

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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Comment Period Closes on New LF/HF Ham Band Proposal

"In the months since the September 11, 2001 terrorist attacks, there has been a renewed focus on Amateur Radio and its role as a First Responder in emergency and homeland security planning. The Amateur Service is perhaps more now than in the past recognized as a decentralized network of active, willing and capable volunteers with a communications infrastructure that is impossible to disable, and which is readily available at no cost to any served agency in an instant when called upon." From ARRL comments on OET 02.98.

The public comment period has closed on the FCC's *Notice of Proposed Rulemaking* - (Office of Engineering and Technology Docket No. 02-98, adopted May 15, 2002) that proposes to allocate two new bands at 135.7-137.8 kHz (low frequency, LF) and 5250-5400 kHz (high frequency) bands to the Amateur Radio Service on a secondary basis.

Both proposals were based on *Petitions for Rulemaking* filed by the ARRL - (RM-9404 filed November 23, 1998 and RM-10209 filed August 13, 2001). The low frequency band would permit experimentation and the new 5 MHz HF band would improve emergency and disaster relief communications between the U.S. and its Caribbean islands.

The Commission also tentatively agreed to upgrade the existing secondary Amateur Radio Service allocation in the 2400-2402 MHz band to primary status and to add a primary allocation for the Amateur-Satellite Service in this band. (Requested by ARRL in RM-9949 filed July 17, 2000.)

Comments on all three proposals closed on July 29; reply comments on August 12. A review of the Commission's *Electronic Comment Filing System (ECFS)* shows that about 250 comments have already been filed, mostly from individuals. Here is a sample of comments filed by organizations.

● **ONCOR Electric Energy Delivery Company of Dallas, Texas**, is an investor-owned utility that provides electricity to approximately 2.7 million Texas customers. It opposes the proposal to allocate the 135.7-137.8 kHz band for amateur operations on a secondary basis.

Power line carrier systems operate between 10 and 490 kHz using low power transmitters. ONCOR relies on PLC systems to trip electric relays to prevent widespread outages when an overload occurs on the grid.

"This allocation would increase the likelihood that amateur operations would cause interference to PLC systems that operate in this band. Amateur operations are unpredictable and uncoordinated; and interference from such operations would be difficult to avoid or trace under the best of circumstances.

"Moreover, if the FCC allocates the band to amateur operators on a secondary status, amateurs would not be required to avoid creating interference to PLC systems that are only authorized to operate on an unlicensed basis.

"Finally, the FCC may have understated the potential for interference, because PLC systems operate on 4 kHz wide channels and amateurs

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could interfere with PLC systems as low as 131.7 kHz or as high as 141.8 kHz. Interference to PLC operations could cause the system to trip a relay or it could prevent a relay from tripping when it should.

"The Commission has proposed that EIRP be limited to 1 W; that transmission bandwidth be limited to 100 Hz; and that amateur output power be limited to 100 W PEP. However, the FCC has refused to adopt antenna size or design limits, because it believes that power limits alone will adequately address the potential for interference to PLC operations.

"Power limits are meaningless if they are not coupled with antenna size or design limits that protect PLC systems from harmful interference."

It believes that if the FCC creates a secondary allocation for amateur operations, it should encourage amateur operators to cooperate with utilities to avoid causing harmful interference to each other. ONCOR's comments were filed one day after the comment period deadline.

● **The American Radio Relay League, Newington, CT** filed 21 pages of comments on OET Docket 02-98. It concludes:

"The three allocation proposals in this proceeding should be implemented immediately. The issues are not complex, and compatibility between amateur uses in the subject bands and any other radio service is not a substantial concern in any of the three cases.

"The 5 MHz allocation in particular is an urgent priority of the Amateur Service, and it is respectfully requested that this allocation be expedited.

"The service rules for the LF and the 5 MHz band should be established as requested in the respective ARRL petitions on which this proceeding is based.

"It is especially important that, in the 135 kHz band, the Commission permit transmitter power output of not less than 200 watts, and in the 5MHz band, access be provided to all Amateurs holding General, Advanced and Extra Class licenses.

→ "The low-frequency (LF) allocation in the Amateur Service is an important event, as it fills a void that does not exist in any other portion of the spectrum."

→ "ARRL suggests strongly that the 1-watt EIRP and 100-watt (LF) transmitter power limit (versus the 2 watt EIRP and 200 watt power output proposed by ARRL) is overly conservative."

→ "ARRL specifically did not propose sub-bands for this allocation, for several reasons, and suggests that it is unnecessary to impose such regulations at the present time. First of all, and most importantly, any segregation of wideband and narrowband modes by rule reduces the flexibility that Amateurs would otherwise have to conduct in a portion of the band that they determine will not interfere with Federal assignments. ... Limiting a portion of the band so as to preclude SSB

voice in a portion of it is detrimental to the principal use of the band [disaster relief and emergency communications] as envisioned by ARRL."

→ "The upgrading of the Amateur allocation at 2400-2402 MHz constitutes recognition of the importance of the Amateur-Satellite Service in the area of technical development. While this allocation is seriously compromised by the proliferation of unlicensed and essentially uncontrolled devices in the 2400-2450 MHz band, the Amateur and Amateur-Satellite Services have a unique ability to adapt to most communications environments, and will continue to do so in the future."

● **The Power Line Communications Association (Washington, DC)** is an association of electric utilities, service providers and vendors involved in the development and deployment of broadband over power lines.

"Using the existing electrical infrastructure, power line communications (PLC) will not only provide broadband Internet access, but add intelligent networking capabilities to the electric power distribution grid that will enhance its efficiency, reliability, and security."

"PLC operations include the high frequency range identified in the NPRM. The proposed new amateur radio secondary status allocation at 5 MHz thus would fall within the range of frequencies used for PLC. Since PLC testing is just now getting underway in significant scale trials, it would be premature and ill-advised to create any new allocations in this band. As such, the PLCA is opposed to the new amateur allocation at 5 MHz at this time."

● **"United Telecom Council (UTC), Washington, DC** is the national representative on communications matters for the nation's electric, gas, and water utilities, natural gas pipelines and other critical infrastructure industry entities. Approximately 1,000 such entities are members of UTC, ranging in size from large combination electric-gas-water utilities that serve millions of customers, to smaller, rural electric cooperatives and water districts that serve only a few thousand customers each. The electric utility members of UTC rely on power line carrier (PLC) systems to ensure the safe and reliable delivery of electric service to their customers."

"Although the Commission in the NPRM appears to downplay the number of PLC systems in the 135.7-137.8 kHz range, the effect of any one of these systems receiving interference from amateur operations would be the same and could have devastating consequences that far outweigh any conceivable public interest benefit that may come from allowing amateurs to use the 135.7-137.8 kHz band on a secondary basis. Therefore, UTC urges the Commission to protect the reliability of PLC systems, and to decline the proposal to adopt a secondary allocation for amateur operations in the 135.7-137.8 kHz band.

"However, if the Commission does allocate this band to amateur operators, it must adopt technical rules that

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include limits that effectively protect PLC systems, and it should encourage amateur operators to cooperate with utilities through UTC to avoid causing harmful interference to each other."

- **IEEE Project 802 (Lynnfield, MA)** opposes the elevation of the Amateur 2400-2402 MHz band from secondary to primary status and to establish a primary allocation for the Amateur-Satellite Service in the same band.

"The subject band is of vital importance to unlicensed uses that provide tremendous benefits to the public.

"...it does not require a huge imagination to foresee a strong likelihood that the ARRL will, if granted Primary status, attempt to use that elevated status to ultimately raise new challenges to Part 15 unlicensed operations in the subject band.

"...conflicts of a more fundamentally political nature may, in fact, arise in the future, due to the ARRL's tenacious, and often preemptive approach to the defense of amateur operations.

"Furthermore, our understanding, from a review of information available on the websites of the ARRL and AMSAT is that the 2.4 GHz uplink receivers in the amateur satellite known as AO-40 are non-functional, due to an unfortunate accident during the firing of a maneuvering rocket intended to alter the satellite's orbit from its initial post-launch orbit to the desired final orbit. It is also our understanding that only one of the two 2.4 GHz downlink transmitters is functional, and that both the non-functional 2.4 GHz uplink receivers and the non-functional 2.4 GHz downlink transmitter are considered 'unrecoverable.'

"Sharing of the subject band between amateur satellite operations and unlicensed Part 15 operations could be facilitated by simply limiting amateur satellite use of the band to downlink transmission only.

"This would have the effect of precluding recurrent, frivolous challenges to the Commission's authority from the amateur community *vis-a-vis* Part 15 unlicensed operations as well as unreasonable assertions of interference to future systems in the Amateur Radio Service or Amateur-Satellite Service that may be designed without adequate technical consideration of the reality of the other uses of the band combined with, an attitude that 'the onus of co-existence is totally on the Part 15 community.'

"If the ARRL is sincere in its contention that upgrading the Amateur and Amateur-Satellite Service allocations in this band 'would not impose constraints on co-frequency Part 15 devices' they should not object to a 'Safe Harbor' provision." (*Comments submitted by Carl R. Stevenson, WK3C*)

- **Pinnacle West Capital Corporation, Phoenix, Arizona** is engaged in the generation, transmission, distribution and sale of electricity to (a) wholesale customers throughout the Western United States, and (b) to retail electric customers in the States of Arizona and California.

"We utilize PLC frequencies on 5,000 miles of transmission lines in the Western United States, for transfer-trip line protection devices. If falsely triggered, these devices will initiate breaker operation and may cause cascading loss of generation and power outages to our customers as well as portions of the Western United States.

"Pinnacle West opposes the Commission's proposal to allocate the 135.7-137.8 kHz band for amateur operations on a secondary basis and strongly requests the Commission to decline this proposal. The potential for Amateur Operators interfering with critical PLC systems would be greatly increased in the event this band is allocated to them. Since PLC systems are operating on an unlicensed basis, we have no recourse in the event of interference into our systems if amateurs were permitted to operate on a secondary status.

"If the Commission makes the decision to allocate this band to amateur operations, there must be technical rules adopted to include limits to ensure effective protection to PLC systems. Also the Commission should adopt rules to have amateurs coordinate through UTC to avoid causing harmful interference to each other since UTC is the keeper of the PLC database.

"Lastly, if the Commission decides to allocate the PLC band to amateur operators as secondary status, we request the Commission to upgrade PLC users to licensed secondary status also, to ensure we have recourse in the event of interference."

- **"CQ Communications Inc., (Hicksville, NY)** a leading publisher in amateur radio, generally supports the proposals in ET Docket 02-98. Regarding the LF proposal (135.7-137.8 kHz), we would open the band to all amateurs with General Class or higher licenses, would not implement mode restrictions and would make technical requirements flexible enough to encourage a wide range of experimentation.

"On 60 meters (5,250-5,400 kHz), we strongly support creation of the allocation; propose that full amateur power be permitted; would not recommend sub-banding, either by mode or by license class; and would open the band to all amateurs with HF privileges, including CW privileges for those holding Novice Class licenses or Technician licenses with code credit.

"We also strongly support the proposal to make the Amateur Service primary on 2400-2402 MHz, but are very concerned that the Commission appears to be placing the interests of non-licensed users of this band, at a minimum, on par with the interests of licensed users.

"...we urge the Commission to reaffirm its commitment to maintaining the proper relationship between licensed and unlicensed services sharing frequencies, and that the interests of unlicensed users of a particular frequency band are secondary to those of all licensed users, along with reaffirming the basic premise that unlicensed

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operations must tolerate interference from licensed operations, and may not cause interference to licensed operations."

- **The Home Plug Powerline Alliance, is a Washington, DC** industry organization of 65 companies that support networking through a home's electric power wires. Their products operate over the powerlines in the 4-21 MHz spectrum range.

"HomePlug took the extra measure of notching out all current Amateur Radio bands between 4 and 21 MHz in order to minimize radiation to those bands. Working with the ARRL, we were successful in demonstrating that the interference potential from our products is minimal because the unintentional radiation remains at a very low level."

"We are concerned, however, about the implications of a completely new Amateur Radio band at 5 MHz. ...As a practical matter, the additional of a new band potentially has implications for our existing products in the marketplace and for the design of future products."

The HomePlug Alliance asks that if the FCC allocates 5 MHz to the Amateur Service that there be no recourse to any harmful interference caused by HomePlug products for a period of ten years.

"We do not ask for our devices to be protected from interference caused by radioamateurs, only that our devices be presumed to not cause interference and that they not be subjected to mandatory cessation if interference is alleged." (Comments submitted by David R. Siddall, K3ZJ)

- **"Entergy Corporation (an electric utility serving portions of Arkansas, Louisiana, Mississippi, and Texas)** recommends that FCC disapprove the proposal to allocate the 135.7 to 137.8 and 160 to 190 KHz band for usage by amateur radio operators.

"The FCC should consider that PLC systems for electric system protection have been a traditional, cost effective approach for electric utilities for over 50 years. Entergy Corporation would need to retrofit up to 40 existing PLC systems if the proposal to permit amateur radio operation in the 135.7 to 137.8 KHz bands and even more impact would occur for operation in the 160 to 190 KHz band.

- **"The Quarter Century Wireless Association, Inc. (Derwood, MD)** is committed to promoting interest in the amateur service, 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.

"QCWA strongly supports the adoption of the well-reasoned proposals put forth... In particular, the allocation of HF spectrum in the 5250-5400 kHz band (60 meter band) to the amateur service will significantly enhance the

capability of the amateur service community in the United States to provide essential communication needs and facilitate relief actions when normal communication systems are overloaded, damaged or disrupted because a disaster has occurred.

"...the QCWA looks toward having available the 60 meter band for intercommunication with amateur stations located within the hurricane-prone Caribbean Insular area during times of distress.

"The QCWA strongly recommends that the 60 meter band be authorized to General, Advanced and Amateur Extra Class operators. This is essential to taking the best possible advantage of the randomly distributed locations of amateur stations in providing emergency communications. ...The QCWA sees no reason to curtail either the numbers of operators or the maximum power of their stations."

- **IEEE - Power System Relaying Committee (IEEE/PSRC), Oakbrook Terrace, IL** remains concerned that interference resulting from the proposed licensed use of the 135.7 - 137.8 kHz band by the Amateur Radio Service will impact the reliability of electrical service in the United States.

"The only way to assure that the power system reliability remains consistent with past experience is to disapprove any allocation in the PLC band. The citizens of the United States enjoy and rely on reliable power. The Federal Government should take all actions necessary to maintain this reliability.

"Based on the comments filed, there is little interest in the Low Frequency allocation. There is little mention or concern that this frequency band is used in the United States to maintain the reliability of the power system. The small quantity of interested users could be Amateur radio license holders that are given experimental licenses for clearly defined geographic locations and antennas. Utilities understand that they may be the benefactors of new technologies, however they are not willing to risk power interruption."

- **Exelon Corporation, Chicago, IL** - "Because of the potential effect on energy delivery operations, Exelon recommends that the Commission not grant the amateur service secondary license privileges in the 135.7-137.8 KHz band.

"However, if it does, it should at least condition those license privileges in a way that provides that utilities have a right to operate Power Line Carrier (PLC) systems in that band without interference from the amateurs and without regard to whether utility PLC equipment is interfering with the amateurs. use of the band.

"In the alternative, the Commission should specify that the interference rights of amateur licensees are subordinate to those of utilities operating PLC systems on the same frequencies."

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FCC RECOMMENDS THAT KV4FZ BE RELICENSED

Herbert L. Schoenbohn, KV4FZ of the U.S. Virgin Islands may be getting back on the amateur airwaves.

In Dec. 1992, Schoenbohn was convicted of illegally using an "access code" to illegally make free long distance telephone calls over a Caribbean telephone system. Found guilty, he was and sentenced to two months house arrest, two years probation, and fined \$5,000.

In 1994 the FCC declined to routinely renew his Amateur Radio license and, due to the felony conviction, began looking into whether he possessed the proper personal qualities to be a licensed ham operator. He was allowed to continue operating his ham station during the administrative proceeding which lasted three years.

In July 1998, the FCC said that it had determined that he was less than truthful in testimony given in 1995 and 1997 and "...lacked the requisite character to remain a Commission licensee." When the FCC refused to renew his ham ticket, Schoenbohn appealed.

After a lower federal court upheld the FCC action, the U.S. Supreme Court declined in October 2000 to hear his appeal. The FCC canceled his Amateur Extra Class license in January 2001.

At ARRL-VEC exam sessions a couple of months later, Schoenbohn passed both the General and Extra Class license requirements. But rather than routinely grant the licenses, the FCC designated the new license applications for a hearing to determine whether he could be relied on to deal with the Commission in an honest and forthright manner.

At the hearing, Schoenbohn testified that prior to his felony conviction, he had never been convicted of any serious crime nor has he been found guilty of any misconduct since. He said that he has worked hard to rehabilitate himself, to overcome the effects of his conviction and "...to demonstrate that his is capable of obeying the law and, in particular, the FCC's rules and regulations." He told about the responsible job he had with a U.S. Virgin Islands government and that he serves as both an elected and non-elected official of the Republican party.

Frank Todd, K3EKO, of Port Vue, Pennsylvania appeared as a character witness at the hearing. He said he considers Schoenbohn "...a positive role model in Amateur Radio and an individual that is capable of making a very significant contribution to the Amateur Radio Service." He said he believes him to be a "...decent, honest and hard-working person" and hopes that the Commission will allow him "...to prove himself and enjoy his later years through a wonderful activity like Amateur Radio."

There was a question about Schoenbohn's operation during a DX contest in October 2001 - nine months after his license was canceled. He said he was operating under the authority and call sign of another amateur

(Steven S. Reichlyn, AA4V) who remained on the premises, was within earshot and observed his operation.

On July 9, 2002, in a "Finding of Fact and Conclusion of Law", the FCC enforcement's Bureau said there was sufficient evidence to support a finding that Mr. Schoenbohn has rehabilitated himself."

"Mr. Schoenbohn has continued to engage in community activities and assist with disaster relief efforts. [He] also acknowledged that the loss of his prior license was a source of great shame to him, and that he regrets his prior misconduct. Based on the evidence, it thus appears unlikely that Mr. Schoenbohn will engage in future misconduct." The Enforcement Bureau recommended that the FCC grant him an Amateur Radio license.

● **The ARRL held their second 2002 Board of Directors meeting on July 19-20 in Windsor, CT.**

→ Joel M. Harrison, W5ZN told about the challenges in trying to achieve a worldwide band of 300 kHz at 40 Meters and the threat to the bands from Part 15 devices.

→ Paul Rinaldo, W4RI, Technical Relations Manager, reported on several possible implementation plans for realignment of the 7 MHz band..

→ General Counsel Chris Imlay, W3KD said the FCC is under increasing pressure to allow higher power Part 15 devices that will cause greater interference.

→ The League's By-Laws were amended to provide for an "Official ARRL Internet Web Site." The Section News and Contest Line Scores which previously had appeared in *QST* magazine will be relocated to the ARRL Website as of the January 2003 issue.

→ The Industry Advisory Council discussed ways to cooperate with the newly formed industry group called the *American Association of Radio Enthusiasts* (AARE).

→ An analysis will be prepared to evaluate options for better protecting Amateur Radio from 902 MHz through 24 GHz, including possibly a relationship between amateur radio, wireless access and enhanced data networks.

→ A new multi-media presentation depicting the importance of Amateur Radio as a low cost emergency communications resource for homeland security will be developed and made available to various agencies.

→ A possible 8-hour September operating event may be established to demonstrate the ability of ham radio to communicate locally, across state lines, and nationally.

→ The ARRL will petition the FCC to revise Part 97 to regulate subbands by signal bandwidth rather than by mode.

→ The ARRL President was authorized to appoint both an ad hoc planning committee and an ad-hoc HF data modes working group.

→ The ARRL Board voted to restore the responsibility for Band Planning to its Membership Services Committee.

CUTTING EDGE TECHNOLOGY

Newest car safety feature are automobile accidents that report themselves. General Motors has a new Advanced Automatic Crash Notification System (or AACN for short) which detects the deployment of airbags.

Using GPS and handsfree cellular technology, the in-vehicle safety system automatically alerts private emergency call centers of your location.

A live "OnStar" operator advises you that help is on the way. The operator can talk to crash victims in the vehicle and conference in 911 dispatchers with all the information they need to quickly send emergency response assistance.

Crash sensors in the front and rear bumpers and on both sides of the vehicle can even tell where the vehicle was hit and the speed and force of impact.

An on-board 'Mayday button' can also be pushed, providing voice communications and the exact location and description of a vehicle in distress.

GM's Advanced Automatic Crash Notification system will be installed in 400,000 General Motors models next year and 1.4 million over the next three years. See: <www.onstar.com>.

EMERGING COMMUNICATIONS

A new trend in the making? The Associated Press reported that four Florida panhandle newspapers will begin charging for their online Website version. Two of them are dailies: the *Northwest Florida Daily News* of Fort Walton Beach and *The News-Herald* of Panama City. Subscriptions will cost between \$8 and \$9 per month ...about one-third less than home delivery, reflecting savings on paper, ink and delivery costs.

The leader in online newspaper publishing is the *Wall Street Journal* with nearly 600,000 paying subscribers.

Members of Congress, the Department of Justice and the FCC are weighing in on the proposed \$26 billion merger of EchoStars' Dish network and Hughes' "DirecTV" ...the only two high-powered direct-to-home (DBS) satellite TV providers in the United States.

A final decision is expected by year

end. Congress is concerned about how a single merged DBS operator will handle local, religious and minority programming - and pricing ...especially in rural America where 22 million households lack cable TV competition.

DBS has grown dramatically since its introduction eight years ago. Starting at zero in 1994, DBS is a \$10 billion industry today with over 17 million subscribers. The number of DBS subscribers is expected to double and be in one third of all U.S. households by year-end 2008, a 20 percent compounded annual growth rate.

The merger would eliminate much channel duplication and permit satellite broadcasters to carry more local TV stations. Fearing that DBS could replace over-the-air broadcasting as the primary source of local programming, the *National Association of Broadcasters* opposes the merger.

A big disadvantage of Wi-Fi (IEEE 802-11b) wireless networks is that hackers and other PC users can use the bandwidth of unprotected corporations, organizations, and public or home networks. Since transmission distances can extend up to several hundred feet, hackers can gain access to a personal or corporate network from outside a building or home. Software exists that can grab unencrypted passwords or other data sent over a public wireless network.

AT&T has announced that it has begun offering a new "lightning fast" broadband speed to residential cable Internet users.

AT&T UltraLink service was launched on August 1 in Dallas, Denver, Salt Lake City, San Francisco Bay Area, Seattle, St. Paul and communities in the company's Michigan and Rocky Mountain markets.

The UltraLink tier will allow customers to surf at maximum speeds capped at 3 Mbps downstream and 384 kbps upstream for \$79.99 per month. The service costs \$82.99 per month for customers who lease a modem from the company.

The faster service will shortly be expanded to Atlanta, Florida, Pittsburgh, Portland, Richmond and Southern California to be followed by Chicago, Central California and the Northeast markets

The company also plans to test a lower speed cable broadband service later in the year geared toward consumers who are looking to upgrade from a dial-up connection and want the power of always-on

broadband.

AT&T already offers cable broadband service to nearly 1.8 million customers which allows customers to surf at speeds up to 1.5 Mbps downstream and 256 kbps upstream for \$42.95 per month. Customers who lease modems from the company pay \$45.95 per month. More info at <www.attbroadband.com>.

COMPUTERS & SOFTWARE

As part of its proposed antitrust settlement, Microsoft will release a free upgrade "service pack" for Windows XP. This upgrade will make it easier for consumers and computer manufacturers to hide or block access to five Microsoft programs, including its Internet Explorer browser and Windows Media Player, and install competing products.

The software addresses a contention that Microsoft uses its Windows monopoly to promote its other products. Microsoft will also release various software interfaces that can link Windows to rival programs.

Computer networks now have their own armed security guards. Hundreds of thousands of *Department of Defense* computers are victims of attack -- primarily due to hackers -- every year.

Julie Huff, a Northrop Grumman software engineer has received a patent for her development of an "automatic intrusion response" program that counterattacks hackers while they are attacking an Internet site.

"Detection agents" report event data in real time and appropriate countermeasures are immediately launched. It eliminates the manual analysis that normally takes place hours after a site is hacked.

The "Security Kinetix" project was partially financed by the U.S. Army.

GADGETS & GIZMOS

Sony is introducing a feature that allows consumers to view digital photographs on their big screen televisions without the aid of a computer. New sets coming this fall will have a slot on the control panel that allows viewers to insert a Memory Stick - Sony's small removable storage card - and using the remote control, scan pictures stored on the Memory Stick card individually, as

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an index or as a slide show.

INTERNET & WORLD WIDE WEB

Virtual house calls; the doctor is just a click away. According to an April 2002 Harris Interactive study, 90 percent of online adults want to communicate with their physicians online, and over one-third (37 percent) are willing to pay for it. Yet, only 10 percent of all doctors use e-mail with patients.

Thanks to "Medem," many doctors are now dispensing advice and medicine by e-mail. The service is sometimes free but often costs \$20 to \$30 or more per "online consultation" or "OC" as it is being called. Most insurance companies are not covering the charge as they would if the patient made an office visit so e-medicine is not yet widespread.

Medem, a San Francisco-based "physician practice communications network" founded by the *American Medical Association* and other national medical societies has issued guidelines to doctors that wish to interact via the Web with their patients.

The fee-based "Medem Online Consultation" (OC) service allows physicians to securely communicate online with patients and receive payment for their work. Medem claims 83,000 member doctors which seems high. Possibly this is the number of AMA doctors.

Patients can pose administrative questions to their physician's office including appointment and prescription renewal requests, and get access to medical information directly from the nation's medical societies.

Three of 10 doctors using the Internet now have their own Web site online. Medem has a "wizard" called "Your Practice Online" that allows doctor's to easily build their own secure website. See: <www.medem.com> for more info.

More than 100,000 website addresses with '.com' domain suffixes were added during July 2002. There are more than 27.2 million '.com', '.net' and '.org' site addresses in use!

No more standing in the hot dog line at the ballgame. Anyone who has a cellular phone, with the caller ID unblocked, an e-mail address, and a valid credit card can make purchases through the CellBucks Payment Network. It is already being used at some minor-

league sports stadiums to order stadium food and souvenir merchandise.

CellBucks customers simply call a toll-free number, enter a password, punch in codes listed on a printed menu and their seat number. The order is charged to your credit card and delivered to your seat at no additional charge. An e-mailed receipt gets sent after the ball game.

CellBucks gets a percentage of the purchase price. The firm is expanding to include ordering at major restaurant chains for home delivery ...even drive-through fast food outlets. You can become a member at: <www.cellbucks.com>.

WASHINGTON WHISPERS

Japan implements new resident registry of its 127 million population.

A new compulsory universal ID system of Japanese citizens is provoking angry protests from privacy advocates. Officials, on the other hand, say the system will make life easier for citizens and streamline public services.

All Japanese citizens have been assigned an 11-digit number ...somewhat like our 9-digit Social Security number. The biggest difference, is that a U.S. citizen must apply for a SSN making it more or less voluntary.

Under the Japanese system, each local government will be responsible for entering the data and each citizen will be issued a photo ID card. Fearing that the database might be misused, some local registries (including one in Yokohama, Japan's second largest city) are refusing to be included in a mandatory computerized database. It will register only those who consent.

The collected data (name, address, sex and birth date) may only be retrieved by Japanese government officials. Those who leak personal information face up to two years in prison and a fine of \$8,300. The information was compiled from existing paper registries scattered around the country.

Since September 11, the United States has also been debating whether to implement a national mandatory identification system. One plan being considered is a uniform enhanced driver's license that could also serve as a national ID.

Bill would increase the ability of telephone companies to offer DSL

services to American homes. On August 1st, Sen. John McCain (R-Ariz), the ranking Republican on the influential Commerce Committee, introduced the *Consumer Broadband Deregulation Act of 2002*. The wide-ranging broadband-deregulation bill makes it easier for phone companies to compete with cable.

"By ensuring that the market, not government, regulates the deployment of broadband services, the legislation will promote investment and innovation in broadband facilities - and consumers will benefit," McCain said.

Earlier this year, the FCC reclassified cable-television companies as an unregulated "information service" and said they did not have to open their systems to competitors.

Some analysts believe the FCC will craft rules on their own that require neither cable nor phone companies to provide broadband access to competing ISPs at regulated rates, terms and conditions.

If the FCC reclassifies digital subscriber-line (DSL) connections as an "information service" rather than a "telecommunications service," all broadband service would be regulation-free.

On August 7th, the FCC levied a \$5.4 million fine against fax broadcaster, Fax.com, Inc. of Aliso Viejo, California for sending unsolicited advertisements, commonly called "junk faxes," in violation of the Telephone Consumer Protection Act (TCPA).

The firm had been cited numerous times for unlawful use of a "telephone facsimile machine, computer, or other device to send an unsolicited advertisement to a telephone facsimile machine."

It is the largest single fine ever imposed for a TCPA violation and marks the first monetary forfeiture action against a fax broadcaster.

The Commission said that Fax.com, which faxes messages on behalf of others for a fee, apparently violated the rules on 489 separate occasions. Moreover, the FCC said Fax.com appears to have engaged in a pattern of deception to conceal its involvement in sending the prohibited faxes.

In view of the deception, the Commission concluded that Fax.com should pay the maximum fine of \$11,000 for each of the 489 fax violations, for a total proposed fine of \$5,379,000. The com-

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pany has 30 days to challenge the fine or pay it.

In related actions, the Commission staff also issued over 100 citations and letters of inquiry to businesses that used Fax.com to send their advertisements to telephone facsimile machines. The citations warn the businesses that they too may face fines of up to \$11,000 per violation if they continue to send unsolicited fax advertisements.

You can view the International Space Station (ISS) from your backyard with your naked eye. It is visible because it reflects sunlight. Orbiting the Earth at an average altitude of 240 miles, it can appear to move as fast as a high-flying airliner, sometimes taking just three to four minutes to cross the sky and can easily be confused with aircraft lights. The ISS orbits the Earth every 90 minutes at a speed of over 17,000 mph.

There are certain times and locations that offer the best viewing. NASA uses sophisticated software to predict when the ISS will be visible to people on the ground.

You can find the local time, duration (length of time) of the sighting and the approach/departure direction and elevation for dozens of U.S. cities at: <<http://spaceflight.nasa.gov/realdata/sightings>>

The U.S. government detected a series of electronic attacks against American Internet service providers (ISPs) on August 6th... just hours after the FBI had sent out an alert warning of potential wide-scale hacker strikes. The disruption "possibly from Western Europe" caused a rare 1 percent decrease in Internet accessibility. ISPs were not affected.

AMATEUR RADIO NEWS

The Vanity Call Sign Headquarters Website may be going QRT soon!

The popular site, which caters to amateurs wanting to obtain a Vanity call sign, has received over 1.2 million visitors.

Webmaster Michael E Carroll N4MC (Raleigh NC) said in a recent e-mail that "Due to a lack of funds, Vanity HQ will go off the air sometime in the month of August 2002. I do not know exactly which day I will pull the plug. Since I have been unemployed all year, my cash on hand is dangerously low and I can no longer afford to spend money on anything except living expenses. This action will also make all my

email addresses invalid."

Mike recently added a way for amateurs to donate to his site using a credit card. But it is unknown what kind of response he is getting. He said he "... will do what I can to keep Vanity HQ on the air!" At presstime, it was still available at: <<http://www.vanityhq.com>>.

FCC Amateur Enforcement News

Glenn A. Summers KB5VBL, Morgrilton, AR has had his application for renewal of his Amateur Radio license held up by the FCC's Enforcement Bureau. He is to respond within 20 days to complaints concerning allegations of deliberate interference from his station to the AC5RU repeater. Failure to respond will result in the dismissal of his renewal application.

Reliant Energy, Incorporated, Houston, Texas has been advised that their electrical service equipment is apparently causing RF interference to Amateur Radio Station W5GCX operated by Edward J. Gerber. The utility company proposed to remedy the interference by relocating an "otherwise properly operating 250 kva step-down transformer" to another area with the labor cost paid by W5GCX.

The FCC questions the company's explanation of cause of the interference. "A far more typical cause of radio interference from utility lines is in loose or corroded hardware, tie-wires, or defective insulators."

"Regardless of the source of the interference, it is improper to attempt to pass the cost of the relocation, or other solution, to the licensee that is the victim of the interference. It is exclusively the obligation of the operator of the unlicensed device," FCC said.

"Reliant Energy is not entitled to cause harmful interference to a licensed Amateur Radio station in the operation of its devices. Section §15.15(b) makes it clear that operators of Part 15 devices are required to cease operation should harmful interference occur to authorized users of the radio frequency spectrum."

The utility company must eliminate the interference "...and bear any and all necessary costs, to comply with its obligations as an operator of unlicensed devices..." Radiant Energy must also provide the FCC with a report of the steps take to eliminate the interference within 30 days.

Stephen I. Holt KE6WSJ, West Hills, SCA has been notified through his attorney that his Amateur Radio operating privileges have been suspended for a two year period.

Monitoring information had "showed that on numerous occasions since early April of this year, he had deliberately and maliciously interfered with the WB6VVV repeater located in Palmdale, CA. On May 29, 2002, close-proximity direction finding showed that these signals were originating in Holt's apartment..."

"The interference to the WB6VVV repeater consisted of threats of sexual assault made to juvenile licensees operating on the repeater, obscene and indecent language and other harassment of female users and operators of the repeater."

Holt has agreed to the suspension which remains in effect until midnight July 25, 2004.

James H. Davis NN6EE, Concord, CA has been warned that failure to correct his faulty radio signal will result in enforcement action. "On approximately 23 occasions since February of this year, the transmissions from your station have exhibited what appears to be alternator 'whine' when mobile, and power supply noise or 'hum' when operating from your base.

"Information before the Commission indicates that you have been notified several times about these problems but have neglected to take action. ...as an Advanced Class licensee, you should have sufficient knowledge to correct this relatively simple problem..."

He is to notify the FCC within 20 days of the steps he has taken to eliminate the problem.

Leobardo C. Coronado, operator of the KC6PXL-Repeater, Sun Valley, CA has been ordered to immediately shut down his repeater until he "...either: 1) obtains coordination for the 224.160 MHz link; or 2) submits a detailed, specific plan to FCC to prevent interference to the coordinated 224.160 MHz repeater." Failure to shut down will result in enforcement action which may include license revocation and a monetary forfeiture of up to \$7,500.

The FCC had notified KC6PXL on June 4, 2001 that although his 145.120 MHz repeater was coordinated, there was no coordination for repeater cross-linking to 224.160 MHz.

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FCC MANDATES DIGITAL TUNERS IN TV SETS

In 1996, Congress decreed that the nation switch to digital TV broadcasting which offers higher resolution pictures, rich color and clearer, up to 6-channel sound. Toward that end, every television station was given new spectrum on which to phase in their digital channel.

Until 2006, each TV station will broadcast on two channels, one analog and one digital. After that - or when 85% of all consumers have access to digital programming, all TV stations will turn off their analog channel and return the spectrum to the government for auctioning.

The analog spectrum is expected to provide up to \$50 billion to the U.S. treasury.

But the transition to this new technology is not going well. It has been stalled by a number of issues including the limited availability of high-definition programming, the pricey equipment needed for viewers to see it and a reluctance within the industry to make any switch before most households can receive digital signals.

Cable and satellite service providers also have hesitated to allocate more space to HDTV programming which takes more spectrum. And smaller TV stations are struggling with the high cost of converting to digital signals that no one can yet receive. In a nutshell, it is all about 'money.'

On August 8th, the Federal Communications Commission again took action to jumpstart digital television broadcasting. Over the adamant objections of the *Consumer Electronics Association*, the

FCC voted 3-to-1 to require that off-air digital TV (DTV) tuners be included in all new television sets with 13-inch and larger screens by mid-2007.

The DTV tuners will be phased in over a five year period. Larger screen sets will be first, beginning in July 2004. By enacting an extended rollout plan, the FCC says it is minimizing the costs for equipment manufacturers and consumers.

The Commission said its authority to require DTV tuners was established by the 1962 *All Channel Receiver Act*. The ACRA requires that television sets be capable of

receiving all television broadcast frequencies. Its purpose was originally to force manufacturers to include UHF channels in their VHF television receivers. The law is now being expanded to mean that the new digital channels must be included in a TV set along with analog.

The Commission would have preferred that the electronic manufacturers voluntarily add digital TV tuners on their own. But they balked, citing lack of consumer demand and digital programming. The CEA said the FCC mandate will add \$250 to the cost of a TV set in the first year and amounts to an annual \$7 billion "TV tax" on the industry and consumers.

The FCC took issue with CEA's cost estimates and said that DTV prices are declining at a rate of \$100 to \$800 per year. Thus the additional cost of the DTV tuner will be more than offset by the general price decline.

"This plan will ensure that new TV receivers include a DTV tuner on a schedule as close as economically feasible to the December 31, 2006, target completion date for the DTV transition that was set forth by Congress," Powell said. Television set makers are expected to challenge the ruling in court.

The *National Association of Broadcasters* strongly supports the FCC's DTV tuner mandate since they need consumers to be able to receive their digital signals. More than 450 television stations are now broadcasting digital signals in markets that include nearly 90 percent of the nation's TV households. But they say less than 1 percent of the 25 million sets sold each year have internal digital tuners and therefore can not decode the signals. The NAB says digital

tuners are especially important to give people access to digital broadcasts from local stations and in rural areas that are not available by cable or satellite. They, too, do not think consumers will see any cost increase.

There is much confusion among consumers and the media about just exactly what is digital television. High definition television (HDTV) provides the highest resolution (sharpest) form of digital TV. And all digital television schemes is not necessarily classified as 'high definition.' In fact, only two of the 18 different approved digital TV

"Ultimately, the DTV transition will shift into high gear when three factors come together: (1) a critical mass of compelling digital content; (2) distribution of that content to consumers; and (3) reception equipment in consumers' hands. Today's decision promotes the availability of reception equipment, without which the first two factors are meaningless." *Statement by FCC Chairman Michael K. Powell.*

"Adopting a tuner requirement will ensure that consumer expectations are met and will limit the number of new sets being purchased today that will become obsolete at the end of the transition." *Commissioner Kathleen Q. Abernathy*

"There is no question that DTV is the wave of the future: Congress has mandated the return of analog spectrum and the transition to digital broadcasting; this Commission and its Chairman are committed to moving the transition forward; and there are already some 400 stations across the country broadcasting digital signals." *Commissioner Michael J. Copps*

"...the vast majority of consumers receive broadcast programming through their cable or satellite provider. Thus, taking action on digital broadcast tuners alone, confers a real benefit only on the relatively small percentage of consumers (approximately fifteen percent) who do not rely on cable or satellite for broadcast reception. The costs, however, will be borne by every consumer who buys a television." *Dissenting statement by Commissioner Kevin J. Martin*

formats (those with 720 or 1080 horizontal scan lines) are crisp enough to be considered HDTV.

It is possible to have a digital tuner in a set and still not be able to receive HDTV. There is no mandate whatsoever on display quality. Actually the digital display screen can be anything from HDTV quality (720/1080 scan lines) down to 480. But it is assumed that television manufacturers will incorporate all 18 advanced digital formats in their DTV tuners.

The DTV tuner implementation plan

The FCC Order requires that all television receivers with screen sizes greater than 13 inches and VCR/DVD player/recorders be capable of receiving digital television, according to the following roll-out schedule:

- Half of all new TV receivers with screen sizes 36 inches and above must include DTV tuners effective July 1, 2004; and all such units must include DTV tuners a year later.
- Half of all new TV receivers with screen sizes 25 to 35 inches and above must include DTV tuners effective July 1, 2005; and all such units must include DTV tuners a year later.
- Half of all new TV receivers with screen sizes 13 to 24 inches and above must include DTV tuners effective July 1, 2006; and all such units must include DTV tuners a year later.
- All TV Interface Devices, VCRs and DVD players/recorders, etc. that receive broadcast television signals must include DTV tuners effective July 1, 2007.

Over-the-air tuners affects millions of consumers

FCC Chairman Mike Powell said that about 81 million television sets in the U. S. (over 30% of the total) are not connected to any subscription video service and rely solely on free, over-the-air broadcasting. He strongly feels that government-mandated digital tuners are needed now since analog TV broadcasting has been scheduled to cease in 2006. "When that time comes, consumers will expect their television sets to go on working in the digital world just as they do today." But they won't.

The *Consumer Electronics Association's* position is that consumers that want to watch over-the-air digital broadcasting after 2006 should purchase an external set-top converter box which currently costs about \$500. "It is incredible that CEA supports an alternative that would cost consumers 150% more than CEA's own cost projections for the DTV tuner: \$ 500 for the set top box vs. \$200 for the tuner," Powell observed.

He noted that the CEA also opposed the *1962 All Channel Receiver Act* which required TV sets to be capable of UHF reception on the basis that it would increase the cost of television sets by 14%. "In fact, set prices actually declined following passage of the legislation,"

Powell said. Powell expects that the cost of a digital tuner will be "about the same as an analog tuner" in five years.

Comments by other FCC Commissioners

Commissioner Kathleen Q. Abernathy said she "...supported the decision because:

- 1) the transition from analog to digital television is statutorily mandated by Congress and is not driven by market forces;
- 2) without the mass availability of television sets that can receive over-the-air digital signals the transition remains stalled;
- 3) the phase-out of analog only television sets from the market gives consumers access to digital broadcast signals during the transition and protects consumers from disruption of service at the end of the transition; and
- 4) consumers necessarily will face additional costs as a result of the transition and it is our job to mitigate those costs to the extent possible."

Commissioner Michael J. Copps also supported mandatory digital tuners as being " a necessary step toward realizing our statutory obligations with regard to DTV."

"The high price and scarcity of DTV-capable receivers that are on the market now are not consistent with realizing the Congressional goal of transitioning to digital television." Copps noted. "Each time a consumer purchases an analog-only set, we move further from reaching the Congressional objective. History indicates the cost of a digital tuner will fall rapidly as all sets include these tuners."

But Copps added that with some 70% of U. S. households subscribing to cable "we must quickly address cable compatibility issues for the digital transition to succeed."

The lone dissenting commissioner vote came from Republican Kevin J. Martin who noted that most TV viewers no longer receive their signals over-the-air and therefore do not need digital tuners. Seventy percent of U.S. consumers use cable, and another 15-17% use satellite. He believes that Congress never meant to mandate tuners that are not needed by 85% of all consumers.

"It is my understanding that manufacturers can integrate digital broadcast and cable reception capabilities into set-top boxes for approximately the same cost as the digital broadcast tuner alone." He felt the cable industry should be required to adopt a single digital standard that also incorporates broadcast tuners which would enable significantly more consumers to receive digital programs.

The FCC also launched a proceeding to review whether it has authority to impose copy protection standards for broadcast television and whether such a mandate would be in the public interest.