

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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July 15, 2001

More Amateurs Upgrading, But Little Increase in Total Number

That's the bottom line in our mid-year report on the health of the U.S. Amateur Service. In the last four years, the service has grown at about a rate of 2,000 additional amateurs annually ...about three-tenths of one percent a year. That is even less than the U.S. Census Bureau's total projected percentage increase in total U.S. population.

Four years ago the total amateur census stood at 674 thousand. It now stands at 682. An additional 30 thousand amateurs are still in the FCC's database which includes those with expired licenses in the two year "grace period." The FCC cancels about 1,500 licenses every month because they are not renewed before the end of the two year period. Many are silent keys.

The good news is that radioamateurs are upgrading their license class inprecedented numbers. This, of course, was motivated by the FCC's restructuring of the U.S. Amateur Service last year ...especially the reduction of the Morse code requirement to 5 words-per-minute for all license classes. Most Tech Plus, General and Advanced Class operators upgraded because the 13 and 20 wpm code was no longer required.

On April 15, 2000 the FCC also discontinued issuing new Novice, Tech Plus and Advanced Class licenses. Novice and Advanced Class licensees are able to renew their license classes indefinitely but Tech Plus operators are having their licenses renewed as Technician with retained credit for Morse

proficiency. It caused an immediate shift in the percentage of radioamateurs by class.

Number of HF operators increase

To the delight of equipment manufacturers, tens of thousands of potential customers have been added to the all band HF rolls! Only General and higher class license holders get all band privileges. Since April 15, 2000 both the General and Extra Class have increased by about 25 percent.

The Extra Class has added about 20,000 operators, the General Class another 27,000. These are essentially amateurs with lower speed code proficiency who upgraded by taking a one or two short multiple-choice written exams.

To be expected, the Novice, Tech Plus and Advanced Class have had comparable decreases. The Advanced Class has 16,000 (15 percent) less operators; Tech Plus 40,000 (30 percent) less. And there are 8,000 fewer Novices (20 percent) less - a total reduction of 54,000.

The Tech Plus Class got a "double barrel" hit since this license class is no longer being issued - instead a Technician with 5-wpm code remains a Technician and existing Tech Plus licensees are having their licenses renewed as Technician (which distorts the total "no code" Technician statistics since many do indeed have code proficiency.)

Licensing statistics show that about 1,600 new Technicians are licensed for the first time monthly -

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a total of about 19,000 annually.

The first No Code Tech tickets began appearing in Spring 1991. It is now ten years later and they are just now coming up for renewal.

It is very difficult, however, to determine from the FCC's licensing records the percentage of eligible Technician and Tech Plus operators that are renewing their license. But it appears that many are not. The Technician Class has increased by 20,000 since April 15, 2000 but the total number of combined Technician and Tech Plus operators has declined.

The number in the Novice Class census has been deteriorating steadily since early 1991 when the "entry level of choice" switched to the Codeless Technician. There were 95,000 Novices on February 1, 1991 ...today there are only 42,000 - a 60 percent decrease.

About 600 amateurs apply for Vanity call signs every month. Nearly half of that total hold Extra Class licenses.

Conclusion

On the surface it appears that there is a net loss of those with telegraphy skills. But this is not really accurate, since many Techs on the rolls do indeed have their 5 wpm proficiency. (Again, remember no new Tech Plus Class operator licenses are being issued and existing Tech Plus amateurs are being renewed as Technician.)

The big (unanswered) question is "How many Techs have code privileges?" No one knows, since records are kept by either the VEC System or the FCC.

The number of Technicians with 5 wpm code proficiency will increase in coming years making the term "No Code Technician" obsolete.

Reducing the faster Morse code requirements to 5 wpm (and the number of license classes to three) has motivated existing radioamateurs with code proficiency to upgrade to General and Extra. It has not, however, added new operators. The number of amateurs in each license class has merely been re-arranged upward.

The overall conclusion is that Amateur Radio is not growing in relation to the overall population. The Morse code speed or license class reduction has had no impact on growth, instead, any growth seems to mirror shifts in U.S. population.

For example: Utah, Wyoming, Nevada, Idaho, Arizona, New Mexico had triple the growth as the average state; Texas, Colorado, Oklahoma had double.)

But the high population states with major urban cities (such as California, New York, Illinois, etc.) had no growth or a net loss in the number of radioamateurs.

More than half of all U.S. licensed amateurs live in only 10 of the 50 states. The ten states with the most radioamateurs (with a comparison to 5 and 10 years ago) are:

U. S. State	Top Ten 2001	Top Ten 1996*	Top Ten 1991*
California	1 102,030	1 109,124	1 76,953
Texas	2 41,864	3 42,551	3 30,878
Florida	3 39,786	2 43,726	2 32,450
New York	4 32,275	4 36,997	4 29,539
Ohio	5 30,256	5 32,195	5 24,547
Pennsylvania	6 24,325	6 26,003	6 20,270
Washington	7 24,189	8 24,647	8 17,092
Illinois	8 22,750	7 24,802	7 19,875
Michigan	9 21,205	9 21,791	9 16,416
New Jersey		10 17,906	
N. Carolina	10 18,588		
Mass			10 13,181

Note: * = 1991 and 1996 figures includes amateurs in the 2 year "grace period." The year 2001 does not.

AMATEUR RADIO STATION CALL SIGNS

...sequentially issued as of the first of July 2001:

Radio District	Group A Extra	Group B Advanced	Group C Tech/Gen.	Group D Novice
0 (*)	AB0RI	KI0RZ	(***)	KC0KZH
1 (*)	AA1YR	KE1LZ	(***)	KB1GZH
2 (*)	AB2RE	KG2RN	(***)	KC2IEF
3 (*)	AA3XF	KF3EB	(***)	KB3GUS
4 (*)	AG4JO	KV4FO	(***)	KG4OFC
5 (*)	AD5ER	KM5XL	(***)	KD5OYQ
6 (*)	AD6YG	KR6ET	(***)	KG6HAW
7 (*)	AC7OB	KK7WY	(***)	KD7NRR
8 (*)	AB8LF	KI8JZ	(***)	KC8RTW
9 (*)	AB9CK	KG9RA	(***)	KB9ZXG
N. Mariana	NH0Z	AH0BB	KH0NG	WH0ABP
Guam	(**)	AH2DO	KH2VL	WH2ANX
Hawaii	(**)	AH6RB	KH7ZZ	WH6DGN
Am. Samoa	AH8V	AH8AI	KH8DP	WH8ABF
Alaska	(**)	AL7RR	KL1DH	WL7CVH
Virgin Isl.	(**)	KP2CR	NP2LT	WP2AIN
Puerto Rico	WP3T	KP3BL	WP3LF	WP4NOU

* = All 1-by-2 and 2-by-1 call signs have all been assigned. AA-AK-by-2 now being assigned.

** = All 2-by-1 call signs have been assigned.

*** = Group "C" (N-by-3) call signs have all been allocated in all districts. (K-by-3 and W-by-3 are not assigned under the sequential call sign system. Available only to the Vanity Call Sign system.)

Note: The following prefix numerals are now allocated to Puerto Rico (KP, NP, WP3 or 4), Hawaii (AH, KH, NH, WH6 or 7) and Alaska (AL, KL, NL WL1 thru 0)

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

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AMATEUR RADIO SERVICE CENSUS - Individual Stations - July 1, 2001

State and Name	Extra	Advanced	General	Tech & Tech+	Tech+	Technic.	Novice	Total
AK Alaska	444	387	637	1589	370	1219	158	3215
AL Alabama	1532	1299	2048	5252	1290	3962	397	10528
AR Arkansas	1007	825	1252	3635	847	2788	290	7009
AZ Arizona	2174	2094	3012	7806	1983	5823	603	15689
CA California	11123	11575	16824	55272	13824	41448	7236	102030
CO Colorado	1820	1635	2400	5790	1611	4179	560	12205
CT Connecticut	1325	1127	1894	3214	1136	2078	713	8273
DC District of Columbia	70	77	104	137	45	92	30	418
DE Delaware	240	179	320	570	200	370	80	1389
FL Florida	5593	6267	9718	15231	5235	9996	2977	39786
GA Georgia	2107	2051	2957	6819	1983	4836	667	14601
HI Hawaii	478	384	572	1643	457	1186	212	3289
IA Iowa	975	1072	1492	2526	758	1768	411	6476
ID Idaho	560	449	833	2404	553	1851	147	4393
IL Illinois	3336	3014	4943	9919	3023	6896	1538	22750
IN Indiana	2005	1837	3141	7096	2144	4952	896	14975
KS Kansas	965	849	1611	3390	965	2425	473	7288
KY Kentucky	1219	962	1664	4488	1192	3296	533	8866
LA Louisiana	1014	1017	1377	2990	887	2103	359	6757
MA Massachusetts	2431	1986	3177	5783	2077	3706	1042	14419
MD Maryland	1887	1639	2321	4567	1524	3043	691	11105
ME Maine	671	542	1039	1896	584	1312	265	4413
MI Michigan	3079	2671	4558	9738	2793	6945	1159	21205
MN Minnesota	1645	1482	2400	4626	1347	3279	567	10720
MO Missouri	1874	1680	2757	5770	1566	4204	680	12761
MS Mississippi	675	643	941	2193	541	1652	210	4662
MT Montana	435	361	642	1475	347	1128	161	3074
NC North Carolina	2688	2381	3627	8704	2433	6271	1188	18588
ND North Dakota	220	169	368	725	222	503	80	1562
NE Nebraska	551	562	998	1588	502	1086	211	3910
NH New Hampshire	867	591	1041	2179	697	1482	280	4958
NJ New Jersey	2545	2312	3408	6123	2336	3787	1289	15677
NM New Mexico	799	719	988	2741	576	2165	155	5402
NV Nevada	653	595	1049	2260	568	1692	187	4744
NY New York	4527	4163	6761	13902	4547	9355	2922	32275
OH Ohio	4227	3600	6178	14392	4676	9716	1859	30256
OK Oklahoma	1261	1114	1589	4845	1163	3682	404	9213
OR Oregon	1740	1671	2974	6094	1719	4375	707	13186
PA Pennsylvania	3891	3378	5431	10037	3430	6607	1588	24325
PR Puerto Rico	360	486	839	2792	1592	1200	1829	6306
RI Rhode Island	387	266	540	946	411	535	190	2329
SC South Carolina	1058	877	1556	3083	885	2198	325	6899
SD South Dakota	251	247	375	616	163	453	99	1588
TN Tennessee	2072	1836	2752	6699	1944	4755	629	13988
TX Texas	6400	5869	8221	19563	5307	14256	1811	41864
UT Utah	768	631	1030	6052	1141	4911	255	8736
VA Virginia	2768	2363	3430	7423	2267	5156	940	16924
VI Virgin Islands	50	28	86	126	32	94	20	310
VT Vermont	346	244	446	1095	277	818	101	2232
WA Washington	3185	2921	4852	12002	3356	8646	1229	24189
WI Wisconsin	1556	1429	2332	4809	1256	3553	553	10679
WV West Virginia	790	594	1093	3691	800	2891	310	6478
WY Wyoming	235	198	314	791	200	591	77	1615
Other (See below)	249	123	207	1012	206	806	69	1660
Total States/Possessions	95128	87471	137119	320109	91988	228121	42362	682189
Percent of Total:	13.9%	12.8%	20.1%	46.9%	13.5%	33.4%	6.2%	100.0%

(* = Other = APO Addresses, Guam, N. Mariana Islands, American Samoa)

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Amateur Radio Census by Month, Year and License Class -- (Last 4 Years)

End of the month census not including Amateurs with expired licenses but still in the two year grace period.

Month	Extra	Advanced	General	Tech/Tech+	Novice	ARS Total
June-2001	95,128	87,471	137,119	320,109	42,362	682,189
June-2000	90,451	90,837	128,652	320,892	48,441	679,273
June-1999	75,113	103,705	110,838	331,842	54,502	676,000
June-1998	74,274	104,509	112,977	322,195	60,125	674,080
May-2001	95,974	87,663	136,950	320,505	42,698	683,790
May-2000	83,104	96,759	117,903	330,567	49,016	677,349
May-1999	75,004	103,645	110,914	330,820	54,993	675,376
May-1998	74,210	104,604	113,061	321,460	60,638	673,973
April-2001	95,644	87,853	136,514	320,700	43,241	683,952
April-2000	77,530	101,725	111,337	337,870	50,077	678,539
April-1999	74,981	103,714	111,100	330,038	55,696	675,529
April-1998	74,192	104,927	113,603	320,788	61,594	675,104
March-2001	95,243	88,082	136,056	321,012	43,966	684,359
March-2000	75,985	103,048	109,787	338,334	50,630	677,784
March-1999	74,855	103,636	111,162	328,821	56,245	674,719
March-1998	74,066	104,958	113,682	319,818	62,243	674,767
February-2001	94,824	88,344	135,437	320,625	44,564	683,794
February-2000	75,609	103,215	110,047	336,712	51,263	676,846
February-1999	74,689	103,532	111,176	327,306	56,700	673,403
February-1998	74,067	105,501	114,341	318,880	63,239	676,028
January-2001	94,147	88,618	134,616	320,103	45,118	682,602
January-2000	75,428	103,360	110,201	335,967	51,762	676,718
January-1999	74,622	103,436	111,259	326,508	57,008	672,833
January-1998	74,043	105,795	114,798	318,281	63,892	676,809
December-2000	93,807	88,783	134,144	319,874	45,632	682,240
December-1999	75,392	103,471	110,386	335,768	52,375	677,392
December-1998	74,669	103,592	111,513	326,432	57,617	673,823
December-1997	73,949	105,835	114,877	317,676	64,169	676,506
November-2000	93,417	89,032	133,689	319,663	46,362	682,163
November-1999	75,293	103,455	110,406	334,793	52,819	676,766
November-1998	74,496	103,526	111,498	325,229	58,034	672,783
November-1997	73,939	106,123	115,280	317,304	64,868	677,514
October-2000	92,903	89,310	132,818	319,375	46,776	681,182
October-1999	75,252	103,447	110,488	333,922	53,078	676,187
October-1998	74,509	103,723	111,851	324,556	58,423	673,062
October-1997	73,915	106,207	115,460	316,413	65,142	677,137
September-2000	92,541	89,605	132,144	319,502	47,180	680,972
September-1999	75,207	103,512	110,518	333,194	53,510	675,941
September-1998	74,366	103,775	111,989	323,843	58,705	672,678
September-1997	73,794	106,304	115,639	315,886	65,372	676,995
August-2000	92,015	89,937	131,361	319,587	47,670	680,570
August-1999	75,186	103,608	110,651	332,751	53,825	676,021
August-1998	74,318	103,943	112,255	323,382	59,021	672,919
August-1997	73,804	106,668	116,079	315,860	65,909	678,320
July-2000	91,142	90,320	129,789	319,831	47,839	678,921
July-1999	75,166	103,723	110,780	332,446	54,203	676,318
July-1998	74,315	104,219	112,623	322,797	59,448	673,402
July-1997	73,737	107,024	116,629	314,532	66,551	678,473

CUTTING EDGE TECHNOLOGY

Managing driver behavior - "Tele-matics" is a new emerging wireless GPS-based industry that permits individual vehicle and fleet owners to know the location of their cars and trucks and whether drivers are adhering to certain operating guidelines.

Clients even have the capability to determine vehicle location in real time, receive reports of out-of-bounds operation and excessive speeding, re-create exact route based on date and time, reconstruct accident information, and to remotely disable stolen vehicles.

Developed by the U.S. Dept. of Defense and released for public use, the Global Positioning System of 24 satellites is the standard for location technology. A year ago, the United States stopped the intentional degradation, called Selective Availability (or SA), of GPS signals available to the public. As a result, as of May 1, 2000, GPS receivers can pinpoint any location with accuracy to about 10 yards.

The *New Haven (Connecticut) Advocate* says Acme-Rent-a-Car uses GPS tracking technology from "AirIQ" to track the speed of drivers that rent its automobiles. They fined one renter \$450 last fall for speeding three times. When the driver disputed the charges, Acme was able to point out on a map exactly where he exceeded the company's threshold speed of 79 mph.

Acme uses the technology to find stolen rental cars and charge customers for excessive speed ...a policy clearly stated in the rental agreement.

According to a financing statement, AirIQ, Inc., (of Pickering, Ontario, Canada) has established contracts with licensees of Avis Car Rental, Budget Car and Truck Rental, Dollar Rent-A-Car Systems, National Car Rental, Rent-A-Wreck, Thrifty Rent-A-Car Systems, U-Save and many independent rental operators.

"AirIQ uses wireless communications, GPS-positioning technology, digitized mapping and computing intelligence to form an 'intelligent black box.'" The vehicle must be within cellular coverage to communicate two-way. Cellular covers about 95% of populated North America.

LoJack Corporation, (Dedham, MA) the world leader in stolen vehicle recovery, also uses AirIQ exclusively to give consumers, companies and law enforcement personnel "a cost effective telematics

product which offers location technology, roadside assistance, automatic collision notification and 'Mayday' services, as well as asset tracking and remote door unlocking and starter disabling." See: <www.AirIQ.com> and <www.LoJack.com>.

Changing equipment functions by rewriting software - Currently, various hardware devices are approved by the FCC based on their adherence to a particular set of operating standards. Once certified, the radio can not be altered. But with the advent of software-defined radios (SDR), this is about to change.

In a SDR, the signal is digitized and then processed using software-programmable digital signal processing techniques. The modulated signal to be transmitted is generated as a digital signal then converted to an analog signal for transmission.

The key element is that by software programming, the radio's fundamental operating characteristics such as modulation types, frequencies, bandwidths, transmission standards and such, can be easily and quickly be changed.

Some portions of an SDR system consists of chips running software, while other portions are hardwired subsystems with options which can be selected by software. This literally allows you to "build a radio" in real time.

Japan's Ministry for Communications has already directed its Telecom Engineering Center to look at the regulatory issues for SDR equipment certification in Japan. Such regulatory support is crucial to the success of SDR technology, since the characteristics of such radios are likely to change on the fly and thus to jeopardize the radios' approval while units are in the field.

The FCC is also looking into how to approve SDR devices that can be upgraded through software changes that can be downloaded from remote locations. Such devices also could download new service applications as they are developed and made available ...eliminating the need to replace the hardware. One transceiver could also be used for a variety of unrelated functions. <www.sdrforum.org>.

EMERGING COMMUNICATIONS

Bad news for such carriers as AT&T, Sprint and WorldCom. Telephone minutes have become so cheap worldwide that there's nothing left on which to make a profit!

Internet telephone service provider, Net2Phone (Newark, NJ) is launching a new long distance service that allows people with high speed Internet access to make Net-based phone calls using their regular phones. There is no need to call from your computer!

You simply plug your regular telephone line into a new Net2Phone router which is lashed to a cable or DSL (digital subscriber line) modem. Long distance cost is 4 cents per minute for the first 250 minutes a month (\$9.99) ...and drops to 2.9¢ for 1700 minutes (nearly 30 hours of calling.) International calls start at 7.9¢ per minute.

Net2Phone's "PC-to-Phone" totally free 5-minute domestic long distance call service is still available at their <http://www.net2phone.com/> website. Yahoo and MSN both charge 2¢ per minute to talk as long as you want for computer-originated-to-standard telephone calling through their "Messenger" services.

Low cost broadband being rolled out in major cities in Japan - Beginning next month, Yahoo Japan will offer high speed ASDL (asymmetrical digital subscriber line) services at a fixed monthly charge of 2,000 yen (\$16.28) ...about half the fee charged by industry leader Nippon Telegraph and Telephone Corp. Yahoo Japan is owned by Japanese Internet investor Softbank Corp. and U.S. Internet giant Yahoo Inc. (*Reuters*)

It does not look like widespread telephone-based high speed Internet access will be launched anytime soon in the U.S. by the nation's Bell telephone companies. The Tauzin-Dingell broadband deregulation bill is meeting stiff opposition from Senate Democrats.

The legislation seeks to amend the *Telecommunications Act of 1996*, effectively removing some of the regulatory restraints barring Bell companies from offering high-speed Internet services. The 1996 Act prevents Bell companies from offering high-speed data services in their local phone service markets until they can prove that they have opened those markets to competition. Tauzin-Dingell would erase that restriction.

If you are looking for local scanner frequencies, check out this web site: <http://www.cityfreq.com/>. They offer free updated scanner frequencies for thousands of cities across the U.S.

A Japanese survey finds that the number of people accessing the Internet exclusively through Internet-

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enabled cellular phones leaped to some 6.5 million ...more than 200 times the 30,000 level last year. Another report put the *total* number of "i-mode" users in Japan at 24million. The demand for Internet-compatible phones has surged due to demand for wildly popular "i-mode" models by NTT DoCoMo that allow users to browse the Web and send e-mail. The small screen (only 100x100 pixels) permits 100 characters at a time to be displayed. See what "i-mode" looks liked by going to: <www.japan-times.co.jp/i/>. This is the "i-mode" mobile edition of the English language "Japan Times."

Now comes word that cellphone giant Nokia is getting into the content business. Its virtual "Club Nokia" wireless messaging, gaming service is coming to North America. It also plans to offer cellphone programming from third-party content providers. Nokia sold 128 million phones last year - one in three phones sold worldwide. Nokia believes they will have a 50 percent market share by 2005. According to market researchers, the worldwide wireless entertainment market will reach \$76 billion in 2005.

According to a new study by IDC (a large market research firm) cable modems will be used by 57.5 million subscribers worldwide by 2005. Cable modems grew about 178 percent to 7.2 million customers in 2000. The United States represents 53 percent of the global cable modem market.

"Work-at-home employees and power Internet users sparked demand for cable modems in the residential market," IDC said. "Future growth will be driven by the prevalence of image-rich and video-rich applications on the Internet."

In their Sixth Annual Report on the State of Competition in the Wireless Marketplace, the FCC said the mobile phone/data industry continues to experience increased competition and innovation, translating into lower prices and an expanded assortment of services.

Digital mobile phone customers now make up 62 percent of the wireless market, up from 51 percent at the end of 1999 and 30 percent in 1998.

The report also found the sector generated more than \$52.5 billion in revenues last year with the total number of subscribers increasing by 27% ...from 86 million to 109.5 million. The nationwide cellphone penetration rate now stands at

about 39%. The FCC said 259 million people - almost 91% of the total U.S. population - now have access to three or more different wireless service operators.

"Many analysts expect that the development and deployment of advanced wireless or Third Generation (3G) services will increase the growth of mobile data services over the next several years. ...At least six carriers expect to begin deploying network technologies during late 2001 and early 2002 that will allow for mobile Internet access speeds at up to 144 kbps."

COMPUTER INFO

IBM has unveiled the world's highest resolution, flat-panel computer monitor -- enabling photograph-quality imaging for business-critical tasks. The 22-inch screen has 9 million pixels (200 pixels an inch) -- 12 times current highest resolution monitors. But few will rush out to buy it. At least not yet. Cost is a mere \$22,000.

The new technology is geared toward medicine, weather forecasting, finance, graphic design, satellite mapping and engineering. It also needs a special computer to handle so much data. Eventually the price will come down so the technology can be used in mainstream monitors. See: <<http://www.ibm.com/>>

INTERNET NEWS

There is no need to call an airline or airport to get departure, arrival, delay or schedule change information. (Schedule changes includes flights that are cancelled, re-routed or re-scheduled.)

You can get free up-to-the-minute information from <<http://www.FlightArrivals.com>> and <<http://www.trackaflight.com/>>.

These handy "real time" sites cover all commercial airline flights operating to/from/within the United States. There is also a variety of search options that allow you to find flight info even without knowing the flight number.

Boeing's fledgling in-flight two-way "Connexion" Internet service is to be installed on 500 American, Delta and United Airlines aircraft. The key to the service is the Boeing proprietary phased array receive and transmit antenna. Rollout is scheduled for mid- 2002. It

will cost \$20.00 an hour to connect to the satellite-based service.

The two-way high speed (up to 5 MBps) broadband service will allow e-mail access, Web browsing ...as well as live TV and entertainment services, while in flight.

The service is targeted at business travelers with laptops. Market researchers say that by 2010 about 1.5 billion passengers a year will cart laptop computers onto commercial airliners. Airborne broadband services is a potential \$70 billion market.

Already the largest and fastest search engine on the Web (averaging one-half second), Google is looking to be even faster. The giant Web search engine, will relocate its servers to Metromedia Fiber Network sites in Jose, CA and McLean, VA.

Google uses a proprietary software robot called "Googlebot" to identify, evaluate and rank (by importance) more than a billion pages of content on the web.

The word "Google" is a play on the word "googol," a number represented by "1" followed by one hundred zeros. And check out the Google graphic image site: <<http://images.google.com/>>.

America Online, the World's leading interactive service, now has 30 million subscribers. It took 10 months to go from 20 to 25 million, only 8 months to add another 5 million. (Six million subscribers are in foreign countries.) Microsoft's MSN service is a distant second at just over 5 million customers.

Yahoo! is adding video to its Instant Messenger service so users will be able see each other as they communicate over the computer. People who use the new feature will be able to preview their own images prior to sending them, can pause their Webcams to control the images they send and determine who on their 'Friends List' may see their own images. The big three in Instant Messaging are AOL, MSN and Yahoo.

Get ready for the new Internet domain land rush! The *Internet Corporation for Assigned Names and Numbers* (ICANN) has finalized agreements to integrate the ".biz" and ".info" generic top-level domain (gTLD) names into its addressing system.

VeriSign, Register.com and Neulevel, Inc., have already begun accepting registration applications from companies for the new ".biz" domain name. Up until recently, Network Solutions had a

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monopoly in the registering of Web addresses. The new domain names will start showing up on the Internet after October 1st. (Copyright issues will be resolved by then.)

Due to the competition, the costs will be much lower. For example, Verisign charges only \$5 per ".biz" domain name application. Eventually there will be dozens of accredited registrars with whom you can reserve a ".biz" Web address.

The ".biz" domain is one of seven new global top-level domains created last year to meet the demand for more Web addresses. Other registrars will begin selling the new ".info" domain this fall ...followed by ".pro" for professionals; ".name" for personal use; ".coop" for cooperatives; ".museum" and ".aero" for aeronautical.

Nevada casinos are heading to the Internet. On June 13th, Nevada Governor Kenny Guinn signed legislation that enables casino gaming over the Web. The Nevada Gaming Control Board and state Gaming Commission are now designing the regulatory framework aimed at controlling Internet gambling ...a process estimated to take some two years.

The games may only be conducted from states that do not prohibit gambling. (There is legal gambling in 47 of the 50 states.) Nevada hotel-casinos can apply to conduct Internet gambling after paying a \$100,000 application fee and \$500,000 for a two-year license. Licensees also pay a 6.25 percent state gambling tax on gross revenues. Manufacturers of interactive gambling devices pay a \$250,000 license fee. The high fees are to ensure that only the "healthiest" casinos enter the new and volatile market. It could be a huge windfall for the State of Nevada.

The U.S. Department of Justice contends that existing laws already ban American companies from offering Internet betting. They say that the Wire Wager Act, passed in the early 1960's to crack down on bookies taking and making bets over "wire communication facilities" across state borders, prohibits interstate betting over the Internet as well.

But that position took a hit last February when a U.S. District Court judge in New Orleans ruled that non-sports Internet gambling is not illegal under federal law. And what about the emerging wireless Internet?

Casino executives think there is a huge untapped market for legal Web wagering. Experts estimate that revenues from Internet gambling -- largely conducted by offshore companies because of a U.S. ban

-- reached \$1.5 billion last year and could reach \$6 billion by 2003.

WASHINGTON WHISPERS

The June 21st Wall Street Journal tells how keynote speaker FCC Chairman Mike Powell bounded onto the stage at the national cable television convention in Chicago "and did a full somersault. Mr. Powell, clad in his usual suit and tie, landed squarely on his feet to cheers and thunderous applause."

The FCC chairman made his entry on the heels of a performance by the Jesse White Tumbling Team, a group that often entertains the crowds at Chicago Bulls basketball games. "They dared me backstage to do that, and I'm not one to shrink from a challenge," Mr. Powell, a gymnast in college, explained to the crowd. "I had to do it." What made Mr. Powell's feat all the more amazing is that he has a fused spine, the result of a severe back injury that caused him to leave the military many years ago.

The Dept. of Defense appears interested in selling spectrum - In recent months, the Defense Department has come under increased pressure from Congress and private cellular companies to relinquish or share some of its valuable wireless spectrum. This has prompted a report by DoD arguing that preserving its limited spectrum is crucial to national defense missions.

With the growing use of wireless technologies, the United States is unique in that there is no spectrum policy in place to balance national security with commercial uses of frequency spectrum.

This puts the Defense Department in a vulnerable position, says Rear Adm. Robert Nutwell, a deputy assistant Secretary of Defense. He says the DoD spectrum allocation is being viewed as "beachfront property" by the cellular industry.

Nutwell believes full-band sharing is not feasible, but the DoD could vacate some parts of the spectrum under conditions that would include reimbursement for the space and finding comparable spectrum for the DoD. (Reported by Government Computer News, <<http://www.gcn.com>>.)

Military May Give Up Spectrum - At the urging of the Cellular Telephone Industry Association, Rep. Charles "Chip" Pickering (R-Miss.) will sponsor a bill written by the CTIA provid-

ing for the sale of military spectrum to commercial wireless operators.

The bill was a result of Defense Dept. comments that it would part with some of its airwaves "if the price was right." The proposed legislation would create a spectrum advisory committee to help the Commerce Department and the FCC identify and allocate the spectrum.

The Pentagon wants to use the proceeds to modernize its telecommunications equipment. Wireless companies need the spectrum for advanced Internet services. The spectrum being considered is in the 1.8 GHz band.

But officials at the Defense Dept. say the spectrum can't be transferred until 2010, and some satellite-based licenses can't be moved until 2017. (Reuters)

FCC and Commerce Dept. to go after military spectrum. On June 27th, FCC Chairman Mike Powell wrote a letter to the Commerce Dept. (which oversees government use of the airwaves) suggesting that the scheduled September 2002 auction of next generation wireless spectrum be delayed.

The so-called "Third Generation" will deliver the always-on high-speed Internet to wireless phones and handheld devices. The ITU calls it the International Mobile Telecommunications 2000 (or IMT-2000) service.

It unites the two most important telecommunications revolutions of the past decade: mobile devices (such as wireless cellphones) and the broadband Internet. A decision on 3G frequencies was supposed to have been made on July 30, 2001.

The U.S. would like to use the same spectrum that is used in other countries to make it possible for consumers to use their 3G handsets in other parts of the world. Harmonization of frequency bands will also provide economies of scale that lower the cost of equipment and services.

WRC-2000 (Istanbul, Turkey) identified three bands for IMT-2000 (3G) systems: 698 to 960 MHz (currently used in the U.S. for UHF-TV broadcasting), 1710 to 1885 MHz (primarily used by the Dept. of Defense), and 2500 to 2690 MHz (allocated to MDS/ITFS broadband and educational video programming.)

The original thinking was that bands currently occupied by television stations broadcasting analog TV signals might be freed up for wireless use. Broadcasters were to return their analog channel to the FCC for auctioning once the transition to digital TV was mostly complete.

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But the transition from analog to digital TV broadcasting has not been going as well as planned and it is unclear whether the analog spectrum will be available.

It now appears that a major effort will be underway to land some of the Pentagon's coveted frequencies. The 1755 to 1850 MHz band is being targeted.

Powell said the agency needed more time to consider its options which could mean a delay in the auction date.

Here is what the ITU envisions that the 3G wireless handset will be like:

"This new device will be compact enough to fit unobtrusively into a pocket or handbag, and will seamlessly integrate the functions of a whole range of different equipment.

"It will function as a phone, a computer, a television, a pager, a videoconferencing center, a newspaper, a diary and even a credit card.

"The new personal communicator will support not only voice communications, but also real-time video and full-scale multimedia via a screen that can be pulled-out and flexible.

"It will also function as a portable address book and agenda, containing all the information about meetings and contacts and able to remind you automatically before an important appointment or automatically connect to an audio or videoconference at a specified time.

"It will automatically search the Internet for relevant news and information on pre-selected subjects, book your next holiday for you on-line, and download a bedtime story for your child, complete with moving pictures.

"It will even be able to pay for goods when you shop via wireless electronic funds transfer.

"In short, the new mobile handset will become the single, indispensable 'life tool', carried everywhere by everyone, just like a wallet or purse is today."

Early reports indicate that the Internet will continue as a tax-exempt zone until 2006. In 1998, Congress passed the *Internet Tax Freedom Act* (ITFA), which (among other things) established a three-year moratorium on any new taxing of purchases made over the Internet. The current moratorium on new taxes expires in just three months, October 21, 2001.

Congress still has not yet decided what they will do. Needless to say, the

states want to implement some sort of system to collect sales taxes on Internet purchases. They claim that traditional stores are at a competitive disadvantage when they must tax a product that can be purchased over the Web tax-free.

Based on Internet sales projections, lost revenue in unpaid sales tax from on-line transactions could reach \$10.8 billion by 2003. Sales tax revenues currently amount to about \$150 billion annually and, on average, make up approximately one-third of all state revenues.

Actually, the moratorium did not address sales taxes which are governed by a Supreme Court decision which holds that a seller must have a "physical presence" in a state in order to require collection. Taxes are really still supposed to be paid by the buyer; they are then called a "use tax" rather than a "sales tax." But they are basically uncollectible.

It is now starting to look like the temporary ban on e-commerce taxation will be extended for another three to five years. A Senate committee considering the issue concluded the sales tax issue is far too complicated to address this year.

Furthermore, many Republicans say that imposing a sales tax on Internet purchases would be tantamount to a tax increase. Virginia Gov. Jim Gilmore, who headed up Congress' 19-member *Advisory Commission on Electronic Commerce*, believes no Internet taxation is necessary. He is also chairman of the Republican National Committee.

Various bills have been introduced that would make the moratorium permanent (S328, S1611 and HR 3252). On the other hand, Sen. Ernest Hollings (D-SC) wants to impose a 5% national sales tax on Internet sales (S1433).

Any legislation to change the current situation would still have to pass both houses of Congress and anything that 'smells' like new taxes has little chance of passage in the Republican-led House. Rep. Billy Tauzin, R-La., chairman of the House Commerce Committee said "I really don't see us doing much more than extending the current law." That isn't sitting well with local and state governments ...and "brick-and-mortar" retailers.

AMATEUR RADIO

Even though the Phase 3D/AO-40 Amateur Satellite has been anything but a success, **AMSAT is already looking**

ahead to the next bird. AMSAT-NA President Robin Haighton, VE3FRH, says AMSAT's newest satellite project could be launched within three years. Design work on the new satellite is already underway.

The new satellite will not be a low-Earth-orbiting bird but will have an elliptical orbit very similar to the current AO-40 orbit which would provide up to 17 hours of usage out of every 24. The new satellite is code-named "Project JJ" after the two people who came up with the idea -- Lyle Johnson, KK7P, and Dick Jansson, WD4FAB. AMSAT has already started contacting launch agencies.

The most recent IARU Region 2 News tells about how a Swedish sailboat skipper was shot when pirates accosted his vessel March 20 off the coast of Venezuela, remains hospitalized in Trinidad. The victim has been identified as Bo Altheden, SM7XBH, of Bjärred, Sweden. Hams on the *Maritime Mobile Service Net* assisted Altheden and his wife, ViVi-Maj Miren, after Miren put out a call for help on 20 meters.

One of the hams who assisted in coordinating the rescue, Eric Mackie, 9Z4CP, of Trinidad, met with Miren aboard the couple's vessel in Trinidad and was able to learn additional details about what happened. According to what Miren told Mackie, the couple was en route to Trinidad and Tobago and having lunch around 12:30 PM Atlantic Standard Time when their 44-foot-ketch Lorna was approached by six men in a fishing boat.

"The vessel approached from behind, pulled alongside and Bo went out on deck to see what they wanted," Mackie related. "They asked for cigarettes, and Bo said they did not smoke."

Sensing trouble, Altheden started back toward the helm with the intention of pulling away from the other vessel -- a fishing boat. But as he turned away, the intruders shot him once in the back. Miren told Mackie that the bullet wound caused considerable internal damage and bleeding. At that point, the pirates boarded the Lorna and helped themselves to what was on board.

According to Mackie, the pirates' booty amounted to less than \$20 in cash and a few miscellaneous items. Before leaving, the pirates destroyed two VHF radios but missed the HF radio -- an SGC SG-2020. Miren fired up the transceiver and found her way to 20 meters, where she located the *Maritime Mobile Service Net* on 14.300 MHz. Her calls for help

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eventually were heard, although some on frequency later said they'd worried that her pleas might be overlooked. Mackie and others broke in to alert the Net to her calls -- made nearly three hours after the shooting.

Mackie also was able to contact the Trinidad and Tobago Coast Guard, which came on frequency to speak with the Lorna directly, he said.

As it worked out, vessels from the Venezuelan Navy and the Trinidadian Coast Guard arrived on scene at approximately the same time. While a medical team from Trinidad was able to board the Lorna, it was decided to wait until the vessel was in calmer waters before attempting to transfer Altheden to the Coast Guard vessel. Altheden remains in critical, but stable, condition at St Clair Medical Center, a private hospital set up to deal with trauma cases.

The shooting was an eerie reminder of a similar pirate attack one year ago in the Caribbean. In that incident, March 28, 2000, armed marauders shot young Willem van Tuijl from the Netherlands, who was sailing with his parents at the time.

The week of June 11th was a rough week for the QRZ website. If you had trouble reaching them, here is the story. First, the company that was handling their secure credit card processing went out of business. This meant that their online license renewal system was shut down, and no QRZ products could be sold. A new credit card processing provider (Verisign) had to be quickly found and new software implemented.

Then on Thursday, June 14th QRZ's FAX, DSL and T1 Internet connection went dead. A nearby Horizontal Boring Machine that was drilling holes for fiber optic cable severed a huge cable containing 1500 telephone and data lines. It took some time to splice and seal up the cable. But everything is now back online and QRZ.com is working as good as ever!

Know what's happening (and planned to happen) on the various VHF and higher radio frequencies.

Authored by Washington, DC-based Benn Kobb, KC5CW, "The Wireless Spectrum Finder" is a 500-page reference handbook that tells you which radio services use the more than 350 bands in the U.S. between 30 MHz and 300 GHz. We find it invaluable when doing research on the spectrum allocations for the various radio services and the FCC regulations that apply. There is also an interesting section on Ultrawide-

band Radio (UWB) and Software-Defined Radio (SDR). Kobb holds a Masters Degree in Telecommunications from the Univ. of Colorado. From McGraw-Hill Telecom (ISBN: 0071375066) \$49.95

FCC Amateur Radio Enforcement

The FCC has revoked both the GMRS (KAE1170) and General Class licenses of Leslie D. Brewer, KC4HAZ (Tampa, Florida) and fined him \$11,000 for repeatedly operating an FM "pirate radio" station and marketing illegal broadcast transmitting equipment. The commission concluded that Brewer "...lacks the basic character qualifications to be and remain a Commission licensee."

Brewer owns a 2-way radio electronics shop in Tampa, Florida and assembles radio equipment.

On January 10, 1996 FCC Tampa field office engineers traced a pirate FM station broadcasting on 102.1 MHz to Brewer's home. He was issued a warning about unlicensed operation. Brewer said that any further operation would be under Part 15 low-power guidelines.

But a month later, the FCC found him once again operating his unlicensed FM station. Field strength readings by the FCC showed operation at levels higher than authorized under Part 15. Even though Brewer questioned the accuracy of the reading, he was fined \$1,000.

Brewer continued his pirate operations throughout 1996 and into 1997. When a Sarasota, Florida FM station (WHPT-FM 102.5 MHz) complained of interference, the FCC and U.S. Marshals Service raided his home on November 19, 1997 and confiscated his FM transmission equipment.

The record shows that Brewer attempted multiple times to legally apply to operate an FM station. On November 8, 1999 while one of his applications was pending, Brewer resumed his unlicensed "pirate" broadcasts on 102.1 MHz.

This time it was from a warehouse in a Tampa shopping mall. Cancelled checks showed Brewer had leased the warehouse space. Subsequent monitoring indicated he was using an unlicensed studio-to-transmitter (STL) link on 950.0925 MHz to route the FM programming from his home to the warehouse.

In addition to operating pirate FM and STL facilities, Brewer also sold unauthorized FM broadcast transmitting equipment. When confronted, Brewer denied the accusation. But during the fall of 1998, FCC undercover agents were able

to purchase a 20-watt FM transmitter for \$560 from him. This resulted in another \$10,000 fine "...for selling an unauthorized radio frequency device."

A "Show Cause" order was issued on March 5, 2001 and Brewer was given an opportunity for a hearing. He failed to appear or respond and on June 26, 2001, the FCC released a the revocation and forfeiture order.

"Operating unlicensed radio facilities in deliberate and brazen defiance of our rules cannot and will not be tolerated." FCC said. He was ordered to pay the \$11,000 fine within 30 days or face action by the Department of Justice.

The Gary L. Gribble Trucking Company (Rockwood, PA) has been issued a warning for their alleged unlicensed operation on the ten meter ham band. The FCC said the trucking company had been monitored while enroute to - and parked in - Albany, NY. Such unlicensed operation could subject them to imprisonment, a \$7500 to \$10,000 fine and seizure of the transmitting equipment.

Lester M. Killingsworth KE6WSC (Hollywood, CA), a user of the notorious W6NUT repeater has been notified that the FCC has begun enforcement action against his Amateur license. The Commission said that he is not only "seriously misinformed about the basis and purpose of the allocation of spectrum for Amateur Radio" but also about the "Commission's enforcement of the prohibition against obscene or indecent Amateur radio transmissions as well."

"Obscene speech is not protected by the First Amendment and cannot be broadcast at any time." The Commission released a transcript of Killingsworth's May 17th transmission on 147.435 MHz and it indeed fits the three prong obscene material test:

"(1) an average person, applying contemporary community standards, must find that the material, as a whole appeals to the prurient interest,

"(2) the material must depict or describe, in a patently offensive way, sexual conduct..., and

"(3) the material, taken as a whole, must lack serious literary, artistic, political or scientific value."

Indecency is defined "...as language or material that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards, sexual or excretory activities or organs."

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FEDERAL TRADE COMMISSION IS KEPT BUSY DEALING WITH INTERNET SCAMS AND ILLEGAL PYRAMID SCHEMES

On June 18th, the FTC took steps to halt what it believes is the unlawful multi-level marketing operations of Tulsa-based <www.SkyBiz.com>. The agency charged that their sale of online tutorials on building Web sites is actually a massive illegal pyramid scheme which may have conned consumers around the world out of approximately \$175,000,000. The firm started business in 1998.

The four Oklahoma companies named in the federal lawsuit are SkyBiz.com Inc.; World Service Corporation; Nanci Corporation International; and WorldWide Service Corporation. SkyBiz says it operates in 200 countries ...several of which have – or are in the process of – taking legal action against the firm. The FTC is seeking to shut down the company and return money to consumers. The FTC said their suit is not a finding or ruling that the defendant has actually violated the law and that "The case will be decided by the court."

Many of the sales leads that SkyBiz "Associates" obtain apparently came from sending out spam. It reportedly caused many complaints against SkyBiz and the firm advised "members" not to send out spam and or put any of the following names in any unsolicited e-mails: SkyBiz, Skynary, Skybusiness, Skyfamily, familyontheweb, companyontheweb and skyboom ...or any domain names hosted by SkyBiz.

These sites are directed at churches, families, companies ...you name it. These domain names are in the process of being changed to: skywebsite.com, skywebbiz.com, skywebfamily.com, skywebco.com and myskyfamily.com. SkyBiz is a huge, international operation!

The FTC says that SkyBiz has promoted the work-at-home business opportunity with claims of quick riches. The agency said that SkyBiz charges \$125 to buy an "e-Commerce Web Pak," (we saw \$100) which in reality is to purchase the right to receive compensation for recruiting additional downline participants. SkyBiz says it returns \$70 to "associates" for every \$100 web site package sold to new signups.

SkyBiz hosts thousands of web sites, with many – perhaps most – trying to get others to purchase the SkyBiz 2000 site building kit and participate in their "Home Based Business Program." These sites have a link to the SkyBiz corporate site where visitors are told about the business and invited to complete a form.

SkyBiz continues to operate and is treating the FTC charges as a very temporary obstacle. But it is holding up commission checks -- including those issued but not yet cashed since its assets have been frozen by the court. The firm has also advised that until further notice "all corporate functions including meetings, conventions, etc. will not have a corporate presence" and their upcoming programs have been put on "hold" while they deal with their "legal activities." The firm has issued the following state-

ment to their member "associates":

"The FTC's announcement of the charges was improper because the case is still in the courts, and we certainly deny that there is any illegal scheme.

"The Burden of Proof has been placed upon the FTC to prove SkyBiz as an illegal pyramid scheme, and they have acted prematurely in their accusations. As you, the associates, know we do create and sell products and services that have immense value, worth much more than the low annual fee paid. Additionally, associates are compensated by the sales they create, not by the associates they recruit."

"Additionally, we would like to assert that statements made were unfounded and untrue."

SkyBiz has also placed a new "pop up" box on their website with the following policy statement:

"It is a violation of company policy to make any kind of statement regarding the potential for income or any other kind of income representation -- personal or otherwise. Any Associate found making any such statement or representation in person or on websites, printed material, recorded audio messages, video, e-mails or business presentations, will have his/her earnings immediately suspended and website(s) disabled."

SkyBiz is not the only multi-level marketer (MLM) specializing in web site building on an international basis. Another operated by a subsidiary of New Vision International of Tempe AZ is: <<http://ivision.evisionbiz.com>>.

● **The FTC filed suit in U.S. District Court against <www.rhinopoint.com> to halt a deceptive Internet access fee scam** which "...conned consumers into paying membership fees ranging from \$10 to \$16 and turning over sensitive personal and financial information by deceptively claiming it would pay their Internet access fees." The network members had to agree to complete monthly marketing surveys.

The FTC said at least 59,000 consumers enrolled but that the access fees was paid in only a very few cases. The suite names New Millennium Concepts, Inc., doing business as Rhinopoint.com and Karl V. Kay of Hoffman Estates, Illinois. A preliminary injunction prohibits misrepresentations, freezes the defendants' assets, and bars the use of the consumer data, pending trial.

The FTC alleges that the operation pocketed about \$500,000 in "set-up" fees, but did not follow up with "marketing surveys" or pay Internet access fees for most of the consumers. court documents say.

The FTC is seeking a permanent halt to the scam, a ban on the use of the consumers' personal and financial information, and return of membership fees and personal information.