Vol. 23, Issue #23 $1.50   PUBLISHED TWICE A MONTH   December 1, 2001

Low Power Radio Stations Begin Hitting FM Broadcast Airwaves

"Low-power FM radio will provide many communities with increased sources of news and perspectives in an otherwise increasingly consolidated medium. Last Congress, special interest forces opposed to low-power FM radio, most notably the *National Association of Broadcasters* and *National Public Radio,* mounted a successful behind-the-scenes campaign to curtail low-power FM radio without a single debate on the Senate floor." *(Senator John McCain, R-AZ.)*

On January 20, 2000, the FCC adopted rules creating a new, low power FM broadcast radio (LPFM) service. The rules became effective on April 17, 2000. By squeezing between existing stations in the 88.1 to 107.9 megahertz FM band, the FCC envisioned that LPFM stations would provide local access and varied programming to airwaves now dominated by large media conglomerates.

A full power FM station transmits at thousands of watts and it costs a million dollars or more to get on the air to cover a metropolitan area. Only wealthy individuals or companies can afford them and their operation must be operated as a business to cover the high operating costs. This makes it difficult for small organizations to get airtime. The goal of LPFM is to serve the needs and interests of listeners who are currently underserved by advertiser-supported radio.

. LPFM stations are designed to let the small organization, school, church or group speak to their community for a wide variety of not-for-profit reasons. Individuals are not be eligible to apply for LPFM stations.

The new LPFM service consists of two classes of radio stations with maximum power levels of 10 watts (LP-10) and 100 watts (LP-100). They will operate throughout the entire FM band, rather than only in a reserved portion, and will not be permitted in the AM band. Due to widespread concern about the potential for interference, the Commission rejected their original proposal to create a third class of 1,000 watt (LP-1000) LPFM stations.

The new LPFM service is exclusively non-commercial and current broadcast licensees or parties with media interests – such as cable or newspapers – are not be eligible. Only to local groups may be licensed during the first two years of availability.

The 10 watt stations would reach an area of between one and two miles from the transmitter. LP-100 stations may operate with 50–100 watts of power from a height above average terrain of no more than 30 meters which provides a predicted service radius of 3.5 miles. A transmitter this size and its antenna might cost as little as $2,000. LPFM stations may not use directional antennas.

LPFM stations are authorized the same bandwidth (200 kHz) and technical standards that apply to full-power stations. License term is eight years (which may be renewed) and they are required to append the suffix "-LP" to their call signs.. Only FCC "type certified" transmitters may be used.

LPFM licensees are not required to install and

operate *Emergency Alert System* (EAS) encoders but must have a way to be aware of emergency alerts so that they may pass them on to listeners   And like full power FM stations, indecent programming is banned between 6:00 a.m. until 10:00 p.m. local time.

LPFM stations are subject to the same operating hour requirements as full-power noncommercial, educational FM stations, which must operate at least 36 hours per week ...at least five hours daily on at least six days of the week. Stations, however, licensed to educational institutions need not operate on either Saturday or Sunday. Applicants who cannot meet the minimum operating requirement have to share their licenses with others.

To get the new service underway, the Commission divided the 50 states and other jurisdictions into five filing windows of 5 days each.   The window for the first group opened on May 30, 2000. The remaining windows followed at approximate three month intervals. The fifth and last window closed on June 15, 2001.

Applications that request the same frequency in the same community are being resolved through a selection process which awards applicants points for specific operation and having at least a two year community presence.

Number of LPFM stations reduced

Getting LPFM off and running has not been easy! Existing FM broadcasters -- as represented by the *National Association of Broadcasters* and *National Public Radio* -- fiercely objected to the new competition and argued that more stations would produce unacceptable levels of interference.

Technical studies by the FCC had concluded that relaxing the separation rule would not result in much new interference for existing stations. Reacting to political pressure rather than technical data, NAB claims pushed Congress to pass legislation that severely reduced the number of eligible LPFM slots by 75 to 80 percent.

The *Radio Broadcasting Preservation Act of 2000,* passed as a rider to an appropriations bill, reversed the FCC's decision with respect to interference protection by putting back "third adjacent channel protection." The loss of LPFM station channels are concentrated in the most populated markets.

The legislation also required the FCC to "...prohibit any applicant from obtaining a low-power FM license if the applicant has engaged in any manner in the unlicensed operation of any station in violation of FCC rules."

President Clinton signed the appropriations bill and with it, the anti-LPFM legislation into law on January 4, 2001. He said he was "...deeply disappointed that Congress chose to restrict the voice of our nation's churches, schools, civic organizations and community groups. I commend the FCC for giving a voice to the voiceless and I urge the Commission to go forward in licensing as many

stations as possible consistent with the limitations imposed by Congress."

The newly modified rules (adopted on April 2, 2001 by the FCC) requires LPFM stations to be separated three channel bandwidths (or 600 kHz) away from existing full power FM stations. Originally, because LPFM stations cover only a small area, the FCC wanted to waive the 600-kilohertz separation requirements for them.

FCC officials say that roughly 40% of the applicants who filed were knocked out of contention by the new law. Enforcing the 600-kilohertz separation rule leaves little spectrum for what was supposed to have been more than a thousand planned LPFM community stations.

Low Power Radio Act of 2001

In February, Senator John McCain of Arizona introduced the *Low Power Radio Act of 2001,* which would essentially reverse Congress's decision to curtail LPFM.

In a statement made on the Senate floor, Sen. McCain said the bill seeks a remedy to the "derailment of the democratic process" that occurred with the passage of the anti-low-power radio appropriations rider in 2000.

The *Low-Power Radio Act* directs the FCC to determine which, if any, low-power radio stations are causing interference to existing full-power stations, and any action needed to correct it. Sen. McCain said "The bill would allow the FCC to license low-power FM radio service, while at the same time protect existing full-power stations from interference."

That bill still awaits action and is considered a long shot for passage.

Construction permits issued

Meanwhile, the FCC has slowly begun parceling out the first LPFM construction permits to the first flood of applications. So far, there have been more than 130 construction permits granted! Stations must be operational within 18 months after receiving the construction permit. The only exception will be FCC-related delays or disputes over adverse zoning and local permitting decisions.

Lake County Community Radio in Lucerne, California, KPFZ-LP, is perhaps the first LPFM stations to broadcast. It went on the air Labor Day weekend (Sept. 1st at 7 p.m.) On KPFZ-LP, listeners have access to numerous music programs including "Jazz by the Lake," "Denim Alley" (folk), blues as well as Native American programs such as "Lake County Indian Time" (music), and "Voice of the White Plume" (news and talk). It broadcasts on 104.5 MHz. (Check out their website at: <http://www.kpfz.org>.)

Operated totally by volunteers, KPFZ-LP broadcasts all day Saturday and Sunday (7 a.m. to 11 p.m.) and from 5 p.m. to 11 p.m. Monday through Friday. To help with the studio and transmitting equipment cost, the station got a grant of over $22,000 from the Public Telecommunica-

tions and Facilities Program of the *National Telecommunications and Information Administration.* (The NTIA is part of the US Dept. of Commerce.)

One of the construction permits granted (on August 14, 2001) was to the Hancock County Amateur Radio Association of Bay St. Louis, Mississippi. Brice L. Phillips, KB5MPW (Advanced Class) sent in the application and has until February 14, 2003 to get their LPFM station on the air. They were the only ham club to apply for a LPFM license. The Hancock County ARA will operate at 103.5 MHz under the call sign: WQRZ-LP.

Examples of other construction permits that have already been issued include such diverse groups as the:

Knights of Columbus #7422 Educ., Lyons, KS – KPIO-LP – 99.3
Mountain Educat. Svcs., Corp., Trenton, GA – WSDA-LP – 98.7
Bird Street Media Project, Oroville CA – KRBS-LP – 107.1
Edinboro Early School, Ocean City, MD – WEES-LP – 107.9
Enid Public Radio Assoc., Enid, OK – KUAL-LP – 104.7
Evangelical Free Church, Turlock, CA – KEFC-LP – 100.5
St. Simons Radio, Inc., St. Simons Island, GA – WWEZ-LP – 94.7
American River Folk Society, Georgetown, CA – KFOK-LP – 95.1
Write to Read Radio, Inc., Glen, MS – WTRR-LP – 97.1
Teton County School District #1, Jackson, WY – KJHB-LP – 97.7
Newport Musical Arts Assoc., Newport, RI – WXHQ-LP – 105.9
Frogtown Community Radio, Frogtown, GA – WFNG-LPO – 100.5
Pepperdine University, Malibu, CA – KWVS-LP – 91.5
Dos Palos Radio, Dos Palos, CA – KDPT-LP – 102.9
Bedford Public Schools, Temperance, MI – WMLZ-LP – 107.9
First Baptist Church, Mansfield, LA – KEPT-LP – 106.1
Neighbors, Corp., Valparaiso, IN – WVLP-LP – 98.3
Hattiesburg Urban Heritage Assoc., MS – WQID-LP – 105.3
League Unit. Latin Amer. Citizens, S. Bend, IN – WSBL-LP – 98.1
Penobscot School, Rockland, ME – WRFR-LP – 93.3

Many schools have applied to become LPFM broadcasters. One such school is the Penobscot School – see <www.languagelearning.org> – in the coastal town of Rockland, Maine (pop 8,000), which plans to call its station "Rockland Family Radio." The school intends WRFR-LP to be a community station with programming reflecting all the diverse interests of people within the city, involving as many individuals and organizations as possible in generating live, locally produced programming. It will go on the air in January 2002 on 93.3 MHz.

Penobscot School, which considers itself an international school, says it will broadcast a large range of content, including church services, poetry readings, children's programming, local history, live music and foreign language tutorials. (The school teaches evening classes in nine languages: French, Spanish, German, Italian, Japanese, Latin, English, Swedish, Portugese and Russian. There are no tests and no grades.) Tomm Shockey, Ph.D., W2BFE (General Class, Union, ME) is on their staff.

MILITARY TECHNOLOGY THRIVES IN THE PRIVATE SECTOR

Our lives have been reshaped and enriched by systems that were originally developed for the U.S. military. The Internet, Global Positioning Satellites and Spread Spectrum are all communication systems that have their roots in military technology..

Development of the Internet

In 1957, the USSR launched Sputnik, first artificial earth satellite. In response, the United States formed the Advanced Research Projects Agency (ARPA), the following year, within the Department of Defense (DoD) to develop military science and technology.

The Internet grew out of an experiment begun in the 1960's by the U.S. Department of Defense. The DoD wanted to create a computer network that would continue to function in the event of a disaster, such as a nuclear war. If part of the network were damaged or destroyed, the rest of the system still had to work. That network was ARPANET, which linked U.S. scientific and academic researchers. It began operation in 1970.

It is proved that computers can be networked and, in 1972, e-mail was invented to send messages across the network. The first personal computer arrived in 1975. The TCP/IP networking protocol was adopted in 1983 as the Internet standard. The Domain Name System (DNS) was introduced in 1984.

The National Science Foundation (NSF) created NSFNET in 1985 which was provided free to research and educational institutions. Sprint and MCI began to build their own networks, which they linked to NSFNET. The National Science Foundation withdrew from the backbone business once commercial firms assumed operation of the major Internet arteries, NSF also coordinated a service called InterNIC, which registered all addresses on the Internet so that data could be routed. This service was later taken over by Network Solutions, Inc.

The World Wide Web (WWW), a web of hypertext documents -- within which people communicate with each other and with computers -- was developed at a Swiss Physics laboratory in 1991. It contained an address scheme called Universal Resource Locators (URLs) for pointing users to a particular location on the web.

The new WWW information phenomenon was well received and the Internet headed from the university and researchers to the living room. Within a year, a million users had logged on to the Internet.

The White House came on line in 1993 <www.whitehouse.gov/>. That same year, the "Mosaic" web browser -- written by a college student -- took the Internet by storm and lead to the development of the Netscape and Microsoft web browsers.

Internet phones turned up in 1996 and telecom carriers asked Congress to ban them. They didn't. In 1998, Network Solutions registered its two millionth domain

name. By 2000, more than one billion indexable pages were on the Internet. And there are now more than one hundred million Internet users in the United States. All of this growth took place within a span of only ten years!

Global Positioning System

In the early 1970's, the Defense Department needed a navigational tool that troops on the ground could use to pinpoint their location. The solution they developed required two dozen satellites, atomic clocks, microwave radio transmitters and on board computers. The military called it the Global Positioning System, or GPS, and like the Internet, it was a cold war development that is now used by millions of civilians.

GPS is a result of problems experienced by the U.S. military forces during the Vietnam conflict. One of the main difficulties for the troops was how to keep in contact with each other.

The NavStar system was developed and GPS became partially operational during the Gulf War in 1990. It became fully operational on June 26, 1993 when the U.S. Air Force completed the network by launching the 24th Navstar satellite into orbit. Civilians were also allowed to use the system.

GPS satellites orbit the earth twice a day, 11,000 miles above the earth, transmitting their precise position and elevation. GPS satellites send out radio signals that a GPS receiver can detect. To calculate the distance from the satellite to the receiver, the system uses a basic high-school math equation: distance is equal to the speed of travel multiplied by the time.

In addition to the time, a signal from a GPS satellite also includes information about the satellite's exact location, which is known, tracked and kept accurate by ground control stations. The time signal is also very accurate, because each satellite contains several atomic clocks. These rely on the natural, and very regular, oscillation frequencies of atoms to keep time.

The receiver measures the amount of time it takes for the signal to travel from the satellite to the receiver. Since radio signals travel at the speed of light (186,000 miles per second) we can measure the interval between transmission and receipt of the signal to determine the distance between the receiver and the satellite.

Once the receiver has calculated this data for at least 3 satellites, its location and altitude on the earth's surface can be pin-pointed. The end result is that a GPS receiver can produce highly accurate coordinates of latitude, longitude and altitude.

Commercial software developers place your location on a graphic map and can provide turn-by-turn directions to where you want to go: These programs can determine speed and direction from longitude and latitude readings that update every second and display them on a road map.

Spread Spectrum

One of well-known actress Hedy Lamarr's early husbands (she had six!) was an arms manufacturer and Hedy absorbed an education in munitions manufacturing. Disturbed by his arms sales to the Nazis, she escaped on a train to London in 1937.

Hedy, once named the "most beautiful woman in the world." knew that guided torpedoes were much more effective at hitting a target. The problem was radio controlled torpedoes could easily be jammed by the enemy.

On the eve of World War II, Hedy Lamarr and George Antheil, an American composer, dreamed up an interesting radio guidance device. Antheil knew that the holes in a player piano roll caused the piano to skip from one key to another. Hedy thought up the idea of having a radio guidance frequency do the same thing.

She suggested a "frequency hopping" scheme using two paper piano rolls perforated with identical patterns installed in the submarine transmitter and torpedo receiver. Signals broadcast by the transmitter over quickly changing frequencies would be recognized only by the receiver. She reasoned that this would protect U.S. radio-guided torpedoes from German interception because a constantly changing frequency cannot be jammed.

Wh they had the foresight to patent their invention in 1942, the patent expired in 1959 without either of them realizing any money from their invention. Although offered to the U.S. military, the invention was not taken seriously and the frequency hopping system was never used during World War II. Digital technology and fast microprocessors had yet to be developed.

In 1960, however, the technology was renamed "spread spectrum" and the military adopted it for secure communications during the Cuban Missile Crisis and in weapon systems during the Gulf War. In 1981, spread spectrum technology was released into public domain.

Spread spectrum has now revolutionized world-wide communications and forms a basic principle that enables simultaneous and private multi-channel operation. Among other things, it is now used in modern digital cellphones

Spread Spectrum is also seen as one answer to the crowded radio spectrum since different users can use the same radio spectrum band in the same area without interference by changing the spreading formula. Spread spectrum transmits under the noise level without disrupting existing narrow band radio systems.

On March 12, 1997, the Electronic Frontier Foundation honored Hedy Lamarr and George Antheil with a special "Pioneer Award" for their "trail-blazing" co-invention of spread-spectrum broadcast communications technologies. "Ironically," EFF said "the tool they developed to defend democracy half a century ago promises to extend democracy in the 21st century." Hedy Lamarr, born Hedwig Kiesler, died in Florida last year at the age of 86.

CUTTING EDGE TECHNOLOGY

Future wars will be fought by smart machines. By the end of the decade, manned combat aircraft may be obsolete. Robotic deep-strike warplanes called unmanned combat air vehicles (UCAV's) will be identifying enemy targets, making decisions, delivering bombs and engaging enemy fighter jets without human control. And UCAVs can fly missions of more than 24 hours and stay aloft for weeks, something that human pilots can't do. Eventually, every element of warfare will be linked to a communications web. The U.S. Air Force is already using remote-controlled "Predator" surveillance drones that are operated from U.S.-based control centers thousands of miles away to fire missiles at Taliban targets in Afghanistan.

Microsoft's Bill Gates, keynote speaker at this year's down-sized COMDEX computer show, said the future of computing lies in a small portable computer called the "tablet PC." It is about the size of a legal pad of paper and can be used with a mouse and a keyboard. Users can also jot notes and diagrams on it with a "pen," as if drawing on paper. Gates unveiled several prototypes of the device and said he was "already using a tablet as my everyday computer." He said that "... within five years I predict it will be the most popular form of PC sold in America." The device runs on a special version of Micrososft's new Windows XP operating system called the "Tablet PC Edition."

EMERGING COMMUNICATIONS

The FCC has created a Digital Television (DTV) Task Force to take a hard look at the ongoing transition to DTV which is going slower than expected. The Task Force will make recommendations to the Commission concerning priorities to expedite the transition and promote the rapid recovery of analog televison spectrum for other uses.

Powell said that he believes "a big part of the problem were the unrealistic expectations set by the 2006 target date for return [and auctioning] of the analog spectrum." He added "new realities have arisen out of the tragic events of September 11" which have had a financial impact on media company and consumer spending.

Iridium, the first company to offer worldwide satellite phone service, has returned to life after being re-pitched as a homeland-security aid. Benefitting from the Sept. 11th terrorist attack, Iridium, the once-bankrupt and left for dead satellite phone service is making a comeback. Iridium was originally developed by an international consortium headed by Motorola.

Launched in 1997, it went out of business last year in a much-publicized colossal failure. The $8 billion satellite service was eventually sold to a group of investors for the fire sale price of $25 million. It uses a constellation of 66 low-flying satellites to form a communications network which floats above the earth. See "How it works" at: <www.iridium.com>. Satellite phone service costs have now dropped to about $1.50 a minute, a fraction of its original cost.

One of its first customers is the U.S. Dept. of Defense which is paying Iridium $72 million to provide satellite phone service from the Middle East war zone. Iridium is being used by U.S. special forces since it's the only phone that meets U.S. National Security Agency encryption standards.

Iridium has also proposed that its satellites be made the backbone of a real-time aircraft tracking system in which equipment installed in cockpits would alert authorities when a plane deviates from its planned course. The system would look for terrorists by transmitting live video, voice and data signals from airliners to secure FAA data centers for live monitoring by flight controllers.

The procedure could replace the airlines' so-called "black box," which records flight data for crash investigations. Qualcomm and Boeing are also looking into providing a similar service.

Cable TV companies will be the dominant providers of high-speed Internet access services, according to market research released by the Yankee Group. The Boston-based consulting firm expects cable to provide broadband to 15.7 million residential households by the end of 2005. DSL will be the choice in 10.5 million, satellite by 4.5 million and fixed wireless will serve 359,000. Three-quarters of U.S. households will have high-speed Internet access available to them by the end of this year.

The Wall Street Journal said broadband telephony (DSL) is losing its luster, as several large telecom companies are not adding more. In recent weeks, both Sprint and SBC have announced cut-backs in their high-speed DSL services for consumers and small businesses.

COMPUTERS AND SOFTWARE

Let the games begin! The holiday season is upon us and Nintendo, Sony and Microsoft are set to battle for control of the video console market. Nearly half of all video game players will buy one of the new generation of 128-bit console platforms this Christmas.

Nintendo launched its GameBoy Advance handheld this summer and will launch its GameCube on November 18th ($199.) Sony has its well-established PlayStation 2 and newcomer (to the video game business) Microsoft unveils its Xbox on November 15th. Number 4 video console maker, Sega (with its Dreamcast console) has dropped out of the race and is now only an online-game developer. Sony and Microsoft are targeting people in the 18 to 34 year old age bracket while Nintendo goes after a younger player

You can expect a ferocious advertising campaign during the next few weeks. Microsoft says it will sell 5 or 6 million Xbox consoles by next summer and plans to spend $500 million on marketing it worldwide over 18 months.

Sony's PlayStation 2 which initially sold for $299 - cost the company $450 per unit to produce. But high volume has driven down costs and it is now retailing in some areas for less. Sony says it will sell 10 million Playstation 2 units by the end of its fiscal year (Mar. 31.) Microsoft's Xbox (with an initial cost to the company of about $425) will sell for $299.

It is anticipated that due to production problems, both Microsoft and Nintendo will be unable to meet the holiday season demand. Sony, on the other hand, says they will have plenty of product available.

Microsoft hopes that game players will pay a fee (about $10 a month) to play other people over the Internet and to download new games. Microsoft must sell about eight or nine games for every hardware unit to break even. Games sell for about $50 and are very profitable.

The Xbox will launch with between

15 to 20 games, while the GameCube will offer around 17. There are already approximately 300 PlayStation games available.

Within 3 years, Sony is expected to have 42 percent of the worldwide video console market, with Nintendo and Microsoft each taking 29 percent of the market.

Microsoft said its Windows XP Operating System software is "flying off the shelves." WebSideStory Inc., said its research indicates that XP is already being used by 2.36% of computer users on the Internet. "If the past is any indication, Windows XP will be the dominant OS on the Web by this time next year," it said Geoff. <www.webside-story.com> Each month, the company analyzes more than 10 billion page views for its customers. Microsoft launched its flagship Windows XP software with a $200 million marketing campaign on Oct. 25. Microsoft's Windows 98 is currently the leading operating system on the Web, accounting for about half of all OS versions worldwide. Windows 98 surpassed its predecessor, Windows 95, in April 1999, less than a year after its release.

Get ready for "Lindows," an operating system for Pentium-based personal computers that will compete with Microsoft's Windows. Able to run both Linux and Windows software titles, it will cost under $100 and you will be able to run it on as many PCs as you want. Check out: <www.lindows.com>

Some very large corporations are interested in consumer Web surfing habits. Supposedly these companies are only interested in obtaining surfing trends and have no interest in the profiles of individual users.

Web trackers – software technology designed to shadow an individual's Web surfing habits for marketing purposes – are becoming very commonplace, despite growing awareness of the privacy issues associated with them.

Is your computer telling on you? It might be if you have a product such as webHancer's Customer Companion installed on your PC ...and more than 16 million people do! The software is distributed through arrangements with companies offering free software programs.

WebHancer pays these companies to distribute the software, which in turn allows them to provide their programs free of charge. In some cases, the user may have to accept installation of Customer Companion to install the free software. The application then shadows the users, reporting what Web sites they visit, their pattern once within a given Web site, and how long they remain at the site before abandoning it. <www.webhancer.com>.

Another website that gathers customer intelligence is NetGenesis – See: <www.netgen.com>. They collect data through cookies on a client's Web site.

There are dozens of other site trackers, web counters, and stat collectors.

AdSubtract is a software program that intercepts and strips ad banners, background music, pop-ups, Flash and pop-unders and other worthless trash right out of a web page. It features a icon that lets users disable ad blocking temporarily whenever they wish. The Pro version also manages cookies and highlights cookies placed by "ad servers" and known "online profilers" that use cookies to create a database of your surfing habits. You can block cookies from all sites or you can pick and choose. $29.95 – Check out: <www.adsubtract.com>

WebWasher (which can be downloaded for free) also filters out unwanted advertising and cookies. See: <www.webwasher.com> **Pop-Up Stopper** (which controls only pop-up windows) is a free utility from PanicWare Inc. in Seattle – <www.panicware.com>.

RealArcade is a new Web site launched by RealNetworks. The site offers more than one hundred downloadable and web-based PC games for a fee. The RealArcade interface software is free but it costs $4.99 to rent access to one game for seven days, or $14.99 to access all of the games on the site for one month. The company also plans to sell games after allowing their use for free during a trial period. More at: <www.realarcade.com>

AOL has released a new version of it consumer online service software. AOL 7.0's new features include: the launch of Radio@AOL, a service offering dozens of stations carrying music and news programming; and AOL Box Office with Ticketmaster, featuring ticket purchasing for entertainment events in 60 cities as well as details on local information and shopping services.

Greater emphasis is now is placed on local items, such as hometown weather and news, tips on where to eat, and weekend suggestions, all based on your ZIP code. AOL Time Warner has 31 million member households, more than four times as many as runner-up MSN, with 7 million subscribers.

INTERNET NEWS

The FDA is trying to halt potentially illicit drug sales that have emerged in the wake of the recent bioterrorist attacks in the U.S. Cipro – the anthrax antibiotic drug – is available at many websites. There are also unsolicited e-mail ads making the rounds offering the drug.

Cipro requires a doctor's prescription, but some sites are offering "online consultations" with doctors which usually involves just filling out a form about your health. Cipro must be taken twice a day for 60 days to adequately treat anthrax.

For example: <www.cipro.com> is the official Bayer Pharmaceuticals website. <www.cipro-cipro.com> is a site that ships the drug from Fiji in the South Pacific. (112 tablets costs a whopping $520.00!) But even if you pay the price, you may never get it.

The FDA and AMA have both warned that the drug is only to be taken by people believed to have been exposed to anthrax or diagnosed with early symptoms by a doctor.

The FDA (which issued a "Buying Online" advisory on November 1st – see <www.fda.gov>) says foreign drugs promoted on the Internet may not be legally imported and is advising the U.S. Customs Service that shipments from foreign vendors may be detained and refused entry.

Under federal law, any drug that is manufactured in the United States and exported abroad may only be re-imported into the United States by the drug's original manufacturer.

Want to quickly know what time it is any place in the world. Check out: <www.worldtimeserver.com>. This handy site lists every country and most major cities in the world, or you can enter a country or city into a search box.

Growth in the use of the Internet is slowing, according to new research by Harris Interactive. The data shows the proportion of adults online is virtually unchanged at 64% for the last twelve months, indicating 127 million adults are Web users ...up from 121 million a year earlier. <www.harrisinteractive.com>

WASHINGTON WHISPERS

We understand that the Pentagon is selectively jamming GPS (Global Positioning Satellite) signals in Afghanistan so that the Taliban can not use them to determine their precise location or to guide missiles or bombs in an attack on U.S. forces. The 500 watt jammers have more than enough power to wipe out GPS satellite signals within 300 nautical miles of receivers on the ground. U.S. smart bombs are guided to an accuracy of 20 feet by encrypted GPS signals transmitted on secret frequencies.

President Bush's new counterterrorism and infrastructucture protection advisor for cyber security, Richard Clarke, believes the U.S. could be headed for a "cyber calamity" at the hands of U.S. enemies. He says we "have a system that is fragile and vulnerable to sophisticated attacks." He said hostile foreign governments are preparing to wipe out such critical computer networks as the U.S. power grid and telecommunications systems which could result in an "electronic Pearl Harbor."

The *American Association of Motor Vehicle Administrators* (Arlington, VA) is working on a national identification system that would link all state driver databases. The "smart" driver's license would be standardized and contain finger prints and a computer chip. Their *Task Force on Identification Security* claims that driver's licenses are already the de facto national identification card used by law enforcement and anyone requiring proof of identification. Under the proposal, non-drivers would also be issued ID cards. The Task Force is working with Congress, federal agencies and the President's Office of Homeland Security. Civil libertarians and privacy advocates oppose national databases maintained by anyone. More info at: <http://www.aamva.org>

Sending something to FCC headquarters by Federal Express or some other overnight express mail courier service? If so, the Commission's unique agency zip code "20554" cannot be used. In these circumstances, you must use the zip code "20024" as follows: Federal Communications Commission; 445 - 12th Street, S.W.; Washington, D.C. 20024. Only filings and other documents sent by U.S. Postal Service should use 20554.

The FCC's Consumer Information Bureau (CIB) has released the first of what will be quarterly reports on the numbers and types of complaints and inquiries it receives from the public. The report is a tabulation of the most common complaints/inquiries received during the third quarter of this year on broadcast, cable, wireless and wireline telecommunications issues. The FCC received nearly 70 thousand of them.

The statistics show that billing-related matters involving wireline and wireless telephone services comprise the largest category. The second largest category was "slamming" ...the unauthorized changing of telephone service from one carrier to another. The third largest issue was "cramming" ...adding billable line items to consumer phone bills. Telephone billing, slamming and cramming account for about one-third of all complaints and inquiries received by the agency.

New figures released by the non-profit *Institute for State Studies* show that state and local governments will lose $13.3 billion in revenue this year – 41 percent higher than previously estimated – because taxes are not paid on remote online purchases made over the Internet as they are on "Main Street" purchases. The report is available online at <www.statestudies.org>. This could cause local governments to raise their sales tax rates by as much as 1.75%.

AMATEUR RADIO

Jeffrey T. Briggs K1ZM (Hopewell Junction, NY) and William R. Tippett W4ZV (New London, NC) have filed a 21-page *Petition for Rulemaking* on September 17th asking that the FCC create a 160 meter sub-band for narrowband (CW and digital) modes from 1.800 to 1.843 MHz.

Wideband (SSB and SSTV) modes would be limited to 160m frequencies above 1.843 MHz. The petitioners state "The intent of this action is to separate wideband and narrowband modes."

On July 20-21, 2001 the ARRL Directors approved a 160 meter band plan that provides for the voluntary use of narrowband modes between 1.800 and 1.843 MHz with SSB, SSTV and other wideband modes operating above 1.843 MHz.

The petitioners want the line of demarcation mandated by FCC regulation rather than by "gentleman's agreement." They state that a voluntary bandplan cannot achieve a true separation of narrowband and wideband modes on the low end of the 160 meter band.

Both William Tippett W4ZV and Jeffrey T. Briggs K1ZM served on the ARRL's 160 meter review committee. It was agreed that a request for FCC rulemaking, if filed, should be made outside the committee's recommendation to the ARRL Board.

They point out that "The Commission has wisely adopted a framework of separation by mode of all other Amateur Service bands from 3.5 to 144 MHz" adding that "Wideband and narrowband modes just do not coexist very well within the same narrowly confined space...."

The petition contends that "Weak signal work especially on 160m would cease to be possible without the provision of a haven for CW ...that is afforded some meaningful protection from wideband voice modes such as AM, SSB and SSTV."

Alan Dixon N3HOE (Melbourne, FL) and Robert K. Leef KB6DON (Mission Viejo, CA) submitted a *Petition for Rulemaking* to the FCC on October 9th asking that *Family Radio Service* (FRS) Channel One be established as a universally recognized calling channel. FRS is an unlicensed 14-channel low-power two-way 462/467 MHz consumer radio service carved out of spectrum allocated to the General Mobile Radio Service.

They argue that "...situations will occur in which a FRS user is in an emergency situation, and in which the user's only immediate means of communication is a FRS radio."

"Without a common calling or distress channel, the FRS station in distress must attempt communications on 14 different frequencies and 38 different *Continuous Tone Coded Squelch System* (CTCSS) codes. This equates to 532 logical channel combinations, a situation hardly conducive to rapid communications response."

Italian amateur operators will be operating Special Event Station IY1SP until December 31, 2001 to commemorate Guglielmo Marconi's experiments in 1901 and 1931. IY1SP will be active during the CQ WW Contests, the Memorial Marconi VHF and the Italian 40/80 meter contests. QSL's go via I1FNX.

Morse Code to be featured on upcoming X-Files episode. Rob WA6CW, of Hollywood, California, served as a technical adviser to X-Files star Robert Patrick for an upcoming episode. Patrick's character, John Doggett, was in a hospital bed, paralyzed, and was required to send Morse code message by tapping his index finger. WA6CW who also works as an actor taught Patrick how to tap out the message at about 5 WPM. "He was a fast learner," WA6CW said. No word on what the message was, but it might be, "The truth is out there." The episode, entitled "4-D," is scheduled to air Sunday, December 9, on the Fox TV Network.

Radio amateurs in South Africa may not use hand held transceivers in a vehicle unless a "hands free" mechanism exists ..such as headgear or vehicle mounted microphone and speaker. The regulations read as follows:

"No person shall drive a vehicle on a public road while holding a cellular or mobile telephone or any other communication device in one or both hands unless such a device is affixed to the vehicle and remains so affixed while being used or operated, or is specially adapted or designed to be affixed to the person of the driver such as headgear."

The statute makes provision for an exemption of the regulation for "any person driving a vehicle while engaged in civil protection..."

The Radio Society of Great Britain reports that twelve sites have been selected to test the new "Foundation Licence" training/testing scheme. The sites are a mixture of clubs, schools, youth organizations and disabled candidates. This trial is designed to test the syllabus, tutor guide, examination software and administrative procedures before the new license is introduced on the 1st of January 2002. Many clubs across Great Britain contacted the RSGB wishing to participate in the trial.

A special "OQ" call sign prefix has been authorized for Belgium radio amateurs which may be used until Dec. 31st instead of their usual ON or OT prefixes. The Belgian telecom authorities have issued this special prefix on the occasion of the birth of Princess Elizabeth.

During September ITU₋R working groups continued their discussion on WRC-2003 agenda item 1.36 which covers frequency allocation to shortwave broadcasters in the 4-10 MHz band.

In the debate is also the necessity of harmonizing 7 MHz broadcast and amateur radio spectrum to make 300 kHz available to amateurs world-wide. While the IARU and United States is lobbying for a 7000–7300 kHz (40 meter) allocation, member countries in ITU Region 1 and 3 are not aligned with this. Intense lobbying continues.

The FCC has issued an Experimental License to Digital Wireless Corporation in Los Angeles to test its systems in the 420 to 430 MHz band. Digital Wireless Corporation is a manufacturer of secure, all-digital, Internet-linked trunked and non-trunked dispatch radio equipment that provides secure conversations and seamless network coverage for business, government and military users. The license with the call sign WC2XKK permits holder Brent Jaybush and Digital wireless to operate within 5 km of their factory in Los Angeles through February 1. Radioamateurs are concerned that such use might spread.

The World Radiosport Team Championship (WRTC) – the so-called "Olympics" of international Amateur Radio contesting – will take place in Finland for one week in July 2002. WRTC-2002 is hosted the Finnish Amateur Radio Society (SRAL) and Contest Club Finland (CCF). WRTC brings together over fifty teams made up of the best contest operators from around the world. The on-the-air competition consists of two-person teams operating from one geographical area using identical equipment, power and antennas.

FCC Amateur Radio Enforcement

Richard E. Howell NY4X (Taylors, SC) has been contacted by the FCC relative to his uncoordinated repeater operating on 147.03 MHz. The FCC said there is evidence that some of its users deliberately interfere with KU4OL which is coordinated for that frequency. Howell is to supply the FCC with information concerning the NY4X repeater within 20 days. If his repeater is not coordinated, he is responsible for eliminating the interference. The FCC also wants to know how Howell has been handling any received complaints.

The FCC is looking into a series of application filings by Robert J. Trepanowski, Sr., AA2DQ (Centereach, NY) the first of which was to change his name to Laura Trepanowski. (Greenfield Park, NY). The FCC wants a copy of the documentation if a legal name change was granted.

Bryan C. Bailey KD5PXQ (Hurst, TX) has had his recently issued Technician Class license invalidated. The FCC says it has information that Bailey caused interference on the W5FKN (Lewisville, TX) repeater on September 28, 2001 – prior to his being issued KD5PXQ on October 3, 2001. He is to respond to the allegations within 20 days.

Brett C. Shapen KE6MFW (Burbank, CA) is to respond to the charge that he transmitted music on the W6NUT "Mighty Wonderful" repeater (LaMirada, CA) on August 4th and 5th which is prohibited by Sec. 97.113(a)(4).

Andres L. Hernandez KP4ANG (Aguadilla, PR) has been sent a second and final FCC Warning Notice for deliberately causing interference on 7.087 MHz. The interference occurred as recently as October 25th and is apparently directed at a Mexican net operation.

Hernandez was previously warned on January 23, 2001 for interfering with operations on the 12 and 40 meter HF bands. FCC said any further interference will result in license revocation and a fine of up to $10,000.

Joseph Brue, Jr. K3NM (Brodheadsville, PA) has had his September 12th Warning Notice from the FCC affirmed which will remain part of his station file. It appears that his station was being operated by another operator under is control and that during a contest, they could not hear the complainant. The fact remains, FCC said, that they had two separate telephone calls from the complainant notifying them that their station was interfering with specific ongoing communications.

James R. Mason K5DWO (Plano, TX) has been warned by the FCC that it has received numerous complaints that he has been interfering with the W5MRC McKinney Amateur Radio Club repeater. Mason has been asked to refrain from using the repeater. The FCC advised Mason that "Control operators may take whatever steps are appropriate to ensure compliance with the repeater rules....."

The FCC said they expect Mason to abide by the request to stay off the W5MRC repeater. Failure to do so will result in enforcement action which could include license revocation, a fine or a license modification restricting his operating frequencies.

RUSSIAN FEDERATION SAYS "NO" TO NO CODE.

In a document released by the International Telecommunication Union on October 12, 2001, the Russian Federation says there is a need to retain the Morse code requirement for Amateur Radio operation below 30 Mhz. Follows is a verbatim copy of ITU Document 8A/78-E:

Subject: Item 1.7 of the agenda for WRC-03.

PROPOSAL BY THE RUSSIAN FEDERATION ON WRC-03 AGENDA ITEMS 1.7.1 AND 1.7.2

Introduction:

A review is currently being made of Article 25 of the Radio Regulations, which contains the basic provisions relating to the radio amateur and radio amateur satellite services.

Agenda Item 1.7.1 - Possible revision of Article S25

The Administration of the Russian Federation agrees that there is a nmeed to modify Article S25, and fully supports the proposals by the International Amateur Radio Union (IARU.)

In this regard, it would like to express its concern regarding the deletion of certain provisions:

1.   No. S25.5 - We consider it advisable to retain the provisions in the Radio Regulations which stipulate the need for a command of Morse code in order to be issued a radio amateur licence.

Reasons:

•   A knowledge of Morse code determines the boundary separating users of the radio amateur service from citizen band (CB) users.

•   An analysis of the current situation carried out by Russian radio amateurs shows that the lowering of requirements regarding knowledge of Morse code in different countries did not lead to a significant increase in the number of radio amateurs. On the contrary, to abolish the requirement regarding a knowledge of Morse code in the short-wave bands may produce a significant increase in the number of untrained radio amateurs.

•   The working statistics of major radio contests indicate that roughly the same number of communications are effected using telegraph (Morse code) as single side-band modulation, and a very low percentage of radiocommunications are effected using modern digital transmission facilities.

•   A survey of Russian radio amateurs has shown that an overwhelming number of those having submitted comments are in favor of requiring a knowledge of Morse code for the issue of a licence to operate at frequencies below 30 MHz.

•   Russian radio amateurs consider that revoking the requirement for a knowledge of Morse code would lower the level of proficiency ad lead to numerous infringements

in parts of the amateur ranges.

In addition it is well known that:

•   radiotelegraphy signals constitute the most interference-suppressing means of effecting amateur radio communications, this being of no small importance to radio amateurs.

•   radio telegraphy constitutes one of the most effective means of communication in emergency situations.

Conclusion: The practical ability to work in telegraph mode when operating in frequencies below 30 MHz, i.e. using Morse code, is a mandatory condition, when it comes to examining the proficiency of individuals wishing to be issued a radio amateur licence.

2.   No. S25.3 - We consider it advisable to retain this provision prohibiting the transmission of communications on behalf of third parties.

Reasons: If this provision is deleted, the radio amateur service will take on a commercial character, and this will run counter to the provisions of Article S1 (No. §1.56) of the Radio Regulations, concerning the radio amateur service.

Conclusion: For the purposes of ensuring conformity with the basic provisions of Article S1, No. S25.3 should be retained.

Agenda Item 1.7.2 - Review of the provisions of Article S19 of the ITU Radio Regulations hamper and limit the ability of administrations to designate call signs. This being the case, we would consider it advisable to review a number of provisions in Article S19.

We consider it advisable and more acceptable to retain No. §19.49.

Reasons: In the case of amateur station call signs whose first character if a digit and whose second character is the letter O or I, the latter may, if this provision is deleted, be mistaken for the digits 0 or 1when it comes to examining QSL notices filled in by hand.

Conclusion: It may be more appropriate to retain No. §19.49. *(END QUOTE)*

It is interesting to note that the Russian Federation says it fully supports the proposals of the International Amateur Radio Union.

On October 8th - 4 days before the ITU released the above document - the IARU Administrative Council voted to support the removal of Morse code testing as an ITU requirement for an amateur license to operate on frequencies below 30 MHz. The IARU said that while "...Morse code continues to be an effective and efficient means of communication used by thousands of radio amateurs ...Morse as a qualifying criterion for an HF amateur license is no longer relevant to the healthy future of amateur radio."

AUSTRALIA LOOKS TO OFF-LOAD HAM EXAMS

The comment period has closed on a *Discussion Paper* seeking information on a new Amateur Radio Operator examination scheme in Australia. The Australian Communications Authority (ACA is their telecom regulator) is now reviewing the submissions.

At present, ham radio examinations in Australia are the responsibility of the ACA. In order to provide an examination service that is readily available throughout Australia these examinations are conducted with the assistance of interested associations, clubs and individuals.

The ACA now wishes to introduce an alternative examination structure that will minimize the need for government involvement in the Amateur testing process.

At present, the ACA issues *Certificates of Proficiency* to persons who have passed the necessary examinations or to persons holding equivalent or better overseas qualifications.

The ACA said that "While Member States of the ITU generally adhere to the provisions of the ITU Radio Regulations, they may choose to apply different arrangements in particular circumstances." It questions "whether operator certification is necessary in all circumstances."

"It is open to debate whether a 'once only' demonstration of a person's knowledge by examination, particularly given that most Amateurs use commercially manufactured equipment, continues to serve those purposes," ACA said. "Could, for example, interference and operating procedures be just as well managed by license conditions and by requiring that only commercial equipment of a certain 'standard' is used?" The ACA asked "...under which circumstances could the requirement be dropped?"

Since 1989, amateur examinations in Australia are conducted by the *Wireless Institute of Australia* (WIA), under a *Memorandum of Agreement* with the ACA. The WIA is the national amateur radio society in Australia. The examinations are developed in accordance with a specified syllabus and each examination paper must be approved by the ACA prior to use.

Testing is overseen by licensed amateurs who are called 'invigilators' – similar to our VE (Volunteer Examiner.) Many examinations are conducted at the end of a course of training. The actual tests are sent to the invigilator who must return the completed examination to the WIA for grading. When candidates have passed all required subjects, they may apply to the ACA for the appropriate *Certificate of Proficiency.*

While the current arrangements provide a uniform examination standard, they require substantial ACA involvement.

Under new proposed arrangements, the examiner will be able to determine the content and construction of all Amateur examinations and issue *Certificates of Proficiency* without prior approval of the ACA.

Examiners (comparable to our VEC, Volunteer Examiner Coordinator) are responsible for the proper conduct of the examinations that they provide including taking responsibility for the actions of their invigilators (VE's.) The ACA wants to know "What type of organizations should be appointed as examiners and what should be the on-going role of the ACA?"

The role of the invigilator is to ensure the proper delivery of the examination and to view its proper completion. It does not include grading the examination or even having access to the correct answers. Unlike U.S. VE's, invigilators would not have to hold any formal qualifications.

A possible arrangement would be for the examiner to assume complete responsibility for the development and maintenance of the syllabus and examination questions. The ACA said it favors a common syllabus with a "reference panel" over-sighting its administration and a common bank of multiple choice examination papers or questions, rather than allowing individual examiners to write their own questions. The ACA believes that the reference panel should either develop the banks of papers or questions itself, or over-sight the development of the banks of papers or questions by a contractor.

The examiner would issue the *Certificate of Proficiency,* preferably on forms provided for that purpose by the ACA. Candidates would be advised in writing of their examination results within 30 days by the examiner and not the test invigilator.

Another proposal being considered is whether due to "increasing use and acceptance of the Internet as a means of communications and delivery of services ...whether it can be used to provide examinations under the new arrangements." The ACA said it is concerned that Internet-administered examination may not be solely the work of the candidate and asked "How examinations may be contested via the Internet without jeopardizing qualification standards."

A controversial part of the proposal provides that examiners may charge fees for conducting the examination and for issuing the *Certificate of Proficiency* which "...may incorporate both 'cost recovery' and 'profit' elements."

The examiner may set his or her own charges for conducting examinations. The ACA asked what this fee should be. "The remuneration of invigilators is a matter between the examiner and the invigilator."

Currently two invigilators per exam room are required to conduct Amateur examinations in Australia. The ACA asked for comments on the feasibility of reducing this to one "...recognizing that minimizing the number of invigilators required minimizes the cost of the examination."