# 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.

**May be republished providing credit is given to *The W5YI Report.***



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


*In This Issue...*




**Vol. 21, Issue #24** **$1.50** PUBLISHED TWICE A MONTH **December 15, 1999**


## FCC to Reallocate 200-MHz of Prime Spectrum to New Services!

On November 18th, the FCC issued a Policy Statement concerning spectrum management handling as we enter the new millennium. The plan is to enhance competition and to encourage the development of emerging telecommunications technologies. Two hundred megahertz has been earmarked for redistribution.

The Commission noted that wireless communications has experienced unparalleled wireless communications growth during the past decade ...quadrupling since 1993. Rapid advancements in radio technologies have been achieved in recent years – particularly in the areas of integrated circuitry, signal processing and digital systems.

These new wireless technologies have contributed substantially to economic growth in this country which would not have been possible without the availability of additional spectrum for new technologies and services and relaxed restrictions on the licensing of spectrum.

The 200 MHz of prime VHF/UHF/Microwave spectrum – which spans several bands from 200 to 4,660 MHz – was made available through the transfer of frequencies from Government use and from the reallocation of frequencies used by existing non-Government radio services.

The electromagnetic spectrum is managed in the United States by two agencies. The National Telecommunications and Information Administration (NTIA) oversees federal government frequencies with the FCC administering all other spectrum. The NTIA also serves as the President's principal advisor on telecommunications and information policies.

Today, all of the radio spectrum below 300 gigahertz (GHz) is allocated for various purposes. Congress addressed the spectrum shortage issue in 1993 when the Secretary of Commerce was directed to transfer 200 megahertz of spectrum below 5 GHz, currently used by Federal agencies, to the FCC for licensing to the private sector "to promote and encourage the use of new spectrum-based technologies in telecommunications applications."

The law authorized the FCC to use competitive bidding (auctions) for the reassignment and licensing of spectrum for certain commercial radio-based services.

The first phase of the reallocation process was completed in 1994 when 50 MHz of federal spectrum was made available for immediate reallocation and 150 MHz for delayed reallocation. The 50 MHz designated for immediate reallocation were the 2390-2400, 2402-2417, and 4660-4685 MHz segments.. The 2390-2400 and 2402-2417 segments were then reallocated to the Amateur Service on a primary basis.

Now the FCC will be reallocating the 150 MHz spectrum that was delayed. It includes the 2300-2305, 2400-2402 and 2417-2450 MHz segments


**THE W5YI REPORT [Pub. No. 009-311]** is published twice monthly by The W5YI Group, Inc., 2000 E. Randol Mill Road # 608-A, Arlington, TX 76011
**SUBSCRIPTION RATE:** (U.S., Canada and Mexico) One Year (24 issues) $24.50 • Two Years: $45.00 • Three Years: $64.00. • Tel. 817/461-6443
Foreign Subscriptions via Air Mail: $39.50 per year. (Payment may be made by Check, Money Order, VISA or MasterCard payable in U.S. funds.)
Periodicals Postage paid at Arlington, TX. **POSTMASTER:** Send address changes to THE W5YI REPORT, P.O. Box 565101, Dallas, TX 75356

which are allocated to the Amateur Service on a secondary basis.

The FCC Policy Statement serves as the framework for the reallocation. The spectrum identified for reallocation is shown in the following table.

| Frequency band | Width | Frequency Band | Width |
|---|---|---|---|
| 216-220 MHz* | 4 MHz | 2160-2165 MHz | 5 MHz. |
| 698-746 | 48 | 2300-2305* | 5. |
| 1390-1395 | 5 | 2385-2390 | 5 |
| 1427-1429 | 2 | 2400-2402* | 2 |
| 1432-1435 | 3 | 2417-2450* | 33 |
| 1670-1675 | 5 | 4635-4660 | 25 |
| 1710-1755 | 45 | See Note: * | 15 |

**Note:** The bands 944-960, 1390-1400, 1427-1432, 1670-1675, 2500-2690 and 3650-3700 MHz are candidates for the remaining 15 MHz of spectrum. Part of the 216-220 MHz band is allocated on a co-secondary basis to the Amateur Service. The 2300-2305, 2400-2402 and the 2417-2450 MHz bands are allocated to the Amateur Service on a secondary basis. Currently, the 2300-2305 and 2400-2402 MHz segments are not allocated to any service on a primary basis.

The new spectrum will be used for a broad range of emerging radio communications services which will be implemented over the next three to five years. It includes various new and expanded mobile, wireless and medical telemetry services. Most of the spectrum will be assigned by competitive bidding (that is, auctioned)

The FCC said an aggressive and innovative approach to managing spectrum is necessary and includes the following principles:

- Allow flexibility in allocations as appropriate, including rules that would allow licensees to better respond to market demand.
- Promote new spectrum efficient technologies, such as those that support ultra-wideband and spread spectrum operations.
- Ensure that important communications needs, such as public safety, are met.
- Improve the efficiency of our assignment processes through streamlining and innovative techniques, including consideration of new approaches....
- Seeking out ways to make more spectrum available, for example, through refarming methods, user fees or by reclaiming existing spectrum.

The Policy Statement inventories spectrum that is available for allocation and sets forth proposals for its use. The FCC plans to:

- Expand the General Wireless Communications Service (GWCS) spectrum to 50 MHz, from the current 25 MHz, and relocate this service to the 4940-4990 MHz band at the request of the National Telecommunications and Information Agency.
- Allocate 90 MHz for Advanced Mobile and Fixed Communications Service (AMFCS) at 1710-1755 MHz, 2110-2150 MHz and 2160-2165 MHz. This will be a new flexible use service available for mobile and fixed wireless service. One possible use of this spectrum would be for the introduction of future "third generation (3G)" mobile telecommunications systems, also known as "International Mobile Telecommunications - 2000 (IMT-2000)".
- Establish a new Land Mobile Communications Service (LMCS) in 10 megahertz of spectrum at 1390-1395 MHz, 1427-1429 MHz and 1432-1435 MHz. This allocation will provide additional spectrum to relieve congestion in the existing private land mobile bands and provide opportunities for use of new, spectrum efficient technologies that would improve and enhance business radio communications.
- Reallocate the 48 MHz at 698-766 MHz (TV channels 52-59) for Fixed, Mobile and new Broadcast services for commercial uses following the same approach the Commission adopted recently in reallocating the 36 megahertz at 746-764 MHz and 776-794 MHz bands (TV channels 60-62 and 64-66).
- Allocate 10 MHz of additional spectrum for Fixed and Mobile service in two bands at 1670-1675 MHz, and 2385-2390 MHz and adopt appropriate service rules to permit licensees broad flexibility in the types of service to be offered and the technologies used to provide those services.

As part of the Commission's efforts to effectively manage spectrum in the public interest, FCC Chairman Kennard also announced the creation of a Spectrum Policy Executive Committee. The Bureau and Office Chiefs involved in spectrum issues will participate on the Committee under the direction of Dale Hatfield (who also holds Amateur license WØIFO), Chief of the Office of Engineering and Technology.

The Commission said that their new allocation plans requires use of all of the frequency bands now included in the reserve of spectrum for future uses required under the 1993 Budget Act. The FCC replaced the existing spectrum reserve with a new reserve of 40 megahertz in the three frequency bands at 2300-2305 MHz, 2400-2402 MHz, and 2417-2450 MHz.

That basically means that Amateur access to these bands will not be impacted for the foreseeable future which is good news. The FCC said that "The 35 megahertz in the 2400-2402 MHz and 2417-2450 MHz bands are currently used by Industrial, Scientific and Medical equipment and very low power radio devices. This existing use restricts the availability of the bands for new services given current sharing techniques. In view of these considerations relating to existing uses, we believe it is reasonable to reserve the 2300-2305 MHz, 2400-2402 MHz, and 2417-2450 MHz bands until a future time, when new technology or other changes may increase the opportunities for new operations in these bands. Nevertheless, we will be receptive to petitions for reallocation of the reserve spectrum bands."

Action by the Commission November 18, 1999, by Policy Statement (FCC 99-354).

## AMATEUR RADIO STATION CALL SIGNS

...sequentially issued as of the first of December 1999:

| Radio District | Group A Extra | Group B Advanced | Group C Tech/Gen. | Group D Novice |
|---|---|---|---|---|
| 0 (*) | AB0JL | KI0RD | (***) | KC0GVB |
| 1 (*) | AA1UU | KE1LS | (***) | KB1EPZ |
| 2 (*) | AB2GR | KG2RD | (***) | KC2FRQ |
| 3 (*) | AA3SZ | KF3DP | (***) | KB3EKS |
| 4 (*) | AF4QK | KV4CW | (***) | KG4FMK |
| 5 (*) | AC5TM | KM5WO | (***) | KD5ISB |
| 6 (*) | AD6JL | KR6DM | (***) | KF6ZOH |
| 7 (*) | AC7BR | KK7VA | (***) | KD7HDC |
| 8 (*) | AB8EQ | KI8JH | (***) | KC8NKM |
| 9 (*) | AA9XL | KG9QH | (***) | KB9VMW |
| N. Mariana | NH0P | AH0BB | KH0IF | WH0ABJ |
| Guam | (**) | AH2DN | KH2UU | WH2ANX |
| Hawaii | WH7E | AH6PZ | KH7YS | WH6DGB |
| Am.Samoa | AH8R | AH8AH | KH8DQ | WH8ABF |
| Alaska | AL0R | AL7RN | KL0VF | WL7CVD |
| Virgin Isl. | (**) | KP2CP | NP2KR | WP2AIM |
| Puerto Rico | WP3F | KP3BL | WP3FA | WP4NOQ |

* = All 1-by-2 & 2-by-1 call signs have been assigned.
** = All 2-by-1 call signs have been assigned.
***= Group "C" (N-by-3) call signs have now run out in all districts. Group "D" calls now being assigned.

**Note:** New prefix numerals now being assigned in Puerto Rico (KP3/NP3/WP3), Hawaii (AH7/KH7/WH7) and Alaska (AL0/KL0)

*[Source: FCC Amateur Service Database, Washington, DC]*

## NEW AND UPGRADING AMATEUR STATISTICS

**For the Month of November 1997, 1998 & 1999**

| License | New Amateurs | | | Upgrading Amateurs | | |
|---|---|---|---|---|---|---|
| Class | 1997 | 1998 | 1999 | 1997 | 1998 | 1999 |
| Novice | 66 | 57 | 34 | 0 | 1 | 0 |
| Technician | 1145 | 1208 | 1101 | 0 | 11 | 0 |
| Tech Plus | 122 | 179 | 125 | 220 | 281 | 464 |
| General | 15 | 14 | 10 | 252 | 209 | 151 |
| Advanced | 1 | 4 | 5 | 180 | 189 | 211 |
| Extra Class | 1 | 6 | 2 | 113 | 136 | 223 |
| Total: | 1350 | 1468 | 1277 | 765 | 827 | 1049 |
| Decrease: | (50.3%) | +8.7% | (13.0%) | (43.6%) | +8.1% | +26.8% |

## TOTAL END-OF-MONTH UNEXPIRED AMATEUR SERVICE LICENSES

| Month | Year | Extra | Advanced | General | Tech+ | Technician | Novice | ARS Total |
|---|---|---|---|---|---|---|---|---|
| November | 1999 | 75,427 | 103,582 | 110,492 | 133,475 | 201,546 | 52,821 | **677,343** |
| October | 1999 | 75,132 | 103,311 | 110,349 | 133,116 | 200,410 | 52,980 | **675,298** |
| September | 1999 | 74,867 | 103,086 | 110,151 | 132,866 | 199,362 | 53,217 | **673,549** |
| August | 1999 | 74,722 | 102,937 | 110,029 | 132,704 | 198,333 | 53,392 | **672,117** |
| July | 1999 | 74,562 | 102,899 | 110,028 | 132,669 | 197,447 | 53,721 | **671,326** |
| June | 1999 | 75,113 | 103,705 | 110,838 | 134,161 | 197,681 | 54,502 | **676,000** |
| May | 1999 | 75,004 | 103,645 | 110,914 | 134,222 | 196,598 | 54,993 | **675,376** |
| April | 1999 | 74,981 | 103,714 | 111,100 | 134,587 | 195,451 | 55,696 | **675,529** |
| March | 1999 | 74,855 | 103,636 | 111,162 | 134,598 | 194,223 | 56,245 | **674,719** |
| February | 1999 | 74,689 | 103,532 | 111,176 | 134,348 | 192,958 | 56,700 | **673,403** |
| January | 1999 | 74,622 | 103,436 | 111,259 | 134,421 | 192,087 | 57,008 | **672,833** |
| December | 1998 | 74,669 | 103,592 | 111,513 | 134,857 | 191,575 | 57,617 | **673,823** |
| November | 1998 | 74,496 | 103,526 | 111,498 | 134,719 | 190,510 | 58,034 | **672,783** |
| October | 1998 | 74,509 | 103,723 | 111,851 | 134,882 | 189,674 | 58,423 | **673,062** |
| September | 1998 | 74,366 | 103,775 | 111,989 | 135,003 | 188,840 | 58,705 | **672,678** |
| August | 1998 | 74,318 | 103,943 | 112,255 | 135,149 | 188,233 | 59,021 | **672,919** |
| July | 1998 | 74,315 | 104,219 | 112,623 | 135,371 | 187,426 | 59,448 | **673,402** |
| June | 1998 | 74,274 | 104,509 | 112,977 | 135,737 | 186,458 | 60,125 | **674,080** |
| May | 1998 | 74,210 | 104,604 | 113,061 | 135,989 | 185,471 | 60,638 | **673,973** |
| April | 1998 | 74,192 | 104,927 | 113,603 | 136,460 | 184,328 | 61,594 | **675,104** |
| March | 1998 | 74,066 | 104,958 | 113,682 | 136,580 | 183,238 | 62,243 | **674,767** |
| February | 1998 | 74,067 | 105,501 | 114,341 | 137,214 | 181,666 | 63,239 | **676,028** |
| January | 1998 | 74,043 | 105,795 | 114,798 | 137,616 | 180,665 | 63,892 | **676,809** |
| December | 1997 | 73,949 | 105,835 | 114,877 | 137,688 | 179,988 | 64,169 | **676,506** |
| November | 1997 | 73,939 | 106,123 | 115,280 | 138,064 | 179,240 | 64,868 | **677,514** |
| October | 1997 | 73,915 | 106,207 | 115,460 | 138,078 | 178,335 | 65,142 | **677,137** |
| September | 1997 | 73,794 | 106,304 | 115,639 | 138,339 | 177,547 | 65,372 | **676,995** |
| August | 1997 | 73,804 | 106,668 | 116,079 | 138,900 | 176,960 | 65,909 | **678,320** |
| July | 1997 | 73,749 | 106,877 | 116,352 | 139,238 | 176,355 | 66,162 | **678,733** |
| June | 1997 | 73,737 | 107,024 | 116,629 | 139,608 | 174,924 | 66,551 | **678,473** |

## CUTTING EDGE TECHNOLOGY

■ **Can I make it with a five iron?** Electronic GPS caddies may be a golfer's best friend.

"GYS" (Golf Yardage System) is a golf cart equipped display unit which provides the golfer with accurate yardage using the GPS (Global Positioning System) from anywhere on the course to various features on the course .... such as sand traps, water hazards, center-of-green, etc.

The golfer simply parks, looks at the desired target yardage, selects a club and swings away. GYS then determines the exact length of your golf shot using GPS.

■ **Wavelength Division Multiplexing (or WDM) is a developing technology** that makes additional bandwidth possible over glass fiber optic lines by filling them with not just one but many wavelengths of light, each capable of carrying a separate signal.

The technology has been around a while, but has been given new life now that improved fiber amplifiers have been developed. The developers of WDM systems are already working on how to pack more wavelengths into the same fiber. The day may come when your very own wavelength could deliver the Internet to your home.

■ **A speech-to-speech language translator may soon appear on your store shelf.** The ViA II consists of a microphone, headset, and a small computer worn on a belt. Simply talk into the mic and you'll hear the message in another language over the headset. The ViA II handles Chinese, Spanish, English, French, German, Portuguese and Italian. Little word yet on how faithful its translations are.

■ **Wait before you automatically assume that a fluorescent bulb in your new office is out.** A new breed of ballast transformers by Advance may simply be saving money. Just by turning the wall switch on and off, you can select how many bulbs you want on at any given time. For a four-bulb fixture, turning on the switch turns them all on; turning off the switch and then back on again illuminates only two.

■ **A new type of liquid-crystal display (LCD) offers even more brilliant color than before.** Ferroelectric LCDs eliminate the triads of color pixels (red, green, blue) that ordinarily make up a color picture by rapidly switching light color through only one pixel. The switching speeds among red, green and blue are so fast that the eye can't notice it, and sees only full-color video. This eliminates wasteful filtering of light and also provides a sharper image.

■ **New "smart" labels are being tested by airlines to help track luggage through wireless technology.** Paper-thin RF transponders can read and write bits of information quickly with a scanner. To the casual observer, the smart labels look like any other piece of paper or plastic. But the computer scanner can read large batches of such tags simultaneously, even if suitcases are piled on top of each other. These RF tags are being used in the 13-MHz band. Data such as flight number and destination can quickly be read or changed.

■ **Humans always use their most advanced technology to amuse themselves.** Sega's new Dreamcast home videogame console boasts 10 times as much computer processing power as the Nintendo 64, providing graphics and sound that surpasses even arcade games. An internal modem allows players to link their consoles and play together, even if separated by hundreds of miles. Other home videogame manufacturers are about to release high-powered units of their own, too. Unless a breakthrough in arcade-game technology comes soon, we could soon see video arcades closing due to lack of demand.

## EMERGING COMMUNICATIONS

■ **GPS technology is being incorporated into handheld digital phones, and many other personal communications devices.** This is in part to satisfy the FCC rules requiring cellular phones to provide physical locations when calling 911. But the technology can also help keep users from ever getting lost. Instead of a compass, simply flip open your cellphone.

■ **DSL and cable modems compete for digital dominance.** The battle between the Baby Bell's (with their fast telephone wireline hookups) and coaxial cables (now essentially owned my Ma Bell) is heating up.

While the wireless (multichannel, multipoint distribution service, or MDDS) and satellite-delivered Internet may become a widespread reality down the road, for now, the broadband race is between twisted pair copper and TV cable lines since that is the infrastructure that is already in place.

Both DSL and cable modem proponents claim that they offer the fastest Internet service you can get for your home or office. And both could be right depending upon the specific situation.

Both services offer "always on" Internet service which eliminates dialing in, busy signals, and unexpected disconnects. And the cost is essentially the same - although there may be a difference in how installation and hardware costs -- and the length of time you must sign up for the service are handled. The $40 per month is about equal to the cost of a separate phone line and dial up service.

Both DSL and cable proponents are spending multi-billions to bring fast fiber-assisted access to your neighborhood. It is really the so-called "last mile" that goes by phone or cable wires.

How fast is DSL and cable modem Internet delivery? There are exaggerations and half-truths on both sides. It is safe to say, however, that you won't get anywhere near the advertised speeds of up to 100 times faster than a typical phone line modem.

Congress likes the competition and it is just what they had in in mind when they passed the *Telecommunications Act of 1996.* Competition usually means lower prices for the consumer.

But you don't need both a high speed DSL phone and cable connection. The question is which is better? Both services permit Web pages to seemingly appear instantly (especially the ones with huge capacity) ...and files and e-mail download quickly.

There are pros and cons to both systems. Cable modems can present a serious security problem. We have heard numerous stories about how your "Network Neighborhood" is able to "see" and manipulate all of the other PCs in your surrounding area.

DSL service is said to be more secure than a cable modem since it uses a dedicated connection over your existing telephone line.

Cable modems are more susceptible to hackers since it operates on a shared "house-to-house" system. But then, the entire Internet is based upon shared unencrypted bandwidth. There is also a Windows "file sharing" feature, that if left on can permit others to access your files.

Cable modem speed decreases dramatically at peak hours when there are

many users online in your area. An advantage to two-way cable modems is that they can be used to deliver local telephone service -- something that AT&T is well aware of and wants.

Researcher IDC predicts that 2.2 million cable modems will be in use by 2002. Consulting firm Arthur D. Little Inc. says the potential demand for high-speed Internet access via cable far exceeds cable's current market penetration. Little research estimated 28 percent of all U.S. households are "likely" to subscribe to such a service, priced at $40 a month.

Dataquest predicts the number of DSL subscribers will expand from the current 50,000 to 5 million worldwide by 2002.

It doesn't appear that the broadband battle will be won on the basis of speed alone. It will be determined by price and quality of service. When it comes to reliability, telephone companies generally have a better record on "service" and taking care of the customer than the local cable company.

In terms of bandwidth, a coaxial cable is faster than a "twisted pair." The only thing faster is fiber optics. The fact is, however, that in actual use cable modems do not operate at anywhere near their maximum potential speed.

Another factor is the connection between the ISP and the Internet and the activity on the Net. Traffic on the Internet reaches its destinations at only an "average" speed of 40 kilobits per second (kbps). Therefore, even though high-speed DSL and cable modems may promise more, they cannot deliver web content to users any faster than the Internet's 40-kbps average speed limit will allow.

Even though Ma Bell and her offspring are increasing the bandwidth over the "last mile" to your home or office, the high-speed promises of DSL and cable modems can not be fulfilled until the Internet itself is able to deliver traffic at high speed.

Simply increasing bandwidth to the home is similar to widening the city streets between your home and the nearest freeway - you still may not drive to work any faster because the freeway is as congested as ever. Internet performance problems will only be solved through widespread improvements to its infrastructure.

We are looking at both DSL and cable modems since both will be available to us within a few weeks. SBC Corp. is charging $39 per month for DSL access speeds of up to 1.5M bps and no less than 384K-bps downstream and 128K-bps upstream.

## COMPUTER INFO

■ **The typical PC "junk pile of electronics" is slimming down** and becoming less complex and intimidating. You will shortly be seeing a new personal computing platform dubbed the "Easy PC" on the shelves at your local PC outlet Or you can order it over the web or by phone.

The Intel/Microsoft Easy PC hardware initiative has been widely endorsed by leading PC manufacturers, including Compaq, Dell, Fujitsu, Gateway, Hewlett-Packard, IBM, Micron, NEC and Toshiba.

Its objective is to make personal computers easier to set up, use and upgrade by getting rid of some traditional features and incorporating new hardware and operating system enhancements. The process includes experimenting with new PC shapes, sizes, and colors; paring the number of plugs and port options; and hiding complicated software.

The platform includes the USB (Universal Serial Bus) interface, support of between 32MB and 128 MB of memory, a 4.3GB or larger hard drive, V.90 56kbps modem, Home Phoneline Networking, speaker/headphone outputs, microphone input, an XGA monitor connector, and a 24X speed CD-ROM. The reduced size motherboard will permit smaller PC footprints and novel design shapes.

The Easy PC will be preconfigured for connectivity (or automatically configured with a single phone call), and features easy transfer of data and settings from older computers and simplified cable hook-ups. And Easy PC's can be externally upgraded with out having to open the box to expand the system.

Microsoft is also working on what it calls "PC Health" technology which allows a computer to maintain itself by running diagnostics and taking preventive measures, such as automatically updating virus data files or device drivers, and repairing minor problems when they occur.

■ **Dell Computer Corp. is one of the first to have the new "Easy PC" platform on the market.** They debuted their new "WebPC" on Nov. 30th. The WebPC weighs only 10 pounds, is six inches wide, 11 inches high and 10 inches deep ...about one-third the size of traditional PCs. It comes in designer shades of blue, orange, teal, red and purple with printers and external floppy disk drives in complementary blue or gray.

Prices start at $1,000 for a complete package that includes a computer (Intel Celeron 433-MHz chip), a standard 15-inch monitor with built-in speakers, a printer and one year of the company's Dellnet Internet access service.

Dell even created a special website for the box at: <http://www.webpc.com.>. Orders placed in early to mid-December will be built and delivered before Christmas.

■ **The number of e-mail messages is practically doubling with each passing year,** presently amounting to about 7 trillion. Some of the larger companies are dedicating at least one employee with the responsibility of sorting all of their e-mail traffic.

■ **One of the most common methods of computer virus transmission is to hide them in macros incorporated into the popular Microsoft Word program.** (Macros are user-defined groups of commands, which save hours of needless typing.) Computer users and network administrators are wise to this and often refuse to open any documents sent in through e-mail without scanning them with anti-virus software. One way to lower the risk is to save and send a document in what's called "rich text format," specified with an .rtf suffix. Word does this just as well, preserving the look of the document without exchanging macro viruses.

■ **A 64-bit Windows operating system for personal computers has already been developed** in Microsoft's labs, and may be on the shelves within a year. This will provide the fuel to run Intel's new Merced 64-bit microprocessor.

■ **"Instant Collectible" Dept.** Drivers who bought brand-new cars a few months ago in Maine learned to their dismay that their year 2000 cars were classified on the titles as "horseless carriages." The problem has been cleared up, and new titles issued.

■ **And some citizens of Philadelphia received jury-duty notices in the mail,** ordering them to report in 1900. About 500 people received the notices.

## INTERNET NEWS

■ **Born Chih-Yuan Yang in Taiwan in 1970,** this college student more or less invented and perfected the Internet search engine. Still only 29 years old, he is now a billionaire. Today, millions of people around the world visit his web site daily.

While his name may not be a household word, everyone has heard of his web site. **What is it?**

■ **Here is another one.** Sabeer Bhatia, emigrated to the United States from his native Bangalore, India as a teen ager. While studying at Caltech and Stanford he came up with an idea that would make free a widespread use of a PC that previously required a paid Internet account. The service now has 50 million registered users. **What is it?** *Answers at the end of this section.*

■ **The conventional car dealer is going by the wayside as new ways to buy an automobile spring up on the Web!** It is making traditional new car salesmen very nervous!

J.D. Power & Associates predicts that early next year, 55 percent of new-car buyers will do their research online, up from 15 percent in 1998. Systems are being put in place so they can also buy without haggling with a dealer. Here is a sample.

<**www.CarsDirect.com**> lets you see the manufacturer's retail price, the invoice and the special price you can pay. The still private company is partly bankrolled by Dell Computer Corp. founder Michael Dell who is an expert on how to sell from the Web.

Another revolutionary new car buying service is <**www.InvoiceDealers.com**>. They beat other buying services by providing the actual invoice cost and instant multiple quotes from nearby, aggressive online dealers.

<**www.CarPoint.msn.com**>, a Microsoft site is creating a build-to-order system for the Ford Motor Co. which will allow an online shopper to order a car directly from the factory.

<**www.Priceline.com**> has a 90-day Florida test underway whereby visitors to the Ford Motor site <www.ford.com> can "name-your-own-price" online for the exact Ford car or truck they want.

And <**www.CarOrder.com**> is in the process of buying dealerships and will convert them into online retailers.

Got a car to trade in? Find out what it is worth at <**www.kbb.com**> the Kelly Blue Book website.

■ **In 1979, 4,000 people showed up at the first Comdex computer trade show held annually in Las Vegas..** It had 160 exhibitors. This year, more than 2,100 companies showed off products to about 200,000 vitisors. PCs used to dominate the trade show. But Comdex '99 was all about the Web and high speed access.

■ **Speaking at this Comdex '99** Cisco Systems CEO and President John Chambers said the next Internet killer application will be "e-learning."

He showed a video on cutting-edge universities, such as University of California Berkeley, in California, that offer students Web sites for each separate course and integrate the Internet into the learning process.

Chambers said many teachers, accustomed to "command and control," do not want to give up the power to students to decide what they learn, and are not yet comfortable with Internet collaboration. "But e-learning will take hold over the next two years," he said. And education will become a continuing process, as firms educate their employees via the Net.

Chambers also demonstrated a novel, new gas pump with Internet access where customers receive their own personalized Web page. They can watch news and other information, get a Web-based map for directions ...even order goods online while waiting for their gas tank to fill.

■ **Making money in the new Millennium.** Come up with some new, wild product or marketing idea. Convince a venture capitalist how it will reap a fortune. Go public for big bucks. Then use the money to acquire people and companies to hopefully achieve your goals. Start at the top instead of the bottom. Retail powerhouse Amazon.com is worth some $26 billion based on its stock prices - and it's never made a profit. Starting small and growing little-by-little is no longer the system.

■ **"To Goof Off is Human" Dept.** On-line shopping companies report that their peak usage times during the weekdays come in the middle of the afternoon, when most office workers should be using their computers to do work and not shop.

■ **Southwestern Bell Corp. and the Prodigy ISP are partnering in a venture** that will give SBC a 43 percent equity stake in Prodigy. The deal will permit Prodigy to gain SBC's 650,000 Internet customers bringing its total to some 2 million users.

In exchange, SBC will make DSL -- Digital Subscriber Line - its preferred broadband service. DSL delivers high speed Internet service over a regular pair of voice grade phone wires. In short, Prodigy gets SBC's Internet customers and SBC gets to sell them high speed DSL service.

Furthermore, SBC will exclusively market Prodigy as its Internet service of choice and has promised to deliver a minimum of 1.2 million new customers to Prodigy over the next three years.

The potential for both companies is huge since there are some 100 million people in SBC's service area. Prodigy is just one of the dozens of ISPs that are entering into arrangements with local telcos to provide DSL service.

■ **Inflightonline.com has announced plans to begin testing a system next Spring to provide air travelers with free 56K Internet access.** Web portal Lycos Inc, which has an interest in the venture, will store content on on-board servers, accessible by connecting a laptop to the airliner's seat-back phone system.

Lycos will partner with several e-commerce, news and financial sites which will update their content every few minutes while in flight. Users could get live access to the Internet by placing a call through the system at airphone rates. E- mail access would also be available for an additional charge. Check out: <http://www.-inflightonline.com> for more info.

In Europe, British Telecom recently announced that Excite UK and Amazon.-co.uk would be supplying content for its Skyphone airborne-Internet offering which also relies on data servers aboard planes.

■ **Answers to the questions:** "Jerry" Yang started "Jerry's Guide to the Wide World Web" while at Stanford University in 1993. It later became known as **Yahoo!**

In 1996, Sabeer Bhatia launched **"Hotmail"** - the first free e-mail which could be accessed via a Web browser from any computer connected to the Net. Last year, Microsoft paid Sabeer (still only 30 years old) $400 million for his "Hotmail."

## WASHINGTON WHISPERS

■ **The 20-year-old Space Shuttle fleet is not going into mothballs until at least 2012,** but its flight controls are getting a major upgrade. All four shuttles are having their old CRT pilot displays replaced with color liquid-crystal displays, which consume less power and take up less space. Many other avionics devices are being updated as well. The original Shuttle hardware was designed with technology going back to the 1960s, and it has been updated periodically through the years.

■ **The campaign Web site for Vice President Al Gore located at <http://www.algore2000.com>** has quietly removed support for Comet Systems' tracking program that trails Internet surfers during visits. To obtain the information on the visitor, a Web site offers to change a PCs regular cursor to a graphic character by right-clicking on a drop down box menu.

It the case of the Gore site, the cursor was changed to a miniature "Gore 2000" button when a Net surfer visited the site. A little piece of software installed on the visitor's PC allows the Gore campaign site to get statistics on how many people downloaded the cursor software and their activity within the Web site. A unique ID number separates new visitors from return visitors.

The *Associated Press* and *USA Today* both reported that the Gore 2000 Web site pulled the feature, from its kids page. New York based Comet Systems, Inc., did not dispute that its free "Grab A Comic" cursor software reports back to its own computers with each customer's unique serial numbers each time any of 60,000 web sites are visited.

The basic problem is that web users who change their cursor are not told about the underlying tracking ability of the cartoon character software.

Comet says they are not violating anyone's privacy because they do not match computer IDs to actual people. But critics say it would not be too difficult to link the serial number to a consumer's actual identity if it decided to do so. The firm's technology officer said he was unaware that they were collecting the ID numbers and said they would be deleted. A randomly assigned number would be substituted.

New Jersey-based privacy advocate, Junkbusters Corp., asked the New York Attorney General to investigate saying "Comet is a shining example of how marketers have turned the Web into a gigantic surveillance device covered in smiling cartoon characters." See: <http://www.-junkbusters.com>)

## AMATEUR RADIO

■ **Keep your HF rig operating on Dec. 31st.** No, not to see if it will shut itself off; take advantage of the historic date to welcome the New Year with other hams who will operate special-event stations on New Year's Eve. The Dallas ARC is only one, and there are plenty of others getting ready. Why not record the GMT rollover on WWV for posterity? Have you thought about applying for a Special Event (One-by-One) call sign yourself and running your own Y2K Over-the-Air Party? See: <http://ncvec.spindle.net/> Note: The call signs K2K, N2K and W2K are already taken for Year 2000 stations, but you can select another 1x1 call sign.

■ **Let the buyer beware when you go to the next ham fest or swap meet.** The market for the latest microprocessors is such that pound for pound, they are more valuable than drugs. There are already several recorded cases of theft involving circuit boards and microprocessors, because they are easy to carry, easy to hide, and easy to sell. Stolen chips may be on the table right next to the pirated software.

■ **Jorge Montalbo Flores, WP3AB (Cabo Rojo, PR), Jose M. Pizarro WP4IIK and Maria E. Melendez WP4MMX (both of Toa Baja, PR)** have had their General Class licenses canceled on November 18th since they failed to show up for re-examination. The FCC had ordered them to retake their license examinations at the FCC's Field Office in San Juan, PR by November 15th. The Advanced Class licenses of **Nicholas Rivers, WP4LEZ (Toa Baja, PR)** and **Roberto Rodriquez KP4RRM (Arroyo, PR)** were also canceled on November 18th for the same reason.

**Glen E. Craft, N5RQW (Stringer, MS. Extra Class)** was cited on November 16th for "...operating your station on the 20-meter Amateur Band emitting an unusually wide signal or one that is overpower, or both. Information further indicates that you may have ignored requests from other licensees operating on adjacent frequencies to correct your transmitter emissions in accordance with good Amateur practice." The FCC reminded Craft that "We sent you a letter in this regard on March 5, 1999. You are cautioned that failure to remedy this type of operation may jeopardize your Amateur license."

**Martin M. Hutchins, Sr., WD5EWV (Swartz, LA, Advanced Class)** was sent a similar letter by the FCC and was additionally asked to answer a series of questions concerning his mobile and base station operations on 20-meters.

The FCC requested information about Hutchins' use of a linear amplifier ...including the name of the manufacturer, model number and its technical specifications. The Commission also wanted to know the PEP at which the amplifier is operated if the amplifier had been modified or is homemade. "Your failure to timely respond fully and completely will result in administrative sanctions."

**Alan E. Strauss, WA4JTK (Carol City, FL, Advanced Class)** was again warned that the FCC will continue to monitor the "14.247 DX Group" net operations. The FCC said that it "expect[s] the net to share the frequency and not commandeer it from ongoing Amateur communications."

The FCC added, "A station identifying by only two letters of its call sign, that is not recognized or acknowledged so that it eventually gives its call sign within the time limits of Part 97, is in violation of the rules. ...two-letter identification, where Part 97 is violated, must not be condoned by your group."

■ **We got a note from ARRL VP Dave Sumner, K1ZZ** calling our attention to the fact that the WRC scheduled for 2001 will likely slip past 2002 "...because of ITU conferences already scheduled for 2002."

This is the World Radio Conference that is expected to consider Article S25 - the Amateur Service definition and operator qualifications including the Morse code requirement.

Dave said "The confusion arises because conferences were tentatively scheduled for 1999 and 2001, but 1999 slipped to 2000 and 2001 will likely slip to 2003.

■ **We received another response to our DX survey** which asked about licensing requirements from the various countries of the world.

This one is from **Reinaldo Leandro YV5AMH president of the Radio Club Venezolano,** the national ham radio society of Venezuela. Renaldo said that there were approximately 12,000 Amateur Radio operators in Venezuela in two license classes: Novice (with a YY prefix) and General (YV). After two years and 75 confirmed DXCC countries, YV amateurs may qualify for other special event prefixes.

The written examination consists of passing 75 of 100 questions on basic electronics, regulations and operating. There is a 10 wpm Morse code exam but

"In practice the exam is a little more relaxed. A plain text sentence containing 7 or 8 words, sent by hand at a little less speed." Reinaldo believes "Some form of code knowledge is necessary for HF privileges, maybe 5 wpm.."

■ **The following stats were supplied by R.C. "Smitty" Smith, W6RZA** who heads up the Greater Los Angeles VEC. They indicate the total number of call signs in the FCC's data base including those in the 2 year "Grace" period. All figures are as of Nov. 28, 1999.

| License Class | Total Calls | 2 Yr. Grace | Unexpired Calls Signs |
|---|---|---|---|
| Extra | 77140 | 1847 | 75293 |
| Adv. | 108454 | 4999 | 103455 |
| Gen. | 117627 | 7221 | 110406 |
| Tech+ | 144345 | 10967 | 133378 |
| Tech. | 201420 | 5 | 201415 |
| Nov. | 65177 | 12358 | 52819 |
| Total: | 714163 | 37397 | 676766 |

TOTAL VANITY CALL SIGNS ISSUED

| License Class | Vanity Calls | License Class | Vanity Calls |
|---|---|---|---|
| Extra | 11477 | Tech+ | 2965 |
| Adv. | 4908 | Tech. | 3450 |
| Gen. | 3719 | Nov. | 99 |
| Total issued as of 11/28/99: | | | 26618 |

■ On November 29th, the **FCC denied and dismissed five Petitions for Rulemaking** they are:

**RM-9106:** On March 12, 1997, the ARRL requested that the Amateur frequency allocations be amended to **permit stations in American Samoa to transmit between 7.1 and 7.3 MHz** as a "domestic exception" to the ITU Region 3 allocations. The League argued that nearby Australia, New Zealand and Western Samoa have authorized these frequencies to their amateurs on a non-interference basis.

The FCC denied the request based on propagation characteristics of the 40 meter band and the fact that the band is shared with the International Broadcast Service in Region 1 and 2.

**RM-9114:** On March 19, 1997, James Cardillo-Lee requested that the Rules be amended to specifically **permit Amateur operators who are also emergency professionals to use Amateur frequencies when they are on paid duty.**

In 1993 the FCC amended the rules to expand the benefits derived from the Amateur Service by the general public. It declined, however, to develop a list of permitted or prohibited communications because the list would be very lengthy. Instead the Commission adopted five general standards that an amateur radio operator should use when deciding whether his or her station should transmit a message. It also decided to rely on the Amateur Service's tradition of self-regulation and cooperation between licensees.

The FCC said further clarification was not necessary since two-way communications on Amateur frequencies by paid emergency personnel engaged in disaster relief are permitted under the existing rules.

**RM-9115:** On March 12, 1997 the ARRL asked that the rules be amended to **permit intercommunication between RACES participants and other Amateur stations - especially ARES stations** - actively providing communications related to emergency or disaster situations, including drills and tests.

The League also asked that the one hour per week training limitation be modified to a maximum of five hours per week. RACES is the Radio Amateur Civil Emergency Service, ARES: the ARRL-sponsored Amateur Radio Emergency Service.

The FCC said the ARRL has failed to demonstrate that a separate rulemaking proceeding is warranted, particularly given that the ARRL submitted a similar request that was considered and denied in 1976 when the Commission updated the RACES rules.

The FCC added that under current rules any Amateur station can provide emergency communication with any other Amateur station at any time and on any frequency authorized the control operator of the station.

**RM-9259:** On April 3, 1998, the ARRL filed a *Request for Declaratory Ruling* asking the FCC to declare that the phrase **"good amateur practice" as used in the rules requires that Amateur Radio stations comply with voluntary band plans** adopted by the Amateur community. The League agreed, however, that rigid enforcement of band plans is neither warranted or feasible. The FCC received over 70 comments on the ARRL proposal.

The FCC said a basic Amateur principle is that all frequencies are shared and no frequency will be assigned for the exclusive use of any station.

"Voluntary band planning is a method that Amateurs have long used to meet the requirement that licensees make the most effective use of the Amateur frequencies. It allows the Amateur community to accommodate the varied operating interests of licensees and the specific operating activities that a station or a group of stations wished to engage in without explicit regulation. Voluntary band planning also allows Amateurs the flexibility to reallocate its spectrum among operating interests as new operating interests and technologies emerge or operating interests and technologies fall into disfavor."

"We believe that it is not necessary to define the term 'good amateur practice' as used in the Rules as requiring that Amateur stations comply with voluntary band plans or declare that any Amateur station control operator who selects a transmitting frequency not in harmony with those voluntary band plans is not operating in accord with good Amateur practice. We believe that such definition would have the effect of transforming voluntary band plans into *de facto* required mandates."

"....we note that numerous commenters object to the request, and to any attempt to establish mandatory band plans."

**RM-9673:** On May 3, 1999, the Central States VHF Society (CSVHFS) asked that the rules be amended to **prohibit Amateur stations from transmitting certain emissions in certain VHF (6, 2 and 1.25 meter) and UHF (70-cm) segments.** It contended that long-distance weak-signal work above 50 MHz is important and that wide band emissions interfere with these communications.

CSVHFS wants to protect weak signal communications by prohibiting amateur stations from transmitting wideband emissions in the 50.1-50.3 MHz, 144.0-144.3 MHz, 222-222.15 MHz and 431.8-432.5 MHz segments. It defined wideband emissions as those wider than Morse code and SSB. The FCC received 68 comments on the Petition.

The FCC said that weak signal enthusiasts had already been provided segments at 144.0-144.5 and 100 kHz telegraphy segments in the 6 and 2 meter band.

"We believe, therefore, that spectrum that is free of FM emission types is available for licensees interested in weak signal communications." The FCC also said that "...some commenters express the view that weak signal operations is a minority operating interest within the VHF Amateur Service community [and] ...dispute the need for protecting weak signal operations."

"We are also concerned that subdividing Amateur Service bands on the basis of operating interests would result in a loss of flexibility to accommodate changes in operating trends and emergence of new technologies."

**The FCC denied and dismissed all five *Petitions for Rulemaking*** on the basis that "..they had been previous considered, are unnecessary in light of existing rules and do not warrant further consideration at this time."

## FCC DENIES BROADCASTING ON THE HAM BANDS

The FCC has denied Michael R. Reynolds' March 2nd, 1999 *Petition for Rule Making* .

Reynolds, W0KIE (Advanced Class) of Tulsa, Oklahoma had requested that the Amateur Service Rules be changed to permit amateur stations to make one-way transmissions intended for reception by the general public, either direct or relayed, on Amateur Service frequencies above 420 MHz.

Reynolds also requested that the rule prohibiting amateur stations from engaging in any form of broadcasting [Section 97.113(b) - Prohibited transmissions] be amended to prohibit broadcasting only on amateur frequencies below 420 MHz.

In support of his request, Reynolds said that his proposal, if adopted, would provide new opportunities for non-commercial community-oriented radio and additional diversity in radio voices and program services. He also said that he believed the Amateur Service frequencies above 420 MHz "...are seriously underutilized"

In dismissing the petition, the Commission said that "...the Amateur Service is an international radio communication service for the purpose of self-training, intercommunication, and technical investigations carried out by amateurs, that is duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest." That wording was quoted verbatim from the ITU Radio Regulations, Geneva, 1979.

"One of the fundamental principles of the Amateur Service is that Amateur Service frequencies are reserved for *bona fide* Amateur Service communications. In this connection, we note that other frequencies are allocated to broadcast services which are defined as transmissions intended for reception by the general public, either direct or relayed."

"We also note that the Commission considered the scope of communications that can be transmitted by amateur stations when it amended its Amateur Service rules regarding prohibited transmissions in 1993. (See *Amendment of Part 97of the Commission's Rules to Relax Restrictions on the Scope of Permissible Communications in the Amateur Service,* PR Docket No. 92-136.)

"In that proceeding, the Commission amended the Amateur Service rules to allow amateur operators more flexibility to provide communications for public service projects as well as to enhance the value of the Amateur Service in satisfying personal communications needs."

"The prohibition against newsgathering and broadcasting by an amateur service station, however, was retained because we do not believe the Amateur Service frequencies should be used generally for news gathering or as an alternative to Broadcast Service frequencies. For this reason, an amateur station is prohibited from engaging in any activity related to program production or newsgathering and any form of broadcasting."

"With regard to your specific proposal, we note that amending the Amateur Service rules to permit Amateur Service stations to make one-way transmissions intended for reception by the general public, either direct or relayed, would allow amateurs transmitting on frequencies above 420 MHz to be used as stations in the Broadcasting Service as it is defined in the *International Radio Regulations."*

"We also note that broadcasting is not one of the purposes for which frequencies are allocated to the Amateur Service and that this would be inconsistent with the definition of the Amateur Service in both the Commission's Rules and the *[International] Radio Regulations.*"

"Additionally, we believe that authorizing Amateur Service stations to broadcast in the 420-450 MHz Amateur Service band would cause harmful interference to other stations that share the band with Amateur Service stations, such as Government radiolocation (radar) stations and space stations."

"...with respect to your argument that Amateur Service frequencies above 420 MHz are seriously underutilized, we note that 420 MHz is the lowest Amateur Service frequency that can be used for spread spectrum emission types and fast scan television emissions."

Noting the entries in the ARRL Repeater Directory, the FCC suggested that "...there appear[s] to be numerous Amateur Service repeater stations in the United States and Canada that transmit on this band, even on a secondary basis."

"For this reason, we believe that Amateur Service frequencies above 420 MHz are well utilized and that usage of these frequencies is increasing. Additionally, we feel that the assignment of a rule making number to your petition and the commencement of a separate proceeding is not warranted because the Petition requests rule changes that are repetitive of those considered in PR Docket No. 92-136."

"Finally, we note that the Commission is exploring ways to provide new opportunities for non-commercial community-oriented radio stations in an on-going rulemaking proceeding. See *Creation of a Low Power Radio Service,* MM Docket 99-25, *Notice of Proposed Rulemaking.*"

The ruling was made under delegated authority on November 18th, 1999 by D'wana R. Terry, Chief, Public Safety and Private Wireless Division, Wireless Telecommunication Bureau.

## INTERNET TAXES: TO BE OR NOT TO BE

In 1998, the president signed the *Internet Tax Freedom Act* into Public Law 105-277. It imposed a three-year moratorium on new Internet taxes. As part of that Act, Congress established the *Advisory Commission on Electronic Commerce* (ACEC) to address the issue of taxes on transactions made over the Web. According to Forrester Research, e-commerce is expected to account for some $1.3 trillion by 2003.

The commission's 19 members include three state governors, heads of several major information technology corporations and other government and business leaders from across the nation. Also included are three cabinet-level representatives from the Federal Government - the Secretary of Commerce, the Secretary of the Treasury, and the U.S. Trade Representative. Virginia Governor James Gilmore chairs the commission.

This commission's assignment is to recommend what is arguably the most important policy initiative of the information age. It will have global implications.

The panel's job is to conduct a thorough study of Federal, State, local, and international taxation and tax treatment of transactions made over the Internet and to ensure that the nation's 30,000 different tax jurisdictions don't pass unfair taxes on Net access, services, and sales.

The Commission has already met in New York City on Sept. 14-15. Its next meeting will be Dec. 14-15 in San Francisco. The last meeting will be in Dallas, Texas on March 20-21 of next year. Its final e-Commerce and tax policy recommendations must be submitted to Congress no later than April 21, 2000 and then it will be disbanded.

Central to the taxation issue is the fact that the Internet knows no geographical boundaries. The commission is therefore looking into the impact is of taxation (or absence of taxes) on (1) interstate sales made over the Web, (2) on retail businesses -- most of which charge taxes and (3) on state and local government tax revenues.

### Invitation for Proposals

The most controversial issue is that of taxing remote transactions such as out-of-state mail-order sales. State and local governments already contend that they lose $5 billion annually in sales taxes due to mail-order sales completed outside of their jurisdiction. They fear that the explosion of e-commerce will further erode their tax base. Ideas that have been floated in the past include having states adopt a so-called flat tax for e-commerce transactions nationwide.

The ACEC issued an invitation to interested parties to submit Internet tax related proposals by November 15th. The panel has received many Net tax plans.

The National Governors Association, the U.S. Conference of Mayors, and other government groups already are working on a uniform state law package to deal with the issue of Net taxation, which they will present at the December meeting..

Commission member Governor Mike Leavitt of Utah is the current chairman of the National Governors' Association. He believes existing sales taxes should be collected on goods sold over the Internet, just as they are at retail stores in most states. He is championing a plan for states to phase in a simplified e-commerce tax system in which a "trusted third party" would use computer software to calculate, collect and redistribute sales tax dollars based on the location of the purchaser.

Leavitt expects support from regular "brick and mortar" retailers who find themselves at a competitive disadvantage because of the sales taxes they must collect on traditional sales. Several other governors have endorsed the plan.

### Gilmore says "No Internet tax."

On the other hand, Virginia Governor and Internet tax commission chairman, James S. Gilmore, has proposed abolishing all taxes on e-commerce. He and his supporters - which include most GOP leaders - say the Internet must be permitted to prosper without government interference. Gilmore cited a National Governors Association study which showed that state governments reported $11 billion in surplus in 1998.

Gilmore's position is also backed by Sen. John McCain of Arizona, the GOP presidential candidate who helped push the three-year moratorium on new Internet taxes through Congress and the legislation that created the advisory panel.

Torn between protecting states' rights and revenue ...and the political suicide of endorsing new taxes, Republican presidential front-runner George W. Bush, the governor of Texas, is taking a middle of the road approach. He says he will look at the panel's recommendations once they are released.

A coalition of antitax and consumer groups has joined House Budget Committee chairman John Kasich to limit taxes on e-commerce. Kasich (R-Ohio) has introduced a bill that would ban any local or state sales taxes on e-commerce and also would extend the current ban on Internet access taxes.

His *Internet Tax Elimination Act* (I-TEA) makes permanent the moratorium on Internet access taxes which expires in October of 2001 and prohibits state and local governments from imposing sales or use taxes on goods or services acquired through electronic commerce.

But Senator Ernest F. Hollings believes the tax-free status of e-commerce poses a real threat to "Main Street" merchants and local government services such as schools, police and fire departments which are funded at the local level. He has introduced revenue-sharing legislation that imposes a five percent across the board excise tax on all Internet retail sales transactions.

Proposals to the commission are due by November 15th. The Internet tax commission will consider the various plans at its meeting in San Francisco on December 14 and 15. The final report to Congress is due by April 21, 2000.