W5YI

Nation'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 reproduced providing credit is given to The W5YI Report.

Fred Maia, W5YI, Editor, P.O. Box 565101, Dallas, TX 75356-5101
Tel. 817-461-6443 Electronic mail: 351-1297@mcimail.com

★ *In This Issue* ★

Vol. 17, Issue #7 **$1.50** PUBLISHED TWICE A MONTH **April 1, 1995**

FCC Allocates 219-220 MHz for Use by Amateurs

"...we are allocating the 219-220 MHz band to the amateur service on a secondary basis for point-to-point fixed digital message forwarding systems. This allocation will foster technological experimentation and innovation, particularly with the higher data rates, and will facilitate the construction of regional and/or nationwide packet data backbone networks that can be used for emergency communications purposes." [FCC Report & Order, released March 17, 1995.]

In an action that caught some by surprise, the FCC Commissioners released an Order on March 17th that allocates a one megahertz slice of the 1.25-meter band for amateur point-to-point digital message forwarding systems including intercity packet backbone networks.

The FCC said "This allocation will alleviate congestion that amateurs are experiencing in certain areas of the country in the 222-225 MHz band and will facilitate establishment of regional and nationwide networks for amateur digital packet communications."

The lengthy (22-page single-spaced) *Report and Order* authorizing the spectrum allocation to the Amateur Service contained a rather complicated regulatory plan to ensure that amateurs do not interfere with other users of the band.

Background

The Amateur Service has used 1.25 m spectrum since the 1930's. The service was allocated the entire 220-225 MHz segment in 1946; prior to that the Amateur Service occupied 235-240 MHz. In 1958, the amateur allocation was reduced to secondary with military use primary. WARC-79 established 220-225 MHz as "...co-primary amateur, fixed and mobile" within ITU Region 2 (North and South America.)

In 1988, the 220-225 MHz shared band was divided into two exclusive use segments. The lower two megahertz was allocated to "...spectrally efficient..." narrow-band business use with the Amateur Service obtaining 222-225 MHz on a primary basis. Amateurs were ordered to vacate the 220-222 MHz segment by August 27, 1991. More than 550 *Petitions for Reconsideration* were rejected by the Commission.

The FCC did say, however, "...it would entertain a request for replacement spectrum ...acknowledging that in certain areas of the country, some relief was justified. [Any request] "...would need to provide support why an allocation is needed and show how amateur operators could use this band without causing interference to existing users..."

After a series of tests, the American Radio Relay League petitioned the Commission seeking access to the 216-220 MHz band on a non-interference secondary basis it said it needed to relieve crowding in the 1.25 meter band and to establish digital packet backbone networks. The petition was accepted and assigned RM-7747.

THE W5YI REPORT [Pub. No. 009-311] is published twice monthly by The W5YI Group, 2000 E. Randol Mill Rd, #608A, 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.)
Second Class Postage paid at Arlington, TX. **POSTMASTER:** Send address changes to THE W5YI REPORT, P.O. Box 565101, Dallas, TX. 75356

The League said the loss of the 220-222 MHz band "...left the Amateur Service without a reasonable substitute for high speed links and the development of a truly unique nationwide communications system with unparalleled emergency preparedness and national defense capabilities."

It pointed out that packet radio had grown significantly and that "wider bandwidths necessary for intercity packet radio operation (due to the speed of the communications and the volume of traffic which must be relayed) cannot be accommodated in other amateur bands either below 216 MHz because of extensive loading, skywave interference, and/or regulatory characteristics of those bands, or above 222 MHz because of band loading, sharing, or path length considerations. ...The 420-450 MHz band cannot support the path lengths of 60-100 miles necessary for such links due to propagation limitations."

ARRL said its analysis proved that amateurs would be able to peacefully co-exist with other users of the band. To prove their point, the League conducted laboratory tests involving TV Channel 13 reception and commissioned a private research study which looked into spectrum sharing possibilities at 216 to 220 MHz.

The ARRL did agree, however, that amateur activity would have to be controlled. "It would not be advisable for amateurs to be able to access the band without prior coordination...." The League said they were willing to assume this function. A power level of fifty watts PEP was proposed. The petition has been under consideration for nearly four years!

The 216-218 and 219-220 MHz band are currently allocated to the Maritime Mobile Service for Automated Maritime Telecommunications Systems (AMTS.) Coast and ship stations use these bands for inland waterway communications under Part 80 of the Commission's Rules.

The 218-219 MHz band is to be used by the new Interactive Video and Data Service (IVDS) - a two-way personal radio system that will allow TV viewers to "talk back" to television stations and broadcasts. IVDS is delivered by video ...including cable, broadcast TV and DBS, direct broadcast satellites. In addition, certain other services (such as wildlife telemetry) have secondary access to the 216-220 MHz band.

In a February 26, 1993, *Notice of Proposed Rulemaking,* the FCC agreed that there is a need for additional spectrum for amateur wideband digital packet networks. They said, however, they "...were also concerned that amateur use of the 216-219 MHz portion could result in harmful interference to primary service on and adjacent to those frequencies." Therefore, the FCC proposed the 219-220 MHz segment for secondary amateur use.

Discussion of the comments

The FCC said the majority of the comments supported their initial assessment of the need to allocate additional spectrum to the amateur service. ARRL said the NPRM was "...a reasonable attempt to alleviate the frequency congestion in the 222-225 MHz band." In addition, most (but not all) commercial users of the band also believed the allocation was necessary ...especially for public safety and emergency communications. ARRL felt that only digital signals should be authorized.

The FCC said it was encouraged by ARRL's band plan to organize a high-speed, nationwide digital communications network that would use the 219-220 MHz band where available, and other connections where it is not.

The FCC concluded that amateurs could indeed share spectrum with the primary AMTS (inland waterway) traffic and adopted rules that preclude amateur 219-220 MHz operations within 80 kilometers (about 50 miles) of AMTS stations without the AMTS licensee's approval. The FCC also will require that AMTS stations be notified of all amateur operations within 640 km. (about 400 miles.)

"We believe that by using directional antennas, frequency separation, cross polarizations of signals, and other interference avoidance techniques, amateurs will be able to establish interference free operations," FCC said.

"...we continue to believe that amateurs will maintain the integrity of their operations and enforce sound engineering practices. We note that the amateur service has a long history of successfully sharing with other users."

Technical standards

The Commission agreed with the ARRL that only digital communications should be permitted in the 219-220 MHz band. It also went along with their 50 watt power limit and recommendation that only licensees holding Technician or higher class licenses be permitted to use the 219-220 MHz band. "...we find that 100 kilohertz channels are appropriate for amateur fixed point-to-point digital communications at 219-220 MHz."

The FCC proposed in the Notice that "...local volunteer amateur coordinators that already address operations in the 222-225 MHz band [should] coordinate amateur secondary operations in the 219-220 MHz band." The Commission felt they were "...qualified to handle any coordination task that may be necessary because the same coordination principles, based upon radiated power, distance and type of signal modulation that are applicable to coordinating

amateur operations are applicable to coordinating amateur operations with non-amateur operations."

The FCC did, however, feel that there should be a single national contact point to a database of operations which could be provided to anyone investigating interference. Since the ARRL volunteered, "...we will require that all amateurs notify the ARRL of operations in the 219-220 MHz band thirty days prior to initiation of operations," FCC ruled. "We are specifying in our rules that ARRL maintain a database of these operations and provide coordination services or assistance to amateur planning to utilize the 219-220 MHz band."

"...amateurs will be required to resolve immediately any complaint of interference to an AMTS station or, alternatively, to cease operation. ...amateur operations in the 219-220 MHz band are not permitted to interfere with, nor are they protected from interference by, primary service operations in and adjacent to the 219-220 MHz band." The new rules become effective 30 days after publication in the Federal Register.

HAM RADIO ANTENNA CONDOMINIUM LAWSUIT

Two years and $50,000 later, the antenna lawsuit between Donald Stoner, W6TNS and 440 West, Inc. still has not been resolved. The dispute started in February, 1991, when the Stoners purchased a condominium penthouse in the 440 West complex on Gulfview Blvd. in Clearwater Beach.

Stoner, a ham radio operator for more than 40 years, wanted to operate his station from their new home which required placing an antenna on the roof of the condo. Over the years, Stoner had developed friendships with hams all over the world. Without an antenna for his station, he was not able to maintain his daily contacts with overseas stations.

The Stoners allege they are misled by the Board that permission of the unit owners was required to permit a ham radio antenna. In actual fact, the condominium documents only discussed television and said nothing about ham radio antennas.

But in a spirit of cooperation, Stoner has continued to negotiate with the Board. However, after being continually rebuffed by the Directors, the Stoners initiated a 40-page lawsuit against the Association in January of 1993, claiming a violation of their civil rights and an unreasonable restriction of their freedom of speech.

At the direction of the court, the lawsuit went into mediation late in 1994. The mediation attempts unraveled when 440 West Directors insisted the Stoners indemnify the Association if they granted permission for the antenna. The Stoners maintain they are neither a bank nor an insurance company, and there is nothing in the condominium documents requiring indemnification. Recently, the President of the Board declared an impasse. The case is now headed towards trial.

More recently the situation has taken a nasty turn. The Board blocked off access to the roof of the building to specifically prevent Stoner from putting up an antenna. However, this action also blocked a fire escape route for the Stoners, and Mrs. Stoner's 86 year old mother, who has heart problems.

Since Stoner is physically disabled, their attorney is currently looking to the Federal Government for relief in this extraordinary situation. He believes he has an excellent case to attack restrictive covenants in general and that the case can be moved into Federal Court.

In preparing for the case, W6TNS had difficulty finding information that would be useful in attacking this problem. Generally these situations do not create case law that can be referenced by attorneys. Stoner wants to help others with similar problems by starting a central repository of current information for other Amateurs with similar problems. "I believe the time is optimum to create a database of information on CC&Rs," he said.

W6TNS has now decided to underwrite the costs of placing this database on the Internet, along with the on-going maintenance of same. It will be accessible from all the popular services such as CompuServe, Prodigy, America On-Line, etc. He has also mentioned this to the ARRL's attorney, Chris Imlay, N3AKD and he concurs that it could be a worth-while service.

The database will not be connected with any organization. There will be provision for downloading the stored documents and information. He'd also like to include a section listing attorneys who are active in this area. The information will be divided into two principal areas, i.e. the customary antenna and tower problems where restrictive covenants are not involved.

A second area will be related to those who cannot operate (or must resort to subterfuge - i.e.. hidden antennas) because of restrictive covenants. Anything published in the database would be public domain.

Stoner requests comments and suggestions on the idea. He wants the presentation to be as professional and useful as possible. Any attorneys who would like to be listed, or who may have useful information, should contact Don Stoner, W6TNS. He prefers to receive information in machine readable form (i.e. computer disk in any word processing format). W6TNS may be reached by e-mail at dstoner@tpa.cent.com. From MCI mail, select the EMS option and type INTERNET. At the MBX prompt, type the email address. His mailing address is: Donald L. Stoner, W6TNS P.O. Box 3081 Clearwater Beach, FL 34630. FAX number is (813) 446-9634. The attorney handling his case is Mr. Richard Heiden, Esq. of Kimpton Burke & White. His phone is (813) 791-0063 and the FAX number is (813) 796-0909.

JANUARY 1995 AMATEUR LICENSING STATISTICS

January	1992	1993	1994	1995
First Time Licensed				
New Novices	655	1288	187	211
New Tech's	3318	3381	2179	3312
New Tech Plus	N/A	N/A	N/A	375
New General	42	48	26	38
New Advanced	9	8	5	10
New Extra	6	3	1	7
Total New	***4030***	***4728***	***2398***	***3953***
Upgrading: (Changed Class)				
Novices	921	630	237	9
Technicians	637	763	478	847
Tech Plus	N/A	N/A	N/A	832
Generals	417	389	237	650
Advanced	279	259	186	451
Total:	***2254***	***2041***	***1138***	***2759***
Renewals: (All Classes)				
Total Renew:	62	82	1500	3326
Census:				
Indiv. Oper.	***547139***	***592378***	***631726***	***678610***
Change/Year	+45006	+45239	+39348	+46884

Individual Operators by Class: (and % of total)

Extra	Advan.	General	Tech.*	Novice	Total:
January 1988		(*=Includes all Techs)			
43970	98408	113958	**93675**	82400	***432411***
10.2%	22.7%	26.3%	**21.7%**	19.1%	100.0%
January 1989					
47221	99164	113823	**102931**	81028	***444167***
10.6%	22.3%	25.6%	**23.2%**	18.3%	100.0%
January 1990					
49950	101370	116329	**114505**	84400	***466554***
10.7%	21.7%	24.9%	**24.6%**	18.1%	100.0%
January 1991					
53941	105411	119905	**127785**	95091	***502133***
10.7%	21.0%	23.9%	**25.5%**	18.9%	100.0%
January 1992					
57809	107868	122786	**161588**	97088	***547139***
10.6%	19.7%	22.4%	**29.5%**	17.8%	100.0%
January 1993					
61615	110089	125568	**195385**	99721	***592378***
10.4%	18.6%	21.2%	**33.0%**	16.8%	100.0%
January 1994					
65392	112339	126570	**229130**	98295	***631726***
10.4%	17.8%	20.0%	**36.3%**	15.5%	100.0%
January 1995					
69495	115882	129356	**265570**	98307	***678610***
10.2%	17.1%	19.1%	**39.1%**	14.5%	100.0%

Note: Above figures do not include approximately 2400 Club, RACES & Military Recreation amateur stations)

[Source: FCC Licensing Facility, Gettysburg, PA]

NEW AMATEURS BY MONTH - LAST 4 YEARS

(Number of First Time Licensed Amateurs)

Month:	1991	1992	1993	1994
January	1816	4030	4728	2398
February	2162	4092	3880	2589
March	2656	4806	4239	3010
April	5749	5215	3290	1773
May	4714	4178	5035	2920
June	3231	5957	5978	*3000
July	4676	3843	2125	2297
August	4121	3003	3787	*3000
September	2407	2732	5403	*3000
October	4501	2035	2754	2973
November	2687	1525	1930	2636
December	3940	3332	3037	3919
TOTAL	**42660**	**44748**	**46186**	***33515**

* = Estimated. Apparently we are going to start getting amateur radio licensing statistics again from the FCC. During mid-1994, the FCC in Gettysburg replaced their old licensing computer and implemented a new amateur service data processing system. Many of the reports that were previously available were not distributed. But the stats have started up again and we got reports for the months of October, November, December and January together last week.

For your information, we are publishing the January ending amateur operator census by license class over the last eight years. As you can see, more than 39% of all ham operators now hold a Technician Class operator license. (129,386 are No-Code Techs and, 136,492 are Tech Plus.)

HAM OPERATORS WITH TELEGRAPHY KNOWLEDGE

Even though the Codeless Technician Class is accounting by far for the majority of amateur service growth, there are still 9% more ham operators with code knowledge than prior to when "No-Code" began. Here are the figures:

Class:	Feb. 1991	Feb. 1995	Increase
Novice	94859	98307	
Technician	129386		
Tech Plus		136492	
TOTAL: 5 WPM	**224245**	**234799**	**+ 4.7%**
General	120241	129356	
Advanced	105628	115882	
TOTAL: 13 WPM	**225869**	**245238**	**+ 8.6%**
Extra Class	54246	69495	
TOTAL: 20 WPM	**54246**	**69495**	**+ 28.1%**
TOTAL (ALL)	**504360**	**549532**	**+ 9.0%**

We are listing the amateur radio census on the next page as it stood in 1991 prior to the No Code license and where it stands as of February 1, 1995.

W5YI REPORT
Nation's Oldest Ham Radio Newsletter

Page #5
April 1, 1995

AMATEUR SERVICE GROWTH REPORT - MARCH 1, 1991 VS. FEBRUARY 1, 1995

STATE	EXTRA		ADVANCED		GENERAL		TECHNICIAN		PLUS	NOVICE		TOTAL		INC.
	1991	1995	1991	1995	1991	1995	1991	1995	1995	1991	1995	1991	1995	%
AL	823	1053	1509	1716	1650	1777	2074	2265	2091	1055	1016	7111	9918	39%
AK	264	316	501	549	594	636	481	622	524	428	440	2268	3087	36%
AZ	1022	1407	2214	2531	2324	2636	2680	3350	2744	1267	1242	9507	13910	46%
AR	443	685	868	1040	941	1046	1092	1567	1178	621	615	3965	6131	55%
CA	6756	8446	15124	16151	15897	16659	21340	23105	22163	15024	17073	74141	103597	40%
CO	955	1176	1861	2080	2021	2177	2042	2151	2168	1287	1324	8166	11076	37%
CT	913	1088	1504	1583	1872	1949	1527	1203	1743	1699	1683	7515	9249	23%
DE	167	197	226	234	264	295	304	225	287	212	213	1173	1451	24%
DC	74	84	104	100	123	133	64	70	61	80	83	445	531	19%
FL	3144	4185	6876	7869	8061	9203	7244	6103	7617	6172	6825	31497	41802	33%
GA	1118	1479	2206	2525	2346	2628	2817	2714	2934	1466	1507	9953	13787	39%
HI	265	304	502	524	564	572	602	529	672	663	689	2596	3290	27%
ID	236	313	495	594	656	715	605	816	670	404	410	2390	3518	47%
IL	2122	2543	3968	4209	4758	4855	4900	4164	4755	3637	3575	19385	24101	24%
IN	1153	1474	2268	2428	2620	2780	3258	2936	3289	2125	2062	11424	14969	31%
IA	597	710	1359	1447	1479	1519	1116	1026	1167	1037	1065	5588	6934	24%
KS	562	729	1079	1153	1493	1599	1204	1472	1325	1001	1038	5339	7316	37%
KY	577	811	1069	1205	1326	1440	1525	1829	1633	1198	1217	5695	8135	43%
LA	665	818	1287	1363	1369	1421	1304	1422	1384	914	908	5539	7316	32%
ME	353	484	619	703	941	1040	591	694	763	562	565	3066	4249	39%
MD	1219	1472	2154	2278	2115	2267	2036	2084	2107	1499	1501	9023	11709	30%
MA	1633	2029	2635	2818	3232	3353	3087	2215	3217	2201	2280	12788	15912	24%
MI	1714	2129	3392	3659	4070	4326	3988	3841	4200	2779	2643	15943	20798	30%
MN	919	1147	1845	1985	2210	2359	1766	1782	1944	1382	1310	8122	10527	30%
MS	351	475	721	821	808	849	796	992	812	538	542	3214	4491	40%
MO	1048	1338	2050	2257	2471	2638	2126	2208	2256	1567	1541	9262	12248	32%
MT	229	299	387	443	559	586	356	554	429	351	362	1882	2673	42%
NE	299	383	756	792	978	979	671	569	739	516	488	3220	3950	23%
NV	288	393	537	679	705	812	634	906	672	354	366	2518	3828	52%
NH	500	624	667	745	875	986	883	798	959	586	586	3511	4698	31%
NJ	1813	2154	3105	3222	3328	3519	3483	2499	3639	2560	2647	14289	17680	24%
NM	449	583	823	923	827	892	781	1172	806	388	382	3268	4758	46%
NY	3059	3738	5588	5904	6565	6902	6715	6012	7075	6832	7025	28759	36656	27%
NC	1213	1723	2498	2843	2706	3029	2913	3530	3202	1780	1979	11110	16306	47%
ND	119	153	232	249	354	375	251	293	298	260	254	1216	1622	33%
OH	2423	3067	4660	4982	5281	5627	7098	5760	7357	4393	4142	23845	30935	30%
OK	663	906	1385	1508	1379	1488	1754	1884	1815	1086	1120	6267	8721	39%
OR	908	1188	1903	2157	2416	2691	2234	2306	2294	1637	1619	9098	12255	35%
PA	2303	2999	4141	4522	4856	5163	4713	3880	5017	3701	3645	19714	25226	28%
RI	238	322	325	361	512	542	532	337	568	383	419	1990	2549	28%
SC	488	647	968	1080	1231	1345	1164	1098	1229	657	694	4508	6093	35%
SD	139	168	307	322	354	380	244	246	253	174	174	1218	1543	27%
TN	1010	1438	2074	2340	2038	2282	2851	2703	2962	1520	1487	9493	13212	39%
TX	3555	4544	6726	7452	7143	7763	7934	7875	8109	4473	4387	29831	40130	34%
UT	352	458	689	809	651	738	1333	2298	1575	775	749	3800	6627	74%
VT	181	244	293	329	381	440	307	436	387	228	235	1390	2061	48%
VA	1552	2003	2718	3063	2896	3090	2759	3013	3033	1994	2055	11919	16257	36%
WA	1714	2275	3327	3760	4050	4495	4230	4794	4639	3157	3110	16478	23073	40%
WV	376	535	629	737	849	952	969	1461	1187	942	863	3765	5735	52%
WI	873	1109	1765	1844	2165	2199	1701	1936	1844	1357	1292	7710	10224	33%
WY	133	177	203	241	264	278	251	354	282	243	221	1094	1553	42%
GU	28	55	41	55	41	61	59	136	90	169	169	338	566	44%
PR	204	262	480	570	605	706	1937	500	2189	3462	4368	6688	8595	27%
VI	30	57	51	54	68	85	55	62	57	44	44	248	359	46%
Other	14	60	14	52	20	70	5	244	67	25	49	78	542	***
Total:	**54246**	**69495**	**105628**	**115882**	**120241**	**129356**	**129386**	**129078**	**136492**	**94859**	**98307**	**504360**	**678610**	**34.5%**
%	10.8%	10.2%	20.9%	17.1%	23.9%	19.1%	25.6%	19.0%	20.1%	18.8%	14.5%	100%	100%	
% Inc.	**+28.1%**		**+9.7%**		**+7.6%**		**265570+105.3%**			**+3.6%**		**+34.5%**		

*(*** = Other includes U.S. possessions and in 1995, APO/FPO addresses. Figures not comparable.)*

• **The first auction for broadband personal communications services (PCS) licenses has officially ended,** opening a new chapter of competition in the history of the wireless telephone industry.

The broadband PCS auction began on December 5, 1994. At stake were 99 major market licenses to provide PCS - new low-cost wireless telephone service across the United States and its territories. The auction generated $7.7 billion in high bids - about half of what had been anticipated. Still, that makes it the largest auction of government assets in history.

The auction's big winner was WirelessCo - a joint-venture of Sprint (40%) and three cable-TV companies (20% each.) It spent more than $2 billion to capture licenses in 29 markets which include more than half the population of the U.S. AT&T was second, bidding $1.7 billion for 21 markets.

It will be about two years before PCS is widely available. FCC rules require PCS winners to serve at least one-third of their potential customers within five years and to complete construction within ten years. Merrill Lynch predicts that PCS will grow into a $22 billion business by 2004.

Since 1993, when Congress authorized the FCC to conduct spectrum auctions, the Commission has held four auctions: two for narrowband PCS licenses, one for Interactive Video and Data Service (IVDS), and the just-completed broadband PCS auction. The four auctions, in total, have raised nearly $9 billion for the U.S. Treasury - or $98 for every U.S. household.

The next round of spectrum PCS auctions was due to get underway next month. But it does not look like it will happen. In another blow to affirmative action, a federal appeals court has put a block of 493 smaller market PCS licenses "on hold."

One of the features of that auction was that it would have given special preference (a 25% discount) to minorities and women. A small (Jackson, Miss.) rural telephone company argued that such FCC preferences are unfair. They want the same advantages accorded minorities and women. A September trial has been scheduled for the constitutional challenge. The delay - which could last a year - will give the larger market PCS winners a bigger head start.

• **Liberating the telecommunications marketplace** - Newt Gingrich is a big fan of PCs and believes networked computing will help transform the U.S. into the knowledge age. He wants to encourage a national interactive multimedia network through deregulation.

"Putting advanced computing power in the hands of entire populations will alleviate pressure on highways, reduce air pollution, allow people to live further away from crowded or dangerous urban areas, and expand family time."

If the Republicans have their way, phone, cable and long distance companies will band together and compete with one another. The program would be phased in over a three year transition period. The *Telecommunications Competition & Deregulation Act of 1995* is on the fast track. Republicans want it passed by July 4th. It is drastically more deregulatory than the Democratic version that died last fall in the Senate.

There also is a widespread anti-FCC mood among the Republican leadership. They believe the FCC is too big and micromanages "...a major block to our getting into the 21st century."

President Clinton wants to increase the FCC's budget by 20% in 1996 to $223.6 million and a staffing level of 2,271 FTEs (full time equivalents.) Most of the increase is a one-time charge to finance "automation enhancements" and consolidating the agency in a new location. Gingrich is taking a hard look how the federal government functions and how money is spent.

The telecommunications industry is predicted to add 1.4 million jobs by 2003 and $100 billion to the U.S. economy over the next decade.

• **Formerly known as "Chicago" - Microsoft's "Windows-95" is nearing full roll out!** The final review version has been shipped to 5,000 "beta" testers. That means all of the features have been "nailed down." Another 50,000 advance copies have been sent to personal computer users who have agreed to help test the program.

And we also understand that the first 400,000 people that ask, will be able to purchase a special "Preview" copy at $30. It will be the most exhaustive final check of a software product in the history of personal computing! The biggest problem has been compatibility with the hundreds of hardware cards that work with Windows 3.1

If the final test and preview goes well, then you can expect to see Windows-95 "on the shelf" in about three months. Researcher, Computer Intelligence Infocorp (l aJolla, Calif.) estimates that Microsoft will ship 22 million copies of Windows-95 this year ...and nearly 60 million next year!

Windows-95 has a new way of navigating through files and programs featuring icons and self-explanatory labels. A new "task bar" tells you each window you have opened. Whenever you start a new program, a new button appears on the task bar. A new file naming process is also incorporated. And copying, moving, deleting and renaming files is less complicated.

New goodies such as networking and Internet communications has been added. A "briefcase" option lets you simultaneously update information on your office and notebook computer.

But one thing Microsoft won't do is to bundle its word processing, spreadsheet and other applications with Windows-95. Rival software manufacturers complained bitterly about Microsoft using its leadership in operating systems to increase sales of its other programs.

Nicknamed the "Ali Baba project," Microsoft originally had planned to offer a CD-ROM version of Windows-95 containing limited versions of their best selling applications software. They considered it a convenient way for customers to order new software. Once credit card payment arrangements were made, users would then be given the "key" to the total program.

Many software distributors objected on the basis that the retail sale would go to Microsoft - rather through their dealer network. This would cut into their sales. And competing software developers called the proposal "...an abuse of monopoly power" because the carrier (Windows-95) could become a defacto industry standard.

Microsoft said their proposal was legal, but at the very last minute (March 17th) scrapped the idea ...especially in view that the federal government is now looking into their marketing practices.

Distributing application programs on encrypted compact disks or downloading from an online computer service is still considered the software delivery method of the future. It could make floppy disks as rare as phonograph records.

K1MAN FILES CHARGES AGAINST THE FCC, ARRL

Glenn Baxter, K1MAN, who heads up the International Amateur Radio Network (IARN) in Maine has filed formal criminal charges with the United States Justice Department against both the ARRL and the FCC for alleged violations of Section 501 of the 1934 Communications Act.

These actions stem from the ongoing controversy on 3.975 MHz. over the transmission of IARN information bulletins on this frequency for the last 8 years and interference that southern amateurs claim it is creating. Baxter claims that it is the southern amateurs who are intentionally causing interference to his 45 minute programs that are transmitted several times each day.

According to Baxter: "FCC rule 97.101(b) requires each amateur to cooperate in frequency sharing, but hams in Georgia feel that their use of 3.975 MHz. for decades gives them certain rights and that scheduled IARN bulletins are illegal. As a result, they feel justified in 'talking over' the bulletins when they come on. Baxter's position is that scheduled bulletins are perfectly legal; they have to be somewhere, and once established, it is a violation of Sec. 333 of the 1934 Act to intentionally interfere with them. Violation of Sec. 333 (authored by Barry Goldwater in 1990) is a felony."

Baxter claims he has made good faith attempts to negotiate with the southern hams on several occasions, in compliance with §97.101(b) which mandates cooperation, and that each time he has been rebuffed. Baxter and other IARN members then began filing formal notarized complaints with the U.S. Attorney in Bangor, Maine, alleging that southern amateurs were in criminal violation of Sec. 333. Copies were simultaneously filed with John B. Johnston, W3BE, at the FCC.

The U.S. Attorney in Maine wrote Baxter and advised that their office did not have prosecutorial jurisdiction over the matter. Baxter told W5YI, "She is right. The U.S. Attorney in Georgia is the one who would have to prosecute Georgia hams, and the U.S. Attorney in Tennessee would prosecute Tennessee hams, etc. We filed in Maine under the legal theory that the crime against K1MAN (radio interference) occurred in Maine (by radio), and we wanted to start a 'paper trail' here. The U.S. Attorney should accept the formal com plaints and then go from there. But she is wrong in alleging that I represented to amateurs that her office had instituted proceedings against anybody; I said no such thing, and she knows it. What I did say is that we filed formal charges, not her. John Greenspan's (He is in the FCC's General Counsel's office) allegation that I used his name improperly to threaten other amateurs is also totally false."

Instead of taking any action, the U.S. Attorney in Maine simply forwarded the notarized complaints to the FCC and even advised Baxter to contact Richard Palm, K1CE at ARRL! Baxter says he always sends copies of everything to the League. Baxter became really agitated when one of the notarized complaint copies sent to John B. Johnson, W3BE, came back from the FCC unopened and marked "Return to Sender." Enraged, Baxter filed a *Freedom of Information Act Request* (FOIA) with the FCC on Dec. 22, 1994 with a demand to know the whereabouts of Johnston and what the Commission was doing about the formal complaints.

Regina M. Keeney, Chief of the FCC Wireless Telecommunications Bureau, responded to the FOIA on Feb. 2, 1995. She denied any knowledge about the formal complaints forwarded to the Commission by the U.S. Attorney and advised that Mr. Johnston was alive and well in the FCC's Private Radio Division.

Baxter claims that Johnston's action of returning his mail unopened and Keeney's action of denying any knowledge about the formal complaints are themselves felonies under Sec. 501 which reads: "Any person who willfully or knowingly does or causes or suffers to be done any act, matter or thing, in this Act prohibited or declared to be unlawful, or who willingly or knowingly omits or fails to do any act, matter or thing in this Act required to be done, or willfully or knowingly causes or suffers such omission or failure, shall, upon conviction thereof, be punished for such offense for which no penalty (other than a forfeiture) is provided by this Act, by a fine of not more than $10,000 or by imprisonment for a term not exceeding two years, or both..."

Baxter reasons that the FCC is, in essence, encouraging the illegal interference by their active inaction and denials. Accordingly, Baxter filed formal criminal charges with the U.S. Attorney against the FCC on Feb. 8, 1995. He says the Commission is also in civil violation of the *Freedom of Information Act.*

Meanwhile, according to Baxter, the ARRL has deleted Sec. 333 and 501 from their "FCC Rule Book." Baxter claims that this, also, is a violation of Sec. 501 and filed formal criminal charges with the U.S. Attorney against the League on Jan. 26, 1995.

Baxter told W5YI that, "We have information and belief that the ARRL Executive Committee had a series of high level meetings in Washington on Feb. 11, 1995 about these serious criminal charges, and, of course, that is when ARRL President George Wilson, W4OYI, who is an attorney, had his serious stroke. I speculate that there was some finger pointing at George for allowing the League to get in such an awful mess."

Baxter also said, "Now you (Fred Maia, W5YI) have petitioned the FCC to eliminate all information bulletins below 30 MHz., including W1AW, and the plot thickens. My guess is that ARRL will oppose the petition and so will I. You have a perfect right to file the petition, and we have every right to fight it. I don't

think it will fly, but if it does we will go to court, in a heartbeat, and win! This might take years to litigate."

The petition that The W5YI Group filed with the FCC makes the following points:

- Frederick O. Maia, by his counsel, requests that the Commission amend Part 97 of its rules to eliminate the provisions which permit Amateur Radio Service stations to transmit one-way information bulletins and international Morse code practice below 30 MHz. Such transmissions do not comport with normal operating practices and, in 1995, they have outlived their usefulness.
- Mr. Maia is concerned about one-way communications in the Amateur Service high frequency (hf) bands on two levels. First, as a licensed Amateur Radio operator, he is personally distressed at the level of anger that now exists on these bands. This anger is primarily caused when one-way, broadcast-type transmissions interrupt two-way communications that are already in progress. This anger is manifested by deliberate attempts to interfere with or "jam" the one-way transmissions.
- Second, he is especially concerned about the impact that this anger and the resulting malicious interference has on relatively new amateurs who are increasingly upgrading their Technician VHF Amateur operator licenses to include the long range high frequency operation. The reckless intrusion into on-going conversations and the animosity that these one-way communications engender on the congested HF bands is setting a very bad example to newcomers and is contributing to a general deterioration in the quality of communications in the HF Amateur Service bands.
- Article 32 of the international Radio Regulations refers to "Radiocommunications between amateur stations..." in other words, two-way exchanges of messages or information between Amateur stations are the worldwide norm, as contrasted to one-way "broadcast-type" transmissions.
- In the United States, Amateurs generally conduct two-way communications as stated in Section 97.111(a) of the Commission's Rules. There are, however, certain exceptions contained in Sec. §97.111(b), which permit one-way transmissions to assist in the learning of the international Morse code and the dissemination of information bulletins.
- Section 97.3(a)(23) defines an information bulletin as "A message directed to amateur operators consisting solely of subject matter of direct interest to the amateur service." This is a very permissive category and taken in its broadest context, permits just about anything to be transmitted that is even remotely associated with the Amateur Service.
- Over the years certain stations have become so-called "bulletin stations," transmitting one-way broadcast-type programs on the 75/80, 40 and 20 meter bands and other hf bands as well. Although bulletins and code practice are the exceptions and not the rule, these bulletin stations regularly broadcast on scheduled frequencies regardless of any on-going two-way communications. They are abusing the privilege. The many are suffering at the hands of the few.
- The rules clearly state that "...licensees must cooperate in selecting transmitting channels..." and "No frequency will be assigned for the exclusive use of any station." (See Sec. §97.101(b)) Yet bulletin stations recklessly go on the air on "their" frequencies at "their" scheduled times without the mandated "cooperation" and without observing the most fundamental of operating practices, namely, to monitor the frequency for use before transmitting. The proliferation of these stations has caused chaos in the amateur community that has now reached crisis proportions.
- A cornerstone of the Amateur Service is its "...unique ability to enhance international goodwill." The high frequency band has world-wide range and the image of United States Amateurs is being badly tarnished by this on-going tirade.
- There was a time in the history of the Amateur Radio Service when the benefit to be derived from permitting occasional one-way broadcasts on hf bands outweighed the negative impact of operations of this type on ordinary communications. That time has now passed.
- Today there are plenty of other methods of communicating general information to Amateurs, including Amateur vhf packet networks, on-line computer services such as CompuServe, Prodigy, America Online and the World Wide Web pages of the Internet. Similarly, code practice is now easily accomplished via software training and simulation programs.
- The increasingly crowded conditions on the hf bands and the ready availability of alternative techniques for code practice and information dissemination have now tipped the scales against the continued operation of bulletin stations on hf. Bulletin stations particularly impact hf operations because of the propagation characteristics of these bands. Simply put, the usefulness of hf bulletin stations no longer outweighs their detriments. They have always been the exception and not the rule and now they should be prohibited for the greater good of the Service.
- A major aim of many amateurs is long range communication or "working DX" as it is called. A second popular amateur activity on the hf bands is leisure communications or "rag chewing." The third widespread pursuit is participating in round-table communications about a specific interest or "networks."
- None of these activities is compatible with broadcast-type bulletin or code practice stations that come on an occupied channel without first determining if the frequency is already in use. Such stations have outlived their usefulness to the Amateur Radio Service and should now be prohibited in the hf bands.
- The Part §97.111(b) rules which authorize one-way information bulletin and Morse code practice transmissions as exceptions to the general requirement for two-way communications, should be amended to state that such transmissions must be confined to frequencies above 30 MHz.
- The following rule, which permits control operators of club stations to accept compensation should be amended to state: Sec. §97.113(d) "The control operator of a club station may accept compensation for the periods of time when the station is transmitting telegraphy practice or information bulletins, provided, however, that such telegraphy practice and/or information bulletins may only be transmitted in the amateur bands above 30 MHz."

This petition was filed with the FCC by Raymond A. Kowalski, counsel for The W5YI Group on March 16, 1995. It only impacts information bulletins and telegraphy practice authorized by Sec. §97.111(b)(5)&(6). It does not affect one-way retransmissions, beacon or telemetry operation which are covered by other rules.

ARRL PETITIONS FOR PARTIAL RECONSIDERATION OF 902-928 MHz INTERFERENCE RESTRICTIONS

On March 8th, the American Radio Relay League asked the FCC to reconsider some of the sharing arrangements which apply to Amateur use of the 902-928 MHz band. This band is the site of the new *Location and Monitoring Service.* (LMS.) The Amateur Service has access to this band on a secondary basis and must not interfere with automatic vehicle monitoring systems.

The LMS was established by the FCC in February. The ARRL believes the Commission "...has severely disrupted an existing compatible sharing arrangement in order to expand a type of use [Automatic Vehicle Monitoring) that is incompatible with virtually all of the existing users of the band.

The ARRL wants the Commission to reverse its "harmful interference" guidelines relative to the possible interaction of Automatic Vehicle Monitoring equipment with amateur stations. The League believes that the FCC has placed the burden for interference resolution on the amateur station.

The FCC adopted various antenna and power level guidelines that they would use to preclude a finding of interference by an amateur station. The league says these parameters "...effectively sets a maximum limit of 4 watts..." radiated power on an amateur station. ARRL points out that amateurs are generally permitted transmitter power levels up to 1.5 kW.

ARRL said "...the limitation is so severe that it constitutes a practical preclusion of amateur operation in any segment of 902-928 MHz used for ...LMS systems." The League asks that the Commission reconsider its rules and "...make at least minimal provision for continued Amateur Service operation in the 902-928 MHz band."

UNLICENSED WIRELESS COMPUTING AND PART 15 DEVICES TO CO-EXIST WITH AMATEUR SERVICE

Both the ARRL and AMSAT recently responded to a *Second Notice of Proposed Rule Making* involving the 13-cm band. They agreed that no additional Amateur Service rules were necessary to facilitate the sharing arrangements with Part 15 devices in the 2402 to 2417 MHz band and unlicensed asynchronous Data-PCS devices at 2390 to 2400 MHz. The League believes that there is a minimal potential for interference.

The ARRL requested that the FCC begin an additional proceeding at an early date looking toward the allocation of the 2300-2310 MHz, 2400-2402 MHz and the 2417-2450 MHz bands to the Amateur Service on a primary basis. AMSAT told the FCC that it currently is constructing its Phase 3D satellite which will utilize the 2400-2450 MHz band. It too asked that the 2400-2402 MHz and 2417-2450 MHz be allocated to the Amateur Service on a primary basis just as it did for the 2402-2417 MHz segment.

Apple Computer supported the FCC's decision to allocate the 2390-2400 MHz band for wireless computing devices, secondary only to the Amateur service. "[It] will enable users of personal computers to communicate at high data rates over distances of up to 50 meters without wires or other fixed connections," Apple said.

Apple believes low power unlicensed Data-PCS operations are generally compatible with amateur operations and that "...no special Federal Regulations are necessary to dictate the precise means whereby Data-PCS and the Amateur service will share the 2390-2400 MHz band."

The Southern California Repeater and Remote Base Association (Pasadena,California), Northern California Packet Association (Richmond, California) and the Northern Amateur Relay Council of California, Inc. also filed comments in this proceeding.

MODEMS TO HAVE INTERNET PHONE ACCESS

Motorola is expected to begin selling new 28.8 kbs modems with imbedded software that provides long distance telephone service over the Internet. A software marketing agreement has been signed with a small Israeli company that will allow multimedia PC's to provide long distance service to and from any place in the world for as little as $1 per hour! The $230 modem adds the real-time voice function to the Internet when both users have the same software installed.

The voice compression and reconstruction technology by-passes long-distance carriers (and rates) for the price of a call to your local Internet access provider. Audio quality is said to be "very good."

The software, called "Internet Phone" runs on 486/33-MHz or higher IBM (or compatible) PCs with Windows 3.1, a sound card and a 14.4-Kbs modem. The product has several user-friendly features including speed-dialling, "caller-ID," an on-line phone directory ...even a busy signal if the called party is already in voice contact with another user. And voice mail is planned. A 90-second demonstration is available over the Internet at ftp.vocaltec.com. Some Internet users are worried that long distance phone calls could flood the net.

- **Jim G. Wills, N5HCT (Tyler, Texas)** has had his *Petition for Rulemaking* to reestablish the First and Second Class Radiotelephone Operator License denied by the Commission. The FCC said it would create two commercial radio license classes for which the FCC has no requirements and would result in significant administrative burdens.

WRC-95 AND THE MORSE CODE REQUIREMENT

We have gotten a couple of inquiries about the upcoming World Radio Conference and the similarity of RR 2800 to RR 2735. These international regulations address telegraphy requirements in the experimental and amateur services. We have covered this before, but there seems to be enough interest, that we will go over it again. First of all, RR represents the ITU's prefix for "Radio Regulation." The international Radio Regulations are divided into Articles and Sections. Article 32 covers the Amateur Service (Section I) and Amateur-Satellite Service (Section II.) Article 34, the experimental service.

RR 2735 (in Section I) states: "Any person seeking a license to operate the apparatus of an amateur station shall prove that he is able to send correctly by hand and to receive correctly by ear texts in Morse code signals. The administrations concerned may, however, waive this requirement in the case of stations making use exclusively of frequencies above 30 MHz." The next regulation, RR 2736 states "Administrations shall take such measures as they judge necessary to verify the operational and technical qualifications of any person wishing to operate the apparatus of an amateur station."

The waiver frequency has been reduced at the last three general World Administrative Radio Conferences (WARC). These worldwide conferences which consider the entire radio spectrum are held every decade or two by the International Telecommunication Union. ITU agreements have the force of international law.

Prior to 1947, every amateur operator was required to be proficient in Morse code. A frequency at which the Morse code requirement could be waived was first set at WARC-47 at 1,000 MHz. WARC-59 further reduced it to 144 MHz; WARC-79 to 30 MHz. It set the stage for the VHF no-code license which is now the most popular license around the world. It also changed the face of ham radio as we know it. Worldwide, more licensed amateurs are of the Codeless variety than Morse proficient.

The ITU has now changed the system. Instead of major WARC's which consider all frequencies, they now conduct smaller WRC's every couple of years. The next one is scheduled for later on this year in Geneva (Switzerland) between October 23 to November 17. It is preceded by a Radiocommunications Assembly (RA-95) to be held from October 16 to 20.

World Radio Conferences, have streamlined agendas. WRC-95 generally is dedicated to the Mobile Satellite Service (MSS). But WRC's also have the capability to consider other issues not associated with the main agenda.

The "Voluntary Group of Experts" (or VGE as they are known) is an ITU program which seeks to streamline the Radio Regulations. WRC-95 agenda item 1 is "To review the final report of the VGE, and to consider related proposals from administrations, in order to undertake, as appropriate, a revision of the radio Regulations and to provide a timetable for the implementation of outstanding recommended actions."

The VGE Final Report Part B is entitled "Simplification of the radio regulations, Part B, Recommended changes to the radio regulations" and on page 179 it covers the Experimental Service. Article 34 is to be changed to Article S27, and existing RR 2800 is recommended to be "suppressed," (i.e. eliminated.) The justification is that the purpose is better covered by RR 2801.

RR 2800 currently reads: "In experimental stations any person operating radiotelegraph apparatus, either on their own account or for another, shall have proved his ability to transmit by hand and to receive by ear, texts in Morse code signals." RR 2801 reads: "Administrations shall take such measures as they judge necessary to verify the operational and technical qualifications of any person wishing to operate the apparatus of an experimental station."

As you can see, RR 2800 and RR 2801 are somewhat equivalent regulations to RR 2735 and RR 2736. ORACLE is the New Zealand-based Organization Requesting Alternatives By Code-Less Examinations, Incorporated. This group favors replace the Morse requirement with other examination alternatives.

In a submission to the New Zealand Ministry of Commerce, ORACLE compared RR 2800 and 2801 to RR 2735 and 2736 in Article 32 and argued that if the Experimental Service is to have the telegraphy requirement eliminated, then shouldn't the Amateur Service follow this lead? ORACLE is still waiting for word from their government on the official position that the New Zealand government will take on RR 2735.

Article 32 covering the Amateur Services is scheduled to be changed to Article S25. A proposal to suppress RR 2735 (or S25.5 in the new recommended simplified regulations can be proposed by an administration under agenda item 1 at WRC-95.

Contrary to what you may have been told, the VGE does recommend a minor change to Article 32. The change modifies RR 2738 (or new S25.8) with the addition of the words "the Constitution" in the first sentence. MOD 2738 will read "All the general rules of the Constitution, the Convention and of these Regulations shall apply to amateur stations. In particular, the emitted frequency shall be stable and as free from spurious emissions as the state of technical development for such stations permits." The two words, "the Constitution" have been added to the text. We agree that it is not much of a change.