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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In This Issue...

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United Kingdom looking at Internet Access on the 5 cm Ham Band!

Great Britain has abandoned their Power Line Telecommunications (PLT) project which would have distributed high speed data over electrical power lines. This was good news for UK radioamateurs since it means less interference to the HF spectrum.

Now a new initiative is underway involving the use of RadioLANs (RLANs). David Hendon, Chief Executive of the British Radiocommunications Agency, the UK telecom regulator has announced the start of a two month consultation period hopefully leading to limited amateur radio access to the Internet for British amateurs by the turn of the year.

Mr Hendon, speaking at the ' Making Connections' roadshow in London told of the important role amateur radio had, in the past, played in encouraging young people to take up a career in radio engineering. He also spoke of the decline of amateur radio world wide and emphasized the need to make amateur radio an attractive pursuit for young people to take up.

"Linking amateur radio to the Internet would be an important step forward," he said. "It is hoped, subject to licensing considerations, that limited access perhaps via the Repeater Network would be in operation by Christmas." However, he stressed that this would just be the start. The *Radio Society of Great Britain*, the UK national ham organization, said the amateur community would be consulted fully to ensure the best possible use was made of this initiative. More details on the project is to be released by the Radiocommunications Agency shortly.

Wireless Internet access...

Speaking at the UK Internet Summit in London on October 28th, E-commerce Minister Patricia Hewitt also talked about making 5-cm radio frequencies available which would provide fast wireless Internet access. She did not mention Amateur Radio, however. Ms Hewitt said: "Radio is an important medium for delivering our vision for the Information Age and making the UK the best country in the world for e-commerce."

"Today I am launching a consultation to establish the best way of making frequencies available for *Radio Local Area Networks* (RLANs)." The UK's "consultation" proceeding is similar to our *Notice of Inquiry* which seeks information from the public.

"These radio networks open up exciting new possibilities," she said. "Users will have faster, more convenient access to information services wherever they happen to be in their premises, without having to plug-in to a wired network. Radio networks will offer inexpensive home and educational networking. They can be used for interactive guides in museums and galleries. And they will provide a new fast route to the Internet."

"RLANs will boost innovation, competition and choice. They will offer new services and lower prices, greater efficiency and competitiveness and

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opportunities for equipment manufacturers," she said. "This type of innovative development is key to building a successful knowledge economy." The Radiocommunications Agency said it will consult widely on the most advantageous way of using the available spectrum.

Ms Hewitt added:

"The Prime Minister recently invited me to be the UK's first Minister for e-commerce. We want to make the UK the best place in the world for trading on-line by 2002. And I aim to ensure that the e-commerce opportunities this Government offers to businesses and individuals is second to none."

"Why? Because I believe - and this is shared by the Prime Minister - that our successful exploitation of the Internet lies at the heart of our desire to build the knowledge economy. We are uniquely placed to grasp the opportunities of the Information Age. We have a world-class IT and communication infrastructure, ranked ahead of all the major economies except the U.S. in an EU study last year."

"We lead the world in the deployment of cutting-edge technologies such as interactive digital TV and 3rd generation mobile communications. And we have a regulatory system which facilitates one of the most intensely competitive market places in the world."

What is an RLAN?

The following information has been excerpted from the consultation document. "Radio Local Area Networks are short range, high data rate, mobile or nomadic equipment operating in the 5-cm frequency range: 5.150 to 5.875 GHz. RLANs are defined as high bandwidth (capacity), two way data communications network using radio as the medium of transmission rather than optical fiber or copper cable and operating over a limited geographic area. 'Mobile' equipment can be used on the move and/or when stationary. 'Nomadic' equipment is normally used when stationary and switched off when on in motion."

"Recent technological and economic developments have led to a new emphasis on the development of computer networks. Inevitably, as a result of the parallel growth of mobile communications, there is great interest in the possibility of mobile computer networks, that is to say, computer networks where the end user is free to move within the network (for instance within a building) or from one computer network to another."

What do RLANs do?

"RLANs provide communication between many types of mobile and nomadic terminals. These communication services were only imagined a few years ago and, the likelihood is, that in the future they will provide communications for yet more novel services. HIPERLANs (HIgh PERformance Radio Local Area Networks) are a subset of RLANs that enable both co-existence and interoperability between differing manufacturers' equipment.

"These new services have the potential to revolutionize the provision of IT (information technology) services in business and domestic premises by improving access to a wide range of services. Wireless technology offers a more straightforward method of providing high bandwidth connection between IT equipment. RLANs could support a range of new services, ...bringing them into the office and home."

"Radio frequencies between 5.150 GHz and 5.875 GHz are becoming available for RLANs. The Radiocommunications Agency aims to manage use of these frequencies so as to promote innovation in services and technologies, maximize user benefits and competitiveness gains and promote the development of e-commerce."

What is this consultation about?

"The Agency believes that the direction of development should be driven by needs of the market in terms of cost, required service and accessibility of the technology concerned. In particular the Agency is seeking views on:

- whether only interoperable systems should be permitted to use the spectrum or whether other systems, only capable of co-existence, should also be allowed in;
- whether only private systems should be permitted or whether public systems should also be allowed;
- determining the best way to allocate the available spectrum."

"The Agency believes that the direction of development should be driven by needs of the market in terms of cost, required service and accessibility of the technology concerned. In order to ensure this market can develop, the Agency seeks to determine the best way to use the radio frequencies."

"The objective of the consultation is to explore the opportunities that the 5 GHz bands present to industry and the public and to validate the Agency's strategy for development. The proceeding covers the radio frequency bands 5.150-5.350 GHz, 5.470-5.725 GHz and 5.725-5.875 GHz."

The UK's Amateur Service also has a secondary allocation between 5.650 and 5.850 GHz and the Radiocommunications Agency wants input from radioamateurs. The frequency band 5.725-5.875 GHz is allocated on a world-wide primary basis to non-communications ISM applications. – i.e. Industrial, Scientific and Medical - devices.

"The RA wants to know, given the diversity of potential uses, what are the likely applications for these bands, what development issues remain unresolved, and when and how will services be introduced?"

"The Agency wishes to canvass the views of the industry on this important issue which may be key to the

development of services in these bands. In order for the Agency to define the necessary characteristics of equipment that can be used we plan to publish what is called an interface regulation. Interface regulations are high level descriptions of how the spectrum should be used."

Applications..

"The applications to which RLAN technologies are applied are the key feature that will determine the future of these services and hence the use made of the radio spectrum. However, until now it has been extremely difficult to predict which directions application development will take."

"The views of the industry are sought in this important area. The nature of applications deployed in these bands will determine the regulatory regime that should be applied. Hence it is important for the Agency to obtain accurate information."

"The following suggested list is not intended to be an exhaustive list of potential applications for these bands. It is a sample of possible examples and is intended to stimulate comment:

- Straightforward office RLANs, connections to servers, printers and other devices
- Home networking, distributing an incoming telecom or broadcast service within the home
- Automated airport check in
- Train information to railway passengers on trains or platforms
- Bus information to passengers at bus stops or on board buses
- Educational networks e.g. National Grid for Learning for inexpensive network distribution within schools
- ISP (Internet Service Provision) – public or private.
- V -mail (video mail) and video telephony
- Temporary network facilities during conferences
- Interactive museum guide for visitors
- Distributed database services
- Home or community CCTV Security
- Any interactive high data rate service"

"What are the likely applications for these bands? What development issues remain unresolved? When and how will services be introduced?," the document asks.

"Current plans for these bands are based on the assumption that all services deployed will be private systems operating on the same or a similar basis to fixed local area network facilities, hence a regime of license exemption has been proposed."

"Certain applications that are likely to be proposed for this service may turn out to involve third party communications. An example of this is the provision for Internet access. RLAN technology will certainly support access to and interconnection with the internet. This consultation seeks to establish whether it would be advisable and desirable to permit public access to this service in these bands."

"How best can these bands be assigned? The aim of frequency assignment is to ensure that the maximum numbers of users get appropriate and fair access to spectrum for their applications."

The closing date for the consultation is Friday, January 28, 2000. Keep in mind that this is a UK initiative which (so far anyway) is not being considered in the U.S. Some British amateurs welcome Internet access on the ham bands. Many others are fiercely opposed to it since it has the capability to greatly impact Amateur conduct on the ham bands ...especially if the general (unlicensed) public is also permitted to operate on the same 5-cm spectrum.

"CQ" AND "CQ VHF" MAGAZINES MERGE, EXPAND

CQ VHF magazine will be merged into an expanded CQ magazine, Publisher Richard Ross, K2MGA, announced November 1st. The merger takes effect with the January, 2000, issue. Factors in the decision included the fact that survey results show a majority of CQ VHF readers are also active on HF; the inclusion of one or more VHF/UHF bands in many new HF radios; and the forthcoming FCC restructuring decision that is widely expected to make broad HF privileges more easily accessible to current Technician and Tech-Plus Class hams.

The reader survey, conducted in the August, 1999 issue of CQ VHF, revealed that 62% of CQ VHF readers have at least some HF operating privileges, and that of that group, more than two-thirds (69%) are active on both HF and VHF. In addition, 46% said HF operating is an important part of their overall ham operating,

"The line between HF and VHF has been forever blurred, if not erased," according to Rich Moseson, W2VU, Editor of both magazines. Moseson added, "Clearly, the time for a separate VHF magazine is past. VHF has become firmly established in the mainstream of ham radio."

Starting with the January, 2000 issue, CQ will be expanded by 32 pages to accommodate increased VHF coverage, including features and some columns from CQ VHF. Current subscribers to CQ VHF will have their subscriptions transferred to CQ, while those who subscribe to both magazines will have their CQ subscription terms extended by the number of issues remaining on their CQ VHF subscriptions. Additional details will be published in the December issues of both CQ VHF and CQ.

CQ and CQ VHF magazines are published by CQ Communications, Inc., of Hicksville, New York, which also publishes CQ Contest, Communications Quarterly, Popular Communications and Electronic Servicing & Technology magazines. *[CQ Press Release]*

CUTTING EDGE TECHNOLOGY

■ **IBM, as tired as everyone else from fighting off computer viruses,** is fighting back. The *Digital Immune System* is a project that sets out to examine computer files quickly for potentially damaging instructions, and "correct" them before they get a chance to wreak havoc on a computer network.

Rather than force individual users to load anti-virus software on their own systems, DIS looks for and repairs viruses much faster – the goal is to get rid of viruses even before the user is aware of them.

Since about 10 viruses a day are unleashed into the world, and there are already more than 20,000 of them, the DIS is a growing operation. IBM engineers are already working on equations to help predict how many viruses could exist within a particular group of files.

■ **A school in Colorado recently upgraded their electrical system** to take advantage of computerized load sharing. Devices installed on the incoming power lines receive instructions from the local utility, automatically decreasing ambient light levels and easing the load on the outside electrical grid.

The lights inside the school are dimmed so gradually that students and staff don't notice. Other devices automatically turn out lights in empty rooms and let incoming sunlight bear the brunt of room illumination.

■ **"Get a Bigger Hammer" Dept.** -- Why use solder at all? Some electronics companies are bypassing solder altogether when assembling their printed-circuit board backplanes, relying on press-fit technology. Connector pins in this medium are made with slightly bulging end points, and by forcing the pins into their corresponding holes, the pins are squeezed so tightly against the interior metal walls that a good electrical connection is completed. The light layer of solder within the holes themselves actually melts due to the mechanical stress.

■ **How can you look into an RF-tight cabinet without opening it,** thereby exposing the outside world to potential RF interference? One way is to use Teckshield-F, by Tecknit. It provides RF shielding, yet you can see through it. It's a combination of mesh and glass (or acrylic).

EMERGING COMMUNICATIONS

■ **Popular Science, the world's largest science and technology magazine, has selected EchoStar's DISHPlayer system** for its highly-coveted 12th annual "Best of What's New" award. EchoStar will accept the award in a ceremony that will be held at Tavern-on-the-Green in New York City today.

Jointly developed with WebTV Networks, DISHPlayer is an interactive satellite receiver that can simultaneously record and play back digital video. With the optional WebTV Plus service, customers can browse the Internet,chat online with friends and send e-mail. *[SkyReport.com]*

■ International consulting firm Arthur D. Little Inc said that **cable television companies could capture up to one-third of the U.S. local telephone market.** It could reach up to $14.7 billion in annual revenues taken from Baby Bells, GTE, and other carriers.

The survey found that fifty-nine percent of people buying cable modems for fast Internet access said they would consider also taking phone service from the cable company

"Cable modem services are important not only for the revenues they will generate, but also as door-openers for other telecommunications services."

COMPUTER INFO

■ **A dangerous new type of e-mail virus has emerged** that breaks one of the long-standing rules that you have to open an e-mail attachment to become infected.

The"Seinfeld" virus is said to be more playful than destructive. It renames the computer's registered owner as "Bubbleboy" and makes references to "Seinfeld." It also takes every e-mail address and passes the virus along.

The same technology, when coupled with other commands, could be used to steal personal information or erase a computer's hard drive entirely.

"Bubbleboy'' only requires that the e-mail be previewed on the Inbox screen of Microsoft's Outlook Express, e-mail program. As soon as the e-mail is highlighted, without so much as a click of a mouse, it infects the computer.

The virus affects computers with Windows 98 and some versions of Windows 95 that also use Microsoft's Internet Explorer 5.0 and Outlook Express Web browser and e-mail programs. It apparently does not affect Netscape's e-mail programs. A software patch to protect against the virus is available for free at www.mcafee.com. *[Associated Press.]*

■ **Gateway Inc., will replace IBM as the official supplier of computer hardware** for the 2002 Winter Games to be held in Salt Lake City. IBM announced it will not renew its sponsorship of the Olympics beyond next year's Summer Games in Sydney. But you will not hear much about the change until January when Gateway will be allowed to advertise its new sponsorship.

■ **Computer owners using cable-modems to get high speed Internet access are taking a security risk.** Without proper precautions, other nearby users can gain easy access to your computer files.

Cable modem users have been shocked to find icons representing other users in the "Network Neighborhood" folder on the Windows desktop which permit easy access to files on other computers in the area. "It's as good as sitting at somebody else's computer," one user said.

AT&T, one of the cable operators offering the @Home Internet service, admits that it's a serious privacy issue, one apparently unknown to many customers.

@Home, a consortium of more than 20 cable companies, is used by more than 620,000 users nationwide. In all, more than 2 million Americans are expected to use cable modems by the end of 2000, according to Forrester Research, a high-tech consultancy in Boston.

AT&T issued a patch which turns off the sharing features once they became aware of the problem. "The basic problem is that cable is a shared network," they said. *[Detroit News]*

■ **Packard Bell – which at one time was a leader in U.S. personal computer shipments** – is withdrawing from the U.S. market. Japan's NEC, which now owns the company have shut down their Sacramento, Calif., factory and laid off its 1,000 employees.

Packard Bell was hit by a wave of under $500 priced machines and high manufacturing costs. EMachines, set to go public in a U.S. offering this year, is

manufactured entirely in Asia.

NEC will emphasize computers under its own brand name in the United States, though the Packard Bell brand will be kept alive in Europe.

■ **Disposable PCs** - Hewlett-Packard is launching a new generation of "simplified computers" for business customers, aimed initially at banks, insurance companies and airlines.

The Windows-compatible "e-PC" would be simpler to install and maintain than a traditional PC, which would make it more reliable and cheaper to use. Users would not be able to upgrade the device by adding cards or changing components.

Most PC users don't upgrade their computer anyway. They simply change the computer after a couple of years.

■ In an effort to regain the PC sales leadership, **Compaq Computer Corp., has unveiled plans for a new sleek, cheap "iPaq®" computer** -- a play on Apple's successful "iMac" PC. Dell Computer Corp. is now the No. 1 personal computer maker.

The ten pound internet-ready machine takes up 75 per cent less space than a traditional PC. Size is only 6"x10"x14" (WxDxH)

The $499 model includes a CD-ROM or DVD drive and sports a 500 megahertz Intel processor, 64 MB of memory, a 4.3 gig hard drive and is Windows 2000 ready. It features a new programmable Internet keyboard for instant Web access.

It doesn't have a floppy disk drive, and a monitor is extra. A higher-priced model is more powerful. The machine doesn't have standard ports for peripherals, relying instead on Universal Serial Bus connections. Compaq expects to begin shipping the iPaq in January.

■ **Microsoft Corp. said that its new "Windows 2000 Professional" operating system** will begin shipping on February 17th and cost $219 as an upgrade from previous Windows 95 and 98, or $319 if it's not an upgrade.

INTERNET NEWS

■ **Purchase lottery tickets from your home!** - eLottery, a subsidiary of Executone, Inc., Milford. CT, will be launching a new web site to sell governmental lottery tickets on the Internet.

Some 200 state and foreign jurisdictions operate lotteries worldwide with ticket sales exceeding $100 billion. One-third of this revenue originates in the United States. Governments have authorized lotteries primarily as a means of generating non-tax revenues. eLottery will act as an authorized agent of the sponsoring U.S. state or foreign government.

Executone designed, built, installed, and operated uslottery.com, an Internet lottery web site for 18 months on behalf of the the Coeur d'Alene Indian Tribe's National Indian Lottery (NIL). The NIL was shut down about a year ago after an Idaho federal court ruled that because the transaction was not totally occurring on Indian lands, the NIL was not covered by the Indian Gaming Regulatory Act.

eLottery is on the Web at <http://-www.elottery.com> Demonstration games are at <http://www.elotteryworld.com>

■ **Britannica completes its transition from print encyclopedia to the free online world** - The entire 32-volume set of the Encyclopedia Britannica has finally made it to the Web. This time there was no advance notice or press release from the 250-year-old Chicago-based Britannica.

In October, Britannicia shocked the reference market, libraries, schools and book sellers by publicly announcing that effective immediately it would no longer charge a subscription fee for access and their Website would now be advertising and sponsor supported. Their rivals, Microsoft's Encarta (with a 43% market share), Grolier, World Book and Compton were shocked!

Their Website was quickly overwhelmed with hits and almost immediately knocked off the Web. Engineers were quickly called in and now online capacity has been dramatically increased. The site has now quietly crept back online with no fanfare at <www.britannica.com>. Once things settle down, the company plans to spend $37 million to promote the site, including a spot in the Superbowl.

Also offered is the text of more than 75 top-quality magazines, a directory of the best sites on the Web, and the Books in Print data base. Check it out!

■ **"We will do it all and tell our customers which buttons to push,"** said Radio Shack chairman, president and CEO Len Roberts. On Nov. 11th, Radio Shack and Microsoft announced a five-year strategic alliance which looks toward hooking up America to the dial-up or broadband Internet. The companies will also establish Microsoft "store within a store" kiosks in as many as 7,000 RadioShack locations across the nation.

In addition, as part of the alliance, Microsoft will make a $100 million equity investment in the newly launched RadioShack.com, to help build it into a leading e-commerce site. RadioShack will showcase a broad range of connectivity solutions and services including MSN Internet Access, Microsoft WebTV, Windows CE-based handheld devices, MSN mobile solutions and Microsoft home networking.

Customers can sign up for narrowband or broadband MSN Internet service and will have access to a version of MSN co-branded with RadioShack.

The rollout of the new concept is scheduled to begin during the third quarter of 2000.

■ **The World Wide Web is growing fast!** For the week ended Nov. 7th, Nielsen/Netratings said that AOL (with 23.1 million visitors), Yahoo! (with 21.3 million) and MSN (with 13.9 million) are the three most popular Web sites. The active Internet universe (those who actually surfed) increased 5.5 percent during the week, growing from 50.1 million to 52.8 million users.

■ **Priceline.com - the name your own price Web company- will begin offering name-your-price long distance telephone service** for individual consumers after the first of the year. Consumers will be able to name their price on blocks of long distance minutes (domestic and international) and make offers in real-time directly over the telephone before making a call. In both cases, Priceline customers are giving up their choice of service provider while long distance carriers are determining whether they have excess line capacity and will accept lower rate offers.

■ **Top five U.S. Airlines to offer Web deals as Internet travel business heats up!** Microsoft has spun off its web-based travel company, Expedia in a Nov. 10th initial public offering. The IPO price was $14 and it quickly quadrupled to $56. Microsoft owns 85% of the shares.

Forrester Research says the online travel market is expected to increase from $3.1 billion in 1998 to more than $29 billion in 2003. Forrester says the three top online travel companies are Yahoo!, Travelocity and Expedia - in that order. Travelocity's parent owns American

Airlines.

On the same day, Delta Air Lines, United Airlines, Northwest Airlines and Continental Airlines announced that they would be jointly opening a new independent travel Web site which is expected to launch in the first half of 2000. The four airlines will continue their respective Web sites in addition to the joint venture.

■ **Sharing photos with family and friends just got cheaper!** Kodak charges $4.95 to post a roll of up to 40 photos to the Web and after 30 days, it costs $3 a month! <www.kodak.photonet.com>.

Now there is a (banner) advertising-supported free online photo album at <http://www.clubphoto.com>. It only takes a couple of minutes to create your photo web site using their online "Album Manager." Or you can download the "Living Album" software and create your album off line.

Captions or descriptions to your photos are easily added and you can password protect your album site to keep it private. A counter keeps track of visits and guests can enter comments.

Club Photo keeps your album "active" (on line) as long as it is accessed once during a 90 day period. And there is no limit to the number of photos you can post!

WASHINGTON WHISPERS

■ After the market closed Friday Nov. 5, **U.S. District Judge Thomas Penfield Jackson issued his long-anticipated 'findings of fact'** in the massive government antitrust case against Microsoft.

He ruled that Microsoft, the world's biggest software maker, had a Windows computer operating system monopoly and used that position to injure consumers and crush competition. The ruling was not much of a surprise; what was not expected was the harsh rebuke. The judge came down hard on Microsoft.

Judge Jackson is expected to rule in coming months on questions of law in the case and to decide on legal remedies, which could – at its most extreme – result in a breakup of the company. The smaller pieces are already being referred to as "Baby Bills."

Microsoft can appeal the verdict ...or try to settle the case, which is likely. If appealed, the case could drag on for another five years during which time operating system technology could change dramatically making the ruling moot.

Either way, the remedy might be good for investors. If Microsoft is broken up "The parts of the car can be sold off for more than the whole car was worth."

Microsoft could also be forced to allow competitors to sell and improve their own versions of Windows which could result in different flavors of Windows, confusing consumers. Bill Gates seemed to rule this out at their Nov. 10th annual shareholder's meeting.

He said "We're willing to go a long way to address the government's concerns, but if we can't add Internet support, we can't add any new features." Gates said he wanted to settle but could not accept any limitations on Microsoft's ability to develop software,

Another remedy being discussed is that Microsoft could be required to distribute rival software products, such as Netscape's Internet browser, if it includes its own versions of those programs within Windows.

Interestingly, public opinion is running heavily in favor of Microsoft. A new Gallup poll suggests consumers hardly feel victimized and are generally siding with the software giant over the government. The Gallup poll showed 68% with a favorable opinion of Gates, 19% unfavorable.

■ **FCC on fast Interet access**: – In remarks presented in Los Angeles, FCC Cable Services Bureau Chief, Deborah A. Lathen said the commission's goal was to "...fulfill the promise of broadband technology by encouraging the market to bring high-speed Internet service to all American homes."

The FCC's official position is one of "regulatory restraint" during the national roll-out of fast Internet service.

In the mid-1980's, AT&T owned the telephone wires going in to people's houses. Its monopoly ultimately caused its breakup into smaller companies to compete against each other. Do they now have their sights set on owning the TV cable? AT&T, which acquired TCI Cable – the nation's largest – is in the process of introducing fast Internet service across the country.

Lathen said the industry was "...being monitored very closely to avoid any actions or risks that could be detrimental to consumers, such as the threat of a cable monopoly of broadband."

She noted that "the signs of robust competition are emerging and that these threatening signs appear to be absent at this time. Cable modem deployment has spurred alternative broadband technologies, like digital subscriber lines (DSL), and these technologies 'follow each other' into new markets. [But] If market forces fail and cable becomes the dominant means of [fast] Internet access, regulation might then be necessary to promote competition."

■ **Reply comments on the FCC's proposal to create a new class of low power FM (LPFM) radio stations in the existing FM radio band closed on November 15th.** The proceeding began on January 28, 1999 when – at the request of two ham operators – the commission adopted a *Notice of Proposed Rulemaking* (NPRM) suggesting LPFM.

LP-1000-watt stations would serve areas with a radius of approximately 9 miles, and LP-100-watt stations would cover areas within 3.5 miles of the station. The Commission also requested comment on whether to license stations between 1 and 10 watts (Class LP-10), which would serve 1 to 2 mile neighborhood areas.

Currently, most commercial FM radio stations are licensed only if they can operate at a power of 6000 watts without causing interference at the selected location and channel.

If LPFM is adopted, schools, churches, community groups, local governments and other organizations would be able to use low power radio stations to speak to their local communities.

The commission said it is not proposing to license radio "pirates" and the FCC's character qualifications may indeed disqualify license applicants who have intentionally and persistently violated long-standing prohibitions against unlicensed broadcasting.

The Commission, however, asked for public comment on whether illegal broadcasters who ceased operation after being advised of an enforcement action should be eligible for LPFM licenses.

The FCC said it does not expect Low Power FM stations to interfere with the service areas of existing radio stations. Even so, commercial broadcasters are generally fiercely against LPFM – mostly for competitive reasons.

■ **The Defense Department last Spring considered hacking into Serbian computer networks** to disrupt military operations and basic civilian services. But the Pentagon refrained from doing so

because of continuing uncertainties and limitations surrounding the emerging field of "cyber warfare."

As computers revolutionize many aspects of life, military officials have stepped up development of cyber weapons, suggesting soldiers at computer terminals could invade foreign networks to shut down electrical facilities, interrupt telephone service, crash trains and disrupt financial systems.

But midway through the war with Yugoslavia, the Defense Department's top legal office issued guidelines warning that misuse of cyber attacks could subject U.S. authorities to war crimes charges since these were civilian and not military targets. *[Reuters News Service]*

■ **Is Big Brother reading your e-mail?** – If the suspicions of Rep. Bob Barr (R-Georgia), the American Civil Liberties Union and cyber-libertarian "hacktivists" are correct, your fax or e-mail containing certain key words have been intercepted by a sophisticated official electronic sniffing system called "Echelon." Barr has persuaded Congress to open hearings on the question of Echelon's existence and reach.

The Echelon global spying network supposedly is a super secret surveillance system, run by the U.S. National Security Agency (NSA) in conjunction with the governments of Britain, Canada, Australia and New Zealand. The network reportedly can eavesdrop on any phone call, fax, or email, anywhere on earth.

Supposedly Echelon intercepts and sifts through countless electronic transmissions daily, filtering out those with certain suspicious words that might signal some sort of security threat for further analysis .

NSA will not confirm the existence of Echelon but much information has leaked out or been uncovered by various journalists and investigators. Echelon was supposedly organized after World War II, chiefly as a way for participating countries to intercept Soviet communications.

With the Russian threat gone, there is evidence that Echelon is now being used around the world for commercial espionage and keeping tabs on non-military targets. Groups such as the ACLU allege that Echelon's technology and structure makes the unregulated monitoring of e-mails, faxes and phone calls possible – despite laws requiring court permission to eavesdrop on private citizens.

The British Broadcasting Corporation recently reported that an Australian government official has confirmed what both the Americans and British have consistently denied – that the super-secret spy network indeed exists.

"If these reports are accurate, the sheer power and potential for abuse created by Project Echelon demands congressional attention," Rep. Bob Barr said in a statement released by his office.

AMATEUR RADIO

■ **Health advisory!** AMSAT 1999 Symposium Chairman Duane Naugle, KO6BT, has issued an alert to anyone who dined at SeaWorld's "Mama Stella's" Italian restaurant on Monday Oct. 11, 1999, following the 1999 AMSAT Symposium.

The Associated Press reported that as many as 250 people may have been exposed to Hepatitis "A" from an infected employee. Tests confirmed that a 40-year-old restaurant employee contracted the virus. The worker is now on medical leave. People who ate Caesar salad, watermelon, dinner salad or strawberries may be particularly at risk.

Symptoms of the viral infection of the liver include abdominal discomfort, diarrhea, low-grade fever, loss of appetite, fatigue and dark urine. SeaWorld is offering free shots of gamma globulin at a San Diego clinic to customers who believe they may have been exposed. Contact Jean Naugle, KC6QHT, for more information. (619) 273-4088; or ko6bt@amsat.org.

■ **The Sidney (Australia) Olympic Games Organizing Committee wants to use frequencies in the 5.7 GHz Band** for television broadcast links during the Olympic Games. A new Amateur Satellite is due to be launched in the near future and will operate in the 5650-5670 MHz band, precisely the frequency proposed for Olympic use. The Wireless Institute of Australia (WIA is their national Amateur Radio Society) is opposing this temporary allocation. (Thanks Graham, VK4BB)

■ **A bogus radio operator is endangering thousands of aircraft passengers** and crew by transmitting false control tower instructions to pilots flying in and out of a major British airport . Airline chiefs say the prankster, who broadcasts on the same frequency as air traffic controllers, has given false orders to pilots on the ground at Manchester Airport and has issued dangerous instructions to airborne captains approaching the airport to suddenly climb or descend.

In one case ,it is understood he gave a pilot clearance to line up for a take-off that would have caused a catastrophic collision. When the captain checked the instruction, air traffic control said no such order had been issued and told him to halt the aircraft immediately.

A major hunt is underway for the man, who is thought to have broadcast from a car park at or near the airport. The civil aviation authority changed the radio frequency used at Manchester Airport and warned pilots to be alert.

■ **The UK's Radiocommunications Agency has agreed to allow the suffix stroke 2K to be used by UK radio amateurs** during January 2000 to celebrate the new Millennium. This means that anyone operating during next January can add /2K to their callsign, club callsign or while operating a Special Event Station. [RSGB]

■ **Special Event Call Sign: HS72A** – To celebrate the 72nd Birthday of His Majesty the King of Thailand HS1A, on the 5th of December 1999. Thailand's Amateur Radio Society, RAST will be using the special call-sign HS72A until December 31st.

■ **The Tucker family has engaged an attorney in an effort to keep private the FCC inquiry** into the 36 club call signs they have collected. Riley Hollingsworth said the FCC rules permit public disclosure of enforcement actions subject to certain criteria. The commission believes holding 36 club calls "...stretches the credibility of their claim that these are legitimate clubs" and noted that the Tuckers have not submitted information on these clubs as requested more than 4 months ago. The FCC plans to reduce the number of club call signs that the five Tucker's hold within 20 days if no response is received.

▪ **The FCC also said it would not lift the suspension of John A. Abernethy's, K4OKA (Hickory, NC)** right to operate under 30 MHz until Jan. 22, 2000. The suspension was based on audio tape recordings played over the air that were found at K4OKA during a station inspection In Jan. 1999.

▪ **An FCC warning letter was also sent to Alan E. Strauss, WA4JTK (Carol City,FL)** net control station of the "14.247 DX Group" concerning monopolizing that frequency.

AMATEUR SERVICE CENSUS - INDIVIDUAL STATIONS - OCTOBER 31, 1999

STATE	NAME	EXTRA	ADVANCED	GENERAL	TECHPLUS	TECHNIC.	NOVICE	TOTAL:
AK	Alaska	347	461	539	516	1085	221	**3169**
AL	Alabama	1206	1547	1582	2004	3579	473	**10391**
AR	Arkansas	793	989	957	1233	2432	357	**6761**
AZ	Arizona	1677	2399	2408	2832	5192	716	**15224**
CA	California	8826	13649	13542	20172	37157	10019	**103365**
CO	Colorado	1351	1987	1870	2350	3585	722	**11865**
CT	Connecticut	1105	1330	1608	1623	1788	906	**8360**
DC	Dist. Columbia	64	82	101	57	75	35	**414**
DE	Deleware	201	205	255	295	334	99	**1389**
FL	Florida	4569	7090	8221	7490	8898	3673	**39941**
GA	Georgia	1653	2408	2345	2935	4195	842	**14378**
HI	Hawaii	366	446	480	582	1000	291	**3165**
IA	Iowa	769	1257	1224	1125	1569	516	**6460**
ID	Idaho	385	571	676	792	1624	213	**4261**
IL	Illinois	2640	3622	3915	4466	6131	1881	**22655**
IN	Indiana	1563	2157	2423	3195	4345	1120	**14803**
KS	Kansas	746	1053	1326	1431	2124	541	**7221**
KY	Kentucky	992	1132	1314	1713	2934	672	**8757**
LA	Louisiana	831	1175	1148	1282	1932	479	**6847**
MA	Massachusetts	2063	2289	2689	2915	3203	1305	**14464**
MD	Maryland	1509	1999	1889	2212	2700	836	**11145**
ME	Maine	540	650	885	808	1137	330	**4350**
MI	Michigan	2356	3241	3651	4116	5987	1332	**20683**
MN	Minnesota	1242	1810	1956	2012	2805	697	**10522**
MO	Missouri	1487	1995	2262	2297	3712	816	**12569**
MS	Mississippi	550	764	748	823	1474	265	**4624**
MT	Montana	326	455	512	537	1001	192	**3023**
NC	North Carolina	2095	2800	2850	3445	5515	1414	**18119**
ND	North Dakota	158	218	308	313	455	101	**1553**
NE	Nebraska	418	671	819	772	932	261	**3873**
NH	New Hampshire	718	708	832	997	1298	354	**4907**
NJ	New Jersey	2143	2681	2820	3277	3356	1491	**15768**
NM	New Mexico	586	889	763	874	1887	198	**5197**
NV	Nevada	493	698	781	824	1459	213	**4468**
NY	New York	3771	4871	5561	6553	8515	3549	**32820**
OH	Ohio	3274	4389	4735	6854	8586	2225	**30063**
OK	Oklahoma	979	1329	1242	1683	3165	525	**8923**
OR	Oregon	1329	1980	2386	2522	3729	838	**12784**
PA	Pennsylvania	3145	3971	4453	4985	5718	1859	**24131**
PR	Puerto Rico	305	542	770	1886	989	2368	**6860**
RI	Rhode Island	338	317	453	547	482	234	**2371**
SC	South Carolina	809	1051	1256	1312	1889	391	**6708**
SD	South Dakota	186	294	306	259	401	112	**1558**
TN	Tennessee	1635	2175	2095	2941	4128	768	**13742**
TX	Texas	4994	6960	6581	7790	12391	2199	**40915**
UT	Utah	529	783	724	1685	4190	364	**8275**
VA	Virginia	2185	2836	2750	3344	4489	1156	**16760**
VI	Virgin Islands	44	41	67	41	87	21	**301**
VT	Vermont	281	301	370	391	722	131	**2196**
WA	Washington	2498	3470	3896	4783	7551	1565	**23763**
WI	Wisconsin	1228	1709	1863	1887	3095	653	**10435**
WV	West Virginia	632	700	884	1187	2569	384	**6356**
WY	Wyoming	193	221	255	278	518	84	**1549**
Other	APO & Possessions	190	154	188	249	676	79	**1536**
Total		**75313**	**103522**	**110534**	**133492**	**200790**	**53086**	**676737**
% of total:		**11.1%**	**15.3%**	**16.3%**	**19.7%**	**29.7%**	**7.8%**	**100.0%**

W5YI REPORT

America's Oldest Ham Radio Newsletter

Page #9

December 1, 1999

FCC's TERRY ON HAM REPEATER COORDINATION

By Bill Pasternak, WA6ITF, Amateur Radio Newsline

Frequency coordinators serving Amateur Radio must be responsive to the needs of all radio amateurs -- not just repeater owner operators. So says D'wana Terry who is Chief of the Public Safety and Private Wireless Division of the F-C-C's Wireless Telecommunications Bureau.

Ms. Terry's decision comes in response to a letter sent to the FCC by California Congressman David Dreier. Dreier had written to the commission on behalf of two of his constituents who strongly objected to a decision by the *Southern California Repeater and Remote Base Association* to implement 20 kHz inter system spacing in the 70 centimeter Amateur Service repeater subband. Dale Buxton, W6WPY, and Larry Labb, KI7AX, contend that 20 kHz is spectrally wasteful and that SCRRBA should have adopted the commercial 12.5 kHz standard.

Buxton and Labb decided that the only solution was to replace SCRRBA with a new coordination council. They wanted to know what the FCC required as criteria for any new group. When the agency failed to provide them with what they felt to be a reasonable response to their queries, the two hams began writing to their federal representatives. They asked that the FCC to be directed to provide answers. With Congressman Dreier's intervention they finally got what they were looking for ...and probably a lot more.

While much of D'wana Terry's three-page response was typical FCC verbiage, there was one new area that could eventually impact on every repeater council, individual coordinator and repeater operator in the United States. This would be especially true of coordination entities that only permit repeater owner-operators to assist in the decision making process.

According to D'wana Terry, any entity that considers the concerns only of repeater owners would not be considering the concerns of other users of the spectrum affected by repeater operations. As such, says Terry, this in itself would appear to be at odds with the definition of a frequency coordinator in the Amateur Radio Service.

But that's not all. She goes on to say that any coordination entity not considering the concerns of other spectrum users affected by the operation of repeaters can be replaced. She describes the replacement group as consisting of a broad base of local amateurs choosing another frequency coordination entity and then recognizing that entity's decisions.

How would this be done? Ms. Terry says that the mechanics of such a change is totally in the hands of the ham radio community. She does not further define what is meant by "a broad base of local amateurs." She also says that where radio amateurs decide to recognize multiple coordinators in the same geographic area for the same Amateur Service frequency bands, the FCC will expect these coordinators to cooperate with one another. This, says Terry, will permit all spectrum users to make the most efficient use of the Amateur Service frequencies.

The coordination community has been taken by surprise by the D'wana Terry letter. Sources tell us that Terry did not contact the National Frequency Coordination Office or the National Frequency Coordinators Council before issuing this edict. Both of these entities were created several years ago as an outcome of the meeting in St. Charles Missouri between the FCC and the nation's frequency coordinators. This, to provide the Commission with its desired single point of contact -- or SPOC - on ham radio coordination issues. Here is the full text of the D'Wana Terry letter:

Federal Communications Commission
Washington, D.C. 20554

October 20, 1999

In Reply Refer To: 2000F/WTC

The Honorable David Dreier
U.S. House of Representatives
112 North Second Avenue
Covina, California 91723

Attn: Chris Freehand

Dear Congressman Dreier:

Thank you for your letters dated August 10, 1999, and September 1, 1999, on behalf of your constituents, Messrs. Dale Buxton and Larry Labb. These letters follow up my letter of June 29, 1999, to you.

Messrs. Burton and Labb again reiterate their objection to certain decisions recently made by the Southern California Repeater and Remote Base Association (SCRRBA), an amateur service frequency coordinator in southern California.

In their August 6, 1999, letter to you Messrs. Burton and Labb, specifically object to the SCRRBA's technical standards for coordinating an amateur station operating as a repeater station, its decision to coordinate a station on a channel five kilohertz away from another repeater station, and they object to other actions taken by the SCRRBA.

In their August 31, 1999, letter to you Messrs. Burton and Labb include a series of detailed questions about repeater coordination in the amateur service, ask whether certain actions of the SCRRBA are permitted, and ask for confirmation of answers previously received to these questions.

Your letter has been referred to this office because the Amateur Radio Service is administered by the Public Safety and Private Wireless Division of the FCC's Wireless Telecommunications Bureau.

By way of background, we note that the Commission's Rules and policies applicable to frequency coordination in the amateur service were established in a 1986 rulemaking proceeding. See Amendment of Part 97 of the Commission's Rules Concerning Frequency Coordination of Repeaters in the Amateur Radio Service, PR Docket No. 85-22, *Report and Order* (copy enclosed), summary at 51 Fed. Reg. 17324 (1986) and *Memorandum Opinion and Order,* 2 FCC Red 243 (1987).

In this *Report and Order,* the Commission decided to continue relying on voluntary coordination of amateur service repeater stations because mandatory coordination of repeaters was too drastic a remedy without first determining whether the rules adopted in this Report and Order would address repeater-to-repeater interference. See *Report and Order,* 15.

The Commission also stated that because amateur service frequency coordinators derive their authority from the voluntary participation of the entire amateur service community, their recognition must be derived from the same source. Thus, the Commission stated that it was essential that frequency coordinators respond to the broadest base of local amateurs and consider the concerns not only of repeater owners but also of those users of spectrum affected by repeater operation. See *Report and Order,* 25. Accordingly, the Commission did not establish a mechanism to officially recognize local or regional coordinators. Id.

The amateur service rules provide, therefore, that a local or regional frequency coordinator is responsible to amateur radio operators whose stations are eligible to be auxiliary or repeater stations. See *47 C.F.R. 97.3(a).* These operators include all individuals who hold a Technician, Technician Plus, General, Advanced or Amateur Extra Class operator license. See *47 C.F.R. 97.205(a).* This group of licensees is the "broadest base of local amateur operators" possible because it includes all licensees whose stations are eligible to be auxiliary or repeater stations.

As stated in my letter dated June 29, 1999, because frequency coordination in the amateur service is voluntary, in this context we do not regulate frequency coordinators or officially recognize any entity that chooses to serve as a frequency coordinator. See *Report and Order,* 24-25.

For this same reason, there also is no specific Commission rule requiring the licensee or control operator of an amateur service repeater station to obtain the approval of a frequency coordinator before it may start transmitting messages. See *Memorandum Opinion and Order, 2 FCC Red 244; 47 C.F.R. 97.205(a).*

Consequently, the frequency coordinator is responsible to the local or regional amateur service community rather than the FCC. While the FCC does not regulate these coordinators, per se, because the needs of repeater users vary widely between communities, it recognizes the value of coordination. See *47 C.F.R. 97.205(c).* An entity that considers the concerns only of repeater owners, however, would not be considering the concerns of other users of spectrum affected by repeater operation and, therefore, would appear at odds with the definition of a frequency coordinator in the amateur service

We envision that an entity not considering the concerns of other users of spectrum affected by repeater operation can be replaced by a broad base of local amateurs choosing another frequency coordination entity and recognizing that entity's decisions.

In this regard, we note that Messrs. Burton and Labb state in their letter dated August 31, 1999, that they are forming a new coordinating entity in southern California, *Southern California Frequency Management,* which they also state will represent the entire amateur service community.

Changing coordinators is the mechanism that the Commission anticipated amateur radio operators in a local or regional area would use to replace a frequency coordinator that was not representative of all local amateur radio operators or otherwise meeting their needs. As stated in my previous response, the function of an amateur service frequency coordinator is limited to recommending transmit/receive channels and associated operating and technical parameters for auxiliary and repeater stations in order to avoid or minimize potential interference. See *47 C.F.R. 97.3(a).*

We also note that the FCC's longstanding policy of permitting amateur radio operators to collectively self-regulate coordinators of amateur service repeater stations has generally been a resounding success. We believe that this policy has allowed the local amateur radio community to determine for itself whether frequency coordination is needed on a particular amateur service band and, if so, what function(s) the local amateur radio community is willing to allow the frequency coordinator to perform

In this regard, we note that recently the Commission received notification that some amateur service licensees have recognized a new coordination entity in both Indiana and the New York City Tri-state area.

These actions were taken without the involvement of the FCC and this approach keeps coordination at the local level, where people who more readily have knowledge of the facts can respond to the situations expeditiously and where the coordinator is directly answerable to the local amateur community.

As stated in my earlier letter, there are no Commission rules governing the selection of a coordinator or the procedures for coordination. Because the needs and conditions in the Amateur Radio Service vary widely between locations, amateur radio operators have the flexibility to make these decisions at the local and regional level.

While the Commission receives relatively few complaints about the decisions of frequency coordinators in the amateur service, based on the experience of Division staff, it receives more complaints about coordination matters in Southern California than any other area of the country.

In part, this disparity appears to be due to the unique geographical characteristics of the area, the large concentration of population in a relatively small land area, and the fact that amateur radio operators have chosen to place their repeater stations at very high elevations thereby covering large land areas with a single station's signal. The effect of these decisions has been to limit the number of stations that may transmit on the available amateur service channels without interfering with each other. These unique characteristics may best be considered in coordination decisions made at the local level, where the coordinator answers directly to the local amateur community.

With regard to Messrs. Burton and Labb's question concerning an e-mail response from another Commission employee, I note that the Commission has never selected or approved any entity as a local or regional amateur service frequency coordinator, or reviewed the coordination decisions of a particular amateur service frequency coordinator.

In cases of interference between two or more repeater stations, the frequency coordinator the Commission recognizes is the entity recognized in a local or regional area by amateur operators whose stations are eligible to be auxiliary or repeater stations. In the few geographical areas where the local or regional amateur service community has decided that recognition of multiple frequency coordinators for one of the amateur service frequency bands best meets its needs, we expect that the coordinators will cooperate with each other so that station licensees may make the most effective use of amateur service frequencies, as required by the amateur service rules. *See 47 C.F.R. 97.101(b).*

In the event that the transmissions of a repeater station cause harmful interference, as defined in *Section 97.3(a)* of the Commission's Rules, to another repeater station, and both repeater stations have been coordinated, the two station licensees are equally and fully responsible for resolving the interference. See *47 C.F.R. 97 205(c).* The fact that multiple coordinators may be involved does not absolve the station licensees of this responsibility.

I trust that this letter is responsive to your inquiry.

Sincerely,

D'wana R. Terry, Chief, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau,

Enclosure