systems are the rule at public Internet access locations.

■ The *Las Vegas Review-Journal* newspaper is reporting that **their City Council is considering whether it should lend its name to an Internet gambling venture** which would give the site a competitive advantage against the estimated 1,000 competing Web sites that target wary online gamblers. A group of former high-powered casino executives and industry experts have approached the city, hoping to set up the VegasOne.com Internet casino site for non-U.S. citizens by April.

VegasOne.com would be licensed and regulated in Australia to avoid violating U.S. and Nevada laws against Internet gambling. Its Web server would be based overseas, possibly in Australia or Europe. The U.S. Justice Department believes that federal law currently bans Internet gambling within the United States, so only foreign gamblers would be able to place actual bets on the site.

VegasOne.com believes that it is only a question of time before it can accept bets in the U.S. Headquartered and managed from the City of Las Vegas will create a pre-existing foundation to utilize in this event. Gamblers from within U.S. borders would be able to place not-for-money bets on the site, possibly receiving free Las Vegas hotel rooms and vacations for winning wagers.

Under the terms of its proposed licensing agreement with the city, the Las Vegas-based executives would use the City of Las Vegas name and official seal on their VegasOne.com website in exchange for 5 percent of the site's gross revenue and 25 percent of its profits. A municipi-

pally appointed regulatory body would oversee the venture.

VegasOne.com executives told the City Council that the site could capture 20 percent of the worldwide Internet gaming market's estimated \$6 billion in revenue by 2003. The city would earn \$90 million per year, assuming \$360 million in yearly profits.

■ **So far, PC postage technology has been a financial bomb!** Stamps.com allows customers to purchase postage online and print it on labels and envelopes, the first such Internet technology to be approved by the U.S. Postal Service. It has 72% of the Internet postage market ...about 250,000 users. STMP shares are now selling around \$3 - 97% down from its 52 week high of \$98.50. Its senior management has stepped down and 40% of its workforce have been laid off.

Stamps.com is also being sued by mail-metering giant Pitney Bowes for patent infringement. Pitney Bowes has a new online-postage product called "ClickStamp Online 2.0" - but its shares are also down ...some 40 percent. And shares of rival E-Stamp Corp are selling for under \$1.00 after a 52-week high of \$44.88.

■ **Get paid for voluntarily receiving SPAM -- <www.TotalE-mail.com> pays you for the right to send targeted advertising to your mailbox address.** They reimburse you 10% of the advertising revenue you generate for them. And there is a multi-level "pyramid" feature whereby they pay you 5% of the advertising revenue generated by the actions of your "downline" referral groups. Think we'll pass on this one!

■ **Upscale men's clothing designer Polo Ralph Lauren is taking a new "adventure approach" to e-commerce on the Web.** Their brand new site is an "experience" ...complete with a chatting actress online (Penelope Cruz) ...even offering custom upper-class travel to such places as Little Palm, an exclusive island in the Florida Keys and a Rockefeller retreat in the Adirondacks (upstate New York.)

Their site, which opened November 10th, stocks some 2,500 Polo and Ralph Lauren brand styles. They even have "live" online sales help. Ralph Lauren Media LLC, a 50/50 joint venture between Polo Ralph Lauren and NBC, was formed to promote Polo. <<http://polo.com>>. There are no bargains here! But it is a very well done and interesting site.

■ **Check the speed of your connection and the Internet. They are not**

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the same! Does your Internet connection fly like an eagle or crawl like a tortoise? Is it just your imagination, or is your Internet connection slow today ...and what is causing it?

Whether you are using a cable modem, an asymmetric digital subscriber line (ADSL), digital subscriber line (DSL), integrated services digital network (ISDN) connection, or just a plain old 28/56K dial-up modem, the Bandwidth Speed Test will tell you your access speed.

Microsoft's Computing Central speedometer -- located at: <<http://computing-central.msn.com/topics/bandwidth/speed-test500.asp>> -- is well worth checking. It works by calculating the time it takes for a data file to travel to your PC, that is, your upstream/downstream access speed under ideal conditions.

It is almost always the operating speed of the Internet, the remote server and the data routing ...and not the access means (ie. Dial-up, DSL/Cable Modem) that causes slow service. The Information highway is like any other thoroughfare, the more traffic and detours on the road, the longer it takes to get to your destination.

And there is no telling what route your data traveled to get to your PC. It doesn't go in a straight line. Far from it. It zig-zags. There are probably a dozen or more routers between you and the data you requested.

The Andover Net is a website that can tell you the operating speed of the Internet to/from almost any point on the planet. Go to: <<http://www.andovernews.com>> and click on "Internet Traffic Report." They monitor the flow of data around the world every two hours. It then displays a value between zero and 100 for that city. Higher values indicate faster Internet speeds.

■ **Tycoon forms global "easy" Internet empire** -- Stelios Haji-Ioannou, the son of a Greek oil shipping magnate, operates the world's largest chain of Internet cafés across Europe called "easyEverything." He observed how popular small cyber-cafes were in Europe and decided to apply "supermarket economics" to the concept. The result is the cheapest and fastest Internet access money can buy out-of-home.

The cafés all have literally hundreds of fibre-optic connected state-of-the-art computer terminals and all are open 24 hours a day. Pricing depends upon the time of the day and how many PCs are in use. The more customers, the higher the price. Peak hours are generally afternoons and

evenings.

Less than six months ago, easyEverything had 9 cafes across Europe that were used by 1 million visitors. It now serves that number of users monthly. Twenty-two cafes will be open by the end of 2000 with 60 planned by the end of next year. By then, more than 100 million people are expected to visit easyEverything stores. Asia is next.

Revenue comes from customers paying for Internet access plus the sales of snacks, diskettes/CDs and advertising. Users include the local population (surfing the Web, searching for jobs or doing school research), tourists (sending e-mails and photos back home) and traveling businessmen (creating spreadsheets and presentations on-the-fly.)

Its first Internet café outside of Europe opens in New York City's Times Square on November 28th. It will occupy 18,000 square feet (at 8 Times Square and 42nd Street) and have 800 terminals with an average hourly charge of \$1. [*We can't imagine that many PCs in that amount of space! How do they do it?*] "We'll charge whatever it takes to fill the café", is Stelios philosophy. The big question is "Will it all work in America?" where PCs and lower cost access are more commonplace.

Microsoft has now signed on as an "easy" partner and each New York terminal will offer Microsoft software (at another \$1 per hour) to business and leisure users. A global rented software roll-out to all other easyEverything cyber-café will follow.

Stelios has also founded easyJet.com (a no frills low-budget airline which has no printed tickets, no assigned seating and no free refreshments) and easyRentacar.com. Next is an online bank called easyMoney and an e-commerce site: easyValue. All are operated exclusively on the Internet. They won't even take a phone or mail order. Check <<http://www.easyEverything.com>> and <<http://www.stelios.com>>.

■ **Grocery shoppers already custom mix coffee beans. Will they custom mix cereal to go with it?** General Mills (Minneapolis, MN) is now testing a Website at <<http://www.mycereal.com>> that lets consumers develop custom breakfast cereals online from among more than 1 million possible combinations. The cereals, which will be priced at \$1 per serving, will ship directly from General Mills within two to four days of being ordered.

WASHINGTON WHISPERS

■ **Jukeboxes in the sky. Satellite radio revolution coming to FM broadcasting.** In 1997, the FCC sold spectrum to two companies to provide programming in the new SDARS, *Satellite Digital Audio Radio Service*. It will soon be available all over the country.

Beginning in January -- Sirius Satellite Radio (New York City) and XM Labs (Washington, DC) -- will begin offering up to 100 CD-quality, interference free radio channels. Tall buildings and tunnels can interfere with the satellite signal, so a network of land-based transmitters will augment the satellite signal.

The good news is that satellite radio never fades out of range as you drive along. The bad news is it is not free. Digital satellite radio will add another cost to your information budget. Joining cell phone, cable TV and Internet access, coast-to-coast satellite radio will cost you \$9.95 a month. But my hunch is that eventually, satellite radio will indeed be free and advertising supported.

Offered will be original and network programming from such broadcasters as National Public Radio, the BBC, USA Today, AP All News Radio, CNBC, Bloomberg, C-Span, CNN/Sports Illustrated ...and many others. Some stations will be devoted only to specific formats such as music, science fiction, comedy, sports, entertainment, foreign language and niche programming never heard before on terrestrial stations.

Sirius plans 50 music and 50 information-based channels -- all commercial-free. XM Labs will offer both commercial-free and "limited-advertising" channels. Sirius and XM both use the same standard and any "recently manufactured" (second generation) satellite radio can receive broadcasts from either company as well as standard broadcasts.

The three band (AM/FM/SAT) radios will replace the standard radios found in cars and cost \$250 to \$500 depending upon features. Ford, General Motors, and Chrysler are among the many car makers that will be offering satellite receivers in 2001. Such major radio manufacturers such as Pioneer, Alpine, Motorola, Mitsubishi, Delco, Sanyo, Sharp, Kenwood, Panasonic and others will make them.

There is no question that digital radio will eventually replace analog. To compete with SDARS, terrestrial FM broad-

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casters are promoting "iDAB" (in-band on-channel digital audio broadcasting) technology which allows radio stations to simulcast both analog and digital signals on the same frequency. Third generation satellite receivers will support both systems.

Down the road, digital radio broadcasters will have capacity to deliver on-demand non-broadcast data services such as paging, specialized weather, customized news wires, stock quotes, individual data banks, geopositioning services, traffic conditions, videotext material and addressable messages.

■ **The FCC has released statistics showing that high-speed lines (both wireline and wireless) to the Internet increased 57% during the first six months of 2000 for a total of 4.3 million subscribers.** The figure stood at 2.8 million at the end of 1999. Two-thirds of the high-speed lines provided speeds of over 200 kbps in both directions, and thus met the Commission's definition of advanced services, compared to 2.0 million at the end of 1999.

High-speed asymmetric DSL (ADSL) lines in service increased by 157%, to almost one million lines, compared to about 370,000 lines at the end of 1999. Coaxial cable systems increased 59% to about 2.2 million lines, compared to 1.4 million.

■ **On Nov. 20th, the FCC placed Ship station licensing under the Universal Licensing System (ULS.)** Ship stations required to be licensed under Part §80.13 should now file FCC Form 605 (July 1999 edition only) for new, renewal, duplicate and modified ship station licenses. Use of the previous Forms 506 and 405B is permitted during a six month transition period.

Recreational vessels which do not travel to foreign ports are not required to hold individual ship station licenses. These pleasure boats may operate a marine VHF (156-162 MHz) radio, an emergency radio beacon and/or radar on board without a ship station license. Like CB and R/C radio stations, these vessels are now licensed by a blanket rule.

■ **On Nov. 9th, the FCC adopted a Policy Statement and Notice of Proposed Rulemaking (NPRM) calling for the subleasing and trading of radio spectrum acquired through auctions.** FCC said "Demand for spectrum has increased dramatically as a result of explosive growth in wireless communications technologies and user demand for wireless services. This demand threatens to out-

strip supply and to impede the future growth of wireless services."

The Commission is proposing to "...allow and encourage licensees to freely trade or lease their unused or unneeded spectrum capacity." The proposal only applies to wireless radio licensees with "exclusive" spectrum rights and not to licensees who use shared frequencies such as in the case of the Amateur Radio Service. (WT Docket No. 00-230.)

■ **Pay up on-line.** The Internal Revenue Service noticed that more Americans own computers and are logging on, so they might as well take advantage of the technology to pay their yearly income taxes on-line. The IRS likes taxpayers to file electronically because it saves paper, time, and money; they'd like at least 80% of us to file on line by 2007.

AMATEUR RADIO

■ **Dale Hatfield, W0IFO, the head of the FCC's Office of Engineering and Technology (OET)** has announced that he's leaving the Commission. His last day will be December 8th. He was the highest ranking ham operator at the FCC.

The Office of Engineering and Technology (OET) is responsible for managing the non-Government use of the spectrum and is the FCC's technical adviser on engineering and scientific matters. OET makes recommendations on how the radio spectrum should be allocated and establishes the technical standards to be followed by users. OET also provides technical leadership to create new opportunities for competitive technologies and services for the American public.

■ **The launch of AMSAT's Phase 3D Amateur Radio satellite has been scrubbed for 24 hours due to a ground equipment problem.** It was scheduled to liftoff with three other satellites at 8:07 p.m. EST on Tuesday, November 14, 2000 aboard a European Ariane 5 from its South American launch site in the jungles of French Guiana.

The Ariane 507, whose mission is called Flight 135, will loft PanAmSat PAS-1R communications satellite, two (220 pound) British military scientific microsats as well as AMSAT's Phase 3-D Amateur Radio satellite into orbit.

Launch is now know set for Wednesday from the Guiana Space Center in Kourou, French Guiana. The window re-

mains unchanged with a duration of 56 minutes. That window opens at 01:07 GMT and closes at 02:03 GMT November 16. That is 8:07 to 9:03 p.m. EST on Nov. 15.

During final pre-flight preparations, technicians reported a communications link problem between the ground and the primary payload, the PanAmSat PAS-1R satellite payload aboard the rocket. An electronic part in the launch table in which the rocket rests must be replaced before another launch attempt is possible.

At launch, PAS-1R will weigh 10,571 pounds. Payload number two, AMSAT P-3D, will ride in the middle of the spacecraft located inside of Ariane 507's payload bay in the nose cone. The four satellites are supported by a special (first time used) multiple satellite cradle called the Ariane Structure for Auxiliary Payloads or ASAP-5.

AMSAT P-3D is the largest and perhaps the most complex amateur radio satellite ever built. It will support ham radio operators throughout North America, as well as Europe and parts of Asia. The Phase 3-D satellite will be the last to go through the payload separation sequence, separating from the launcher almost 42 minutes after launch.

AMSAT P-3D has five radio receivers and eight transmitters, as well as a complement of experiments and experimental propulsion systems. During its ten years of on-orbit life, the spacecraft will have an orbit with a perigee (low point) of 4,000 km and an apogee (maximum height) of 47,700 km, with an inclination of 63 degrees. At launch, the craft will weigh in at 1,386 pounds. Once in this unique orbit, the satellite will deploy its solar arrays, which span almost 20 feet.

The AMSAT Phase 3-D amateur radio satellite is a joint international project involving Belgium, Finland, Germany, Great Britain, Hungary, Japan, South Africa, and the United States. We will have a complete report in our next issue.

[Thanks: Spaceflight Now and AMSAT's ANS]

■ **Enforcement News - Jan S. Lepitak KM4KC (Spring Hill, FL)** has had his Advanced Class license canceled for failure to appear for retesting by Oct. 20.

Alan J. Koepke K1CL (Coventry, CT) has again been contacted by the FCC concerning his alleged uncoordinated AM repeater operating on 144.65. Evidence indicates that his coordination is for a different frequency configuration and spacing. The FCC is allowing 20 days for K1CL to provide additional information.



Universal Licensing System

TIN/Call Sign ULS Filing Applications Licenses

FCC > WTB > ULS > Applications > License Search > Amateur Advanced Search

Support
Help
FAQ
Getting Connected

License Search

[Return to Basic License Search](#)

License Search

Basic
Amateur
Auctions
Geographic
Land Mobile
Microwave

About searching for licenses

Other Modules

TIN/Call Sign
Registration
ULS Online Filing
Application Search

Amateur License Search

[? Help](#)

Call Sign

Licensee Name
(Last name then first name, such as "Doe, John")

all matches exact match

Narrow your search

Location

State

Zip Code

License Information

Type

Status

Operator Class

Vanity Only

Dates

Type

Anytime
 in the last week

From
to

ONLINE AMATEUR LICENSE SEARCH

The FCC is in the process of installing a new Amateur Service interface on the Internet. This will allow amateurs to quickly determine licensing information from the FCC's Amateur Service database by either entering a call sign or a name. You will also be able to get lists of amateurs within a specific zip code, license class or range of license grant or expiration dates. The layout of the search results form can be customized to the searcher's specifications. It is expected that this new Amateur Service License Search capability will be available by year end. We will let you know the address of this search form as soon as it is released to the public.

The FCC is also working on a new electronic batch filing process that will permit radioamateurs to obtain their licensing information faster ...usually the same day that it is filed by the VEC. Electronic files from the VECs will be processed in "real time" instead of held and processed that night.

Customize your results

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HAM RADIO OPERATIONS FROM THE ISS NEAR!

Amateur Radio operators worldwide followed the recent launch of the 120-foot white, orange and gray Soyuz TM-31 rocket as it roared into the autumn sky from the Baikonur Cosmodrome in Kazakhstan. The launch took place right on time from the same site from which Yuri Gagarin blasted off to become the first human in space some 39 years ago.

Ham operators were especially excited about this flight as aboard the Soyuz rocket was the Expedition-1 crew headed for the International Space Station. The crew includes expedition commander/U.S. astronaut Bill Shepherd, KD5GSL, Soyuz vehicle commander/Russian cosmonaut Yuri Gidzenko, and flight engineer/cosmonaut Sergei Krikalev, U5MIR. Both Gidzenko and Krikalev are long duration veterans of the Russian Mir space program.

The crew successfully docked with the International Space Station's Zvezda module November 2nd as the spacecraft flew high above southeastern Russia, near the border with Kazakhstan, Mongolia and China.

Shepherd, Gidzenko and Krikalev begin what many people hope will be a permanent human presence in space. Shepherd, the first commander aboard ISS, became only the second American to be launched aboard a Russian rocket.

The International Space Station at long last has a real name -- or at least a radio call sign. In a gutsy bid to get bureaucrats to deal with a political hot potato, U.S. astronaut Shepherd boldly asked for a go-ahead to christen the outpost 'Alpha' just hours after arriving at the complex last Thursday.

Planning for the deployment and use of the ham system aboard ISS has been an international effort coordinated by NASA's Goddard Space Flight Center. The effort began in 1996 with the formation of ARISS, the Amateur Radio International Space Station organization. ARISS is made up of delegates from major national amateur radio organizations, including AMSAT.

As we go to press, ARISS amateur radio activity has not started. But it could start at any time. The ARISS initial ham station launched was launched September 2000 aboard shuttle Atlantis. It is now temporarily stowed aboard the Functional Cargo Block (FCB module) of ISS.

The initial station will use an existing antenna that will be adapted to support 2-meter FM voice and packet. The ARISS equipment will get a more-permanent home aboard the Service Module in 2001, along with VHF and UHF antennas. Plans call for amateur TV, both slow scan and fast scan ATV, a digipeater and relay stations.

Two U.S. callsigns have recently been issued for Amateur Radio operations with ISS. The FCC granted vanity callsigns NA1SS and NN1SS to the International Space Station Amateur Radio Club in mid-October. The NA1SS callsign will be used aboard ISS, and NN1SS will

be used for ground-based transmissions from the Goddard Space Flight Center. Russian callsign RZ3DZR and German call sign DL0ISS have previously been issued for use aboard the station. The crew may use their own callsigns (KD5GSL, U5MIR) or they may use one of the ISS calls. RZ3DZR is also the callsign entered into the TNC currently onboard Alpha.

It is not known at this time if the power budget on Alpha will allow for leaving the packet rig powered during times when the crew cannot perform voice contacts. The ARISS working group has requested that the packet rig be left on as much as possible. The crew has been trained in the use of the beaconing capabilities of the TNC.

The Expedition-1 crew's activities are being scheduled around a UTC timeframe. It's expected that their working day will start around 08:00 UTC and end somewhere near 19:00 hours with a lunch break near 12:00 UTC.

Passes near the beginning, lunchtime, and end of the crew day might be good times to find a crewmember relaxing with ham activities, once Amateur Radio operation begins.

The crew will also have most weekends off -- from about mid-Saturday until the end of the day on Sunday. The ARISS team asks that radioamateurs remember that the crew is using ham radio to relax from a very difficult job. They may, or may not, be interested in working a pile-up. They might be more interested in "rag chewing" with one or two hams on a given pass. Please respect each crewmembers different operating style.

Wait for the crew to call for contacts before transmitting. Please let others have a chance with a rare contact, don't monopolize the crew or the packet rig. Please do not ask the crew to schedule school contacts or other schedules: this puts them in an awkward and uncomfortable position.

Tentative Frequencies

Initial operations will only take place on the 2m band. The tentative frequencies for Expedition One operations are as follows:

| | |
|--------------------------------------|------------|
| Worldwide downlink for voice/packet: | 145.80 MHz |
| Worldwide packet uplink: | 145.99 |
| Region 1 voice uplink: | 145.20 |
| Region 2 & 3 voice uplink: | 144.49 |

QSL and SWL cards will be accepted and can be processed through Radio Amateurs of Canada or the American Radio Relay League. The card design is being finalized, but should be ready for distribution early next year.

The Expedition-1 portion of the ARISS web page is constantly being updated. <<http://ariss.gsfc.nasa.gov/ExpeditionOne/>> [Thanks AMSAT, NASA, ARISS and the ARRL]