March '91

Ole Virginia Times

The OVH ARC Newsletter

"OLE VIRGINIA HAMS" AMATEUR RADIO CLUB, INC.
Post Office Box 1255, Manassas, VA 22110

Repeater: WA4FPM -- 146.97
WA4FPM -- 224.66

Digipeater: WA4FPM-1 -- 145.09
WA4FPM-3 -- 223.40

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FROM THE PRESIDENT'S SHACK

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The No-Code Technician class is now set to start on Tuesday, March 19, 1991, at 7:30 p.m., in Class Room 3A, at Stonewall Jackson High School. We still need help with some classes, so anyone willing to teach or act as a "Guest Speaker" is being asked to call John Fritsch at (703) 791-5995 or myself at (703) 369-5636. This is a "first of a kind" for the Club and it appears to be well on its way.

I do not have any figures for the number of people who have signed up as yet, but next month we will have the actual attendance.

We are due for another Hamfest meeting so all those involved please listen in on the Net! We will also be calling all Hamfest Committee Members!

That's about it for this month.

73's

JOE
AB4QV

****

NEW MEMBERS

****

Let's welcome this month's new members:

David Brandstatter (KC4UQV)
Mark Tonolette (KC4VPR)
Jason Jordan (No Call)

WELCOME!!!! WELCOME!!!! WELCOME!!!!

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NEW ON THE AIR

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Joe Barr has received his call. He is KC4WKQ!

We look forward to hearing you on the air soon, Joe!!!!!

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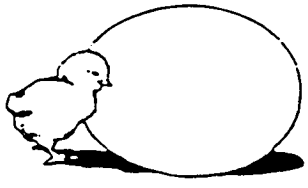

Listen to the Westlink Report at 8:00 pm Thursday Evenings during the OVH Weekly Bulletin.

FAX, AMATEUR RADIO, AND THE FUTURE

by
Rick (KC4BCK)

Many people have wondered about the facsimile transmission capability available to amateur radio operators. How come no one seems to use it? How it compares with the fax machines popular today? And, how could fax technology ultimately affect ham radio?

To put it bluntly, the fax available to ham radio is antiquarian and obsolete. The technology was developed in the 1920's and involves mechanical scanning of pictures wrapped around a drum. At the fastest possible speed, the transmission of a picture will take over three minutes.

By contrast, the modern-day fax machines use what is called Group III digital transmission, usually at 9600 baud. The image is digitized into black-and-white and compressed using a run-length encoding called Modified Huffman encoding.

The single advantage of the old technology used in ham radio (today called Group I) is that it is possible to transmit gray-scale images, whereas Group III is limited to pure black-and-white. For transmission of business documents, shades of gray are seldom necessary. There is still a limited user community for the older technology, the wirephoto services and weather satellites.

A higher-speed digital standard called Group IV is already available. Group IV compresses images in two dimensions, thus crunching the image even further, and then is usually transmitted over X.25 networks at a speed of 56 kb/s. Machines are expensive, but can transmit pages about as fast as an electronic copier and use plain paper.

In discussion is a new Group V standard which will incorporate both gray-scale and color. Once the standard is available, it is expected that the remaining users of analog fax technology will migrate rapidly. Why? Because the equipment will not only be inexpensive, but will feature error detection and correction, eliminating fading, noise and other such problems.

Very few hams today use the "A4" facsimile transmission capability. The machines available are old and falling apart. While personal computers could perform the requisite scan conversion, there seems to be little demand for it. Nor does there seem to be much demand for Group III transmission somewhere in the UHF spectrum. This does not necessarily mean, however, that fax has little future in ham radio.

The big story in the world of telecommunications today is X.400. This is a standard which encapsulates electronic mail, facsimile images, and just about anything else, for transmission over digital media. The data is encapsulated following rules in the CCITT standards and encoded using specific, standard rules. This technology should be a natural for amateur radio over packet radio links.

Let's take a detour into a possible future and envision what this might look like. A station might have three small boxes, one a transceiver, the second a packet TNC similar to a KAM, and the third box connecting to a keyboard, microphone, video monitor or LCD panel, and printer. Other devices could be connected to it as well, such as a scanner and even a Morse key. With this third box, the station could transmit in CW, voice, RTTY, ASCII, AMTOR, ASCII packet and X.400 packet. X.400 packets could be sent containing text, images, or even digitized and compressed voice, in any combination.

Because X.400 messages include addressing fields, which can contain physical delivery addresses, traffic nets could operate almost completely unattended, even delivering messages vial normal fax machines.

The beaut of combining this technology with ham radio would be that, unlike ISDN, it would work anywhere, in rural or remote areas or deserts, or in emergencies where telephone service is unavailable. It would be portable, operating on low power atop mountains.

With the possibility of a codeless Technician, the possibility exists of bringing ham radio back into the mainstream and the mainstream back into ham radio. Whether this is viewed as good or not, it is important, for otherwise hams will be viewed as cliquish squanderers of precious bandwidth. This calls upon the hams of today to do two things.

First, work for the incorporation of new technology in the hobby. Present regulations probably do not allow for X.400 or any other binary data to be transmitted over packet radio.

Second, as more become involved, don't lose sight of ham radio's core concepts: not jus experimentation with new technology, but also international communications, public service, and emergency communications using narrow-bandwidth, low-power techniques such as CW. Newcomers must be educated on these concepts and invited to take part.

So both fax and ham radio can have a part in the future, hopefully building on each other's strengths. This calls upon ham radio enthusiasts to free themselves from grid-leak and spark-gap nostalgia and move on to the glories of the future.

THINK WE HAVE IT BAD??!!!

The following is an excerpt from a letter recently received from Joe Schlatter (K4FPT):

"...I am applying for my Japanese ham license next week ($75.00) and plan to have QRP CW on the air in April or May..."

If anyone would like to write to Joe, his address is listed below:

Joseph A. Schlatter, K4FPT
PSC Box 1817
APO San Francisco, CA 96293

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REQUEST, REQUEST, REQUEST

Charlie Dale (GOOML) (previous call -- WA4YGI) would like to obtain a listing of net frequencies where he can find OVH members. Charlie is active on both CW and Fone on HF.

have listed his address below -- drop him card and let him know where you can be found!

Charlie Dale, GØOML
P. O. Box 554
APO, NYC, NY 09378

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NOTE FROM AL

Excerpt from a letter from Al Picard (K4IQH):

"...Just a quick note to let you folks know that I am on the air now and have a dipole on 75 and 40 and I now have my beam up and it seems to be working quite well. I still haven't hooked up my amplifier yet but that will come in due time.

I have been quite occupied in operating the local MARS station here in Ocala and running phone patches for the GI's that are involved in the middle-east. Good way to spend my extra time and it also makes me feel that I am doing a little something for he effort.

Incidently, my rig seems to make the trip to Manassas pretty well and I have recently joined the group on 3813 on Sundays at 7PM. I would like to see and hear more of you if you get a chance.

The wife and I are doing quite well here in Ocala and have just about overcome all the problems that we had in making the move and with the new house. We hope to be making a trip up north in a few weeks. I will have my 2 meter rig with me and will be on the Manassas machine. Hope that this note finds all in good health and spirits.

Al

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ASSISTANCE NEEDED

To wire a 7 pin DIN plug from a Kenwood TS-140S to drive a Heathkit "Warrior" linear amplifier.

Ro Spooner (WB4NWG) -- 594-2812 -- please call between 5:00 p.m. and 8:30 p.m. weekdays -- weekends, call anytime!!

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STATES.001

K	V	A	P	R	E	T	T	A	L	S	A	G	A	R	R	E	T	T
D	E	A	Z	Y	E	A	G	O	T	A	R	A	S	E	L	W	M	R
V	N	L	N	G	S	V	W	A	B	L	I	N	D	D	A	T	T	G
P	N	O	I	E	C	R	O	L	H	G	V	T	A	L	K	N	C	C
T	E	N	R	C	W	E	R	R	N	U	E	E	V	U	W	O	W	L
X	Y	T	O	H	I	C	L	F	G	O	R	A	T	O	I	M	C	U
W	E	T	L	U	E	L	A	L	Z	D	T	F	I	B	B	D	J	O
D	H	R	S	G	G	U	N	S	I	L	O	P	O	M	R	E	H	T
Q	C	E	N	W	R	S	D	E	T	B	N	N	U	D	N	I	G	O
B	N	E	A	A	E	E	R	J	C	L	D	X	Q	P	E	P	B	H
C	O	D	Y	T	G	C	Y	E	T	U	E	N	Q	G	I	G	X	S
Z	Z	S	G	E	L	U	N	B	R	E	T	T	U	S	M	A	W	O
F	M	Q	L	R	E	A	E	A	U	E	P	S	D	Y	A	F	L	S
G	E	I	E	E	N	F	N	R	D	L	M	L	E	J	R	U	L	O
C	R	H	N	E	R	T	O	D	N	N	L	M	A	E	A	F	Z	K
W	N	G	D	V	O	K	S	H	O	S	U	S	E	C	L	U	S	K
N	A	R	O	M	C	K	K	Y	T	F	E	S	S	K	Q	E	Y	I
H	O	I	Y	O	K	W	C	A	F	K	A	Y	C	E	E	U	Y	P
N	P	D	E	N	A	A	A	Q	A	N	C	H	Y	Q	A	Z	U	R
P	S	Q	E	H	H	O	J	T	Z	Z	E	Y	P	T	J	A	S	U

FIND SOME OF THE TOWNS IN WYOMING

AFTON	GLENROCK	NODE
ALVA	GREYBULL	ORIN
BILL	GROVER	OSHOTO
BONDURANT	GUERNSEY	PIEDMONT
BOSLER	HAWK	RECLUSE
BOULDER	JACKSON	RIVERTON
CALPET	KAYCEE	SARATOGA
CHEYENNE	KEMMERER	SEELEY
CHUGWATER	LARAMIE	SLATTER
CODY	LONTTREE	SUNDANCE
DOUGLAS	LUSK	THERMOPOLIS
ETNA	MERNA	UPTON
GARRETT	MORAN	WAMSUTTER
GEBO	NEWCASTLE	WHEATLAND
GLENDO		WORLAND

BATTERIES

by

Harry (W4PVA)

This is the first of a series which will discuss "batteries". As you already know, many electronic devises are so operated.

To start with we should clear up one matter -- a battery is a group of interconnected cells. The flashlight battery is not really a battery. It is a cell but common usage has used the term battery to the point that one has walk into a store and ask for a battery in order to get a flashlight cell (most flashlights use two or more cells -- thus a battery).

What make a battery work? It is chemical in nature. Two different material conductors are separated by a chemical referred to as the electrolyte and chemical action depletes one plate to supply electricity. The actual going on are a bit more complex than this, but this is essentially what happens.

A definition is necessary. There are primary cells and secondary cells. In the primary cell, chemical action consumes one plate while the battery is supplying electrical current. As the plate is consumed, the cell becomes weaker; to the point where we say it is "dead". In the secondary cell a somewhat similar process takes place **except** the consumption becomes a conversion from one type of conductor to another AND the cell can be restored by passing an electric current through it in the reverse direction. This characteristic has been termed "recharging" (or simply charging). A carbon/zinc flashlight cell is an example of a primary cell and when it is used to the point where it is considered dead we discard it. An automobile battery is an example of a group of secondary cells (remember a battery consists of a group interconnected cells) and it may be recharged -- in the automobile we use the generator -- or in more modern cars, the alternator, to do this.

Science has discovered that plates of various combinations of materials when immersed in an electrolyte will produce various output voltages and a table of these has been published. Any material listed above another material will produce a voltage when the two materials are immersed in an electrolyte with the upper material giving the voltage terminal. This table can be found in nearly any general science book and in the ARRL Handbook.

This battery characteristic of consuming the negative plate has been termed electrolysis. It is of interest to note in passing that stainless steel screws used in assembly of aluminum structures are two different metals and the moisture (from rain, etc.) supplies an electrolyte. Electrolyte action is to be expected and eventually one of the two metals will be consumed.

Back to the common carbon zinc flashlight cell. A number of years ago it was common for the flashlight owner to discover that the zinc case of the cell was consumed and the electrolyte, ammonium chloride and zinc chloride, leaked, destroying the flashlight. One had to replace the cells promptly to preclude losing the device. A new type of cell was developed wherein the metal plates and all were sealed into a case which protected the appliance. These are in common use today. (Note: With regards to a "dry" battery, the electrolyte in this type of battery is immobilized in a filler material -- thus the name "dry".)

The recharging of a primary cell is generally considered not to be acceptable but there are exceptions. These exceptions are not considered practical as occasionally the attempt to recharge a primary cell will result in leakage of the electrolyte or even rupture of the case.

Cells may be stored at room temperature, but storing the cells at a low temperature will increase the shelf life.

The "sealed in steel" for of fabrication resulted from a successful attempt to limit leakage of the electrolyte, but even the sealed cells sometimes leak. So be sure to check and replace the cells when their performance becomes unsatisfactory. If storing a device for several months, remove the batteries. When one cell in a set needs to be replaced, replace the complete set!

"73's"

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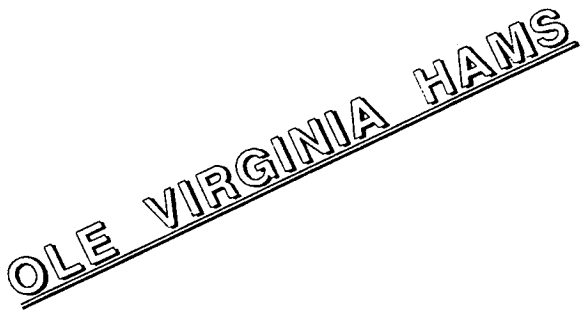

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FOR YOUR INFORMATION

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Bill to Protect Amateur Radio:

On January 3, Rep. Jim Cooper (D-TN) introduced H.R. 73, a bill to prevent the loss of radio spectrum by the Amateur Radio Service. Cooper is a member of the House Subcommittee on Telecommunications and Finance, where the bill is likely to be sent for consideration. H.R. 73 is also known as the Amateur Radio Spectrum Protection Act of 1991.

The legislation proposes that "the Federal Communications Commission shall not diminish existing allocations of spectrum to the Amateur Radio Services after January 1, 1991. The FCC shall provide equivalent replacement spectrum to the Amateur Radio Service for any frequency reallocation after January 1, 1991." . . .

Says Cooper: "I've come to believe that amateur radio operators are a valuable national resource, and I hope to see that they keep the necessary radio spectrum to nable them to be around for many years to ound."

Congress found that (1) there are more than 490,502 licensed amateurs in the U.S.; (2) the amateur operates with a solely personal, nonpecuniary interest; (3) one of the basic purposes of the amateur is to assist in emergency communications; (4) amateur radio operators have reliably provided emergency communications; and (4) the FCC has taken actions which resulted in the loss of over 100 Mhz of spectrum to amateurs. (*73 Amateur Radio Today*, March 1991).

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220-222 Battle Lost:

The fight to keep the lower two megahertz of the 1.25 meter band from reallocation appears to be over, and ham radio has lost. On December 4, 1990, the U.S. Court of Appeals for the District of Columbia Circuit denied the ARRL petition for review of the FCC order reallocating 220-222 Mhz to the Land Mobile Service. In rendering its decision, the Court concluded that by law it had to give great deference to the views of the commission. It also stated hat it could not say that the Commission did not arrive at a reasoned decision about the best way to advance the public interest, convenience, or necessity.

The ARRL and the amateur community have no other legal recourse open to them other than clear legislation by Congress....the appeals court was the last stop in the legal process. The FCC is now in the position to set a date when hams must vacate 220-222 Mhz. ... (*73 Amateur Radio Today*, March 1991.)

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Young Speakers Wanted:

Carole Perry needs good speakers and presenters under 18 years of age for the Dayton Hamvention this April. She will be presenting "Youth in Amateur Radio". She also urges every ham to bring a nonham child or young person to the Hamvention. (*73 Amateur Radio Today*, March 1991.)

Carole's address, as it appears in *73 Amateur Radio Today*:

Carole Perry WB2MGP
Media Mentors, Inc.
P. O. Box 131646
Stanten Island, NY 10313-0006

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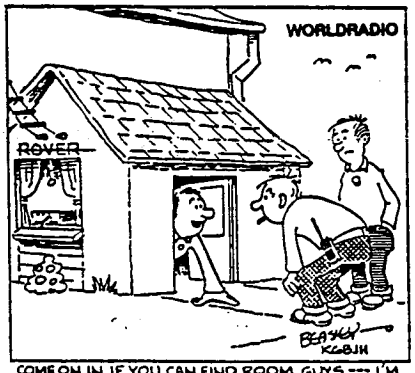

COME ON IN IF YOU CAN FIND ROOM, GUYS --- I'M STRICTLY QRP HERE!

****

SALES SHACK

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Kenwood TM 2530 2 Meter Rig -- Mint with Box, Manual, etc.

TM-2550 (45 watt) -- Good Condition with Bracket and Manual.

2 Dentrol MT-3000A Antenna Tuners, 3000 watt, 2 Meters, Dummy Load, Antenna Switch -- $250.00 each.

Looking for an Icom 3AT.

With regards to any of the above items, please contact Mike (KB4CVL) at (703) 791-2344.

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NOTES FROM THE EDITOR

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The Ole Virginia Times is published monthly by the Ole Virginia Hams Amateur Radio Club, and is mailed free to members of the OVHARC. Permission is granted for use of material contained within this Newsletter, provided proper credit is given. This Editor will exchange Newsletters with other Clubs and Associations upon request. Newsletter deadline for submission of articles is the 5th of each month. The Newsletter is entered as First Class Mail at the Manassas Post Office, Manassas, Virginia.

We are always looking for interesting items for the Newsletter. If you see articles, have shack tips, items for sale, items wanted, brain teasers, etc., please send them to the Newsletter Editor c/o OVH, Post Office Box 1255, Manassas, Virginia 22110; or, give me a landline (361-0008 or 690-6547). If it is interesting to you, chances are it will be interesting to others!

73's

Bonnie (N4QPB)
Editor

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NEXT MEETING

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The next meeting of the OVHARC will be on Monday night, March 18th, 1991, at 8:00 p.m., in the basement Meeting Room of the Northern Virginia Electric Co-Op, 10323 Lomond Drive, Manassas, Virginia.

We look forward to seeing **YOU** there!

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SEVENTEENTH ANNUAL

MANASSAS HAMFEST

AND COMPUTER SHOW

AN ARRL APPROVED HAMFEST

SUNDAY, JUNE 2, 1991

PRESENTED BY THE OLE VIRGINIA HAMS A.R.C., INC.

Dealers' Information Call:
Jack (KI4VP) 703-361-5255

General Information Call:
Jim (WD4OJY) 703-369-3940

OLE VIRGINIA HAMS AMATEUR RADIO CLUB

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Butch Blasdell (W4HJL)	703-369-2877

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Milt Warnock (N4SN)	703-369-7265
Tim Wayne (KB4NR)	703-494-2737

CALENDAR FOR MARCH AND APRIL

17 AMER EAGLE NET @ 1700 ON 28.340	**18** **OVH CLUB MEETING**	**19** W1AW QUALIFYING RUN	**20** NVFMA NET @ 2000 146.19/79	**21** OVH NET @ 2000 146.97 224.66	**22**	**23** WOODBRIDGE NET @ 2100 28.440 --- CQ WORLD-WIDE WPX CONTEST
24 AMER EAGLE NET @ 1700 ON 28.340 --- CQ WORLD-WIDE WPX CONTEST	**25**	**26**	**27** NVFMA NET @ 2000 146.19/79	**28** OVH NET @ 2000 146.97 224.66	**29**	**30** WOODBRIDGE NET @ 2100 28.440
31 AMER EAGLE NET @ 1700 ON 28.340 EASTER	**1** APRIL FOOL'S DAY	**2**	**3** NVFMA NET @ 2000 146.19/79	**4** OVH NET @ 2000 146.97 224.66	**5** NEWSLETTER DEADLINE	**6** WOODBRIDGE NET @ 2100 28.440 --- BALTIMORE HAMBOREE --- VEC EXAMS UNIVERSITY OF MD COLLEGE PARK
7 AMER EAGLE NET @ 1700 ON 28.340 --- BALTIMORE HAMBOREE	**8** 2 METER SPRING SPRINT	**9**	**10** NVFMA NET @ 2000 146.19/79	**11** OVH NET @ 2000 146.97 224.66 --- SKYWARN CLASS	**12**	**13** WOODBRIDGE NET @ 2100 28.440 --- VEC EXAMS HARRISONBURG, VA
14 AMER EAGLE NET @ 1700 ON 28.340 --- RALEIGH, NC HAMFEST	**15** **OVH CLUB MEETING**	**16** 220 Mz SPRING SPRINT	**17** NVFMA NET @ 2000 146.19/79	**18** OVH NET @ 2000 146.97 224.66	**19**	**20** WOODBRIDGE NET @ 2100 28.440 --- VEC EXAM LAUREL, MD

NOTES: 1. For more information on VEC testing, contact Harry W4PVA.
2. The Powwow net meets daily at 2100 on 28.400.
3. Virginia State QSO Party, 1800Z 16 to0200Z 18 March
4. Skywarn Advanced Class Saturday, March 16, 10A till Noon

WORLD WIDE FRIENDSHIP THROUGH AMATEUR RADIO

MARCH 1991

Ole Virginia Hams A.R.C., Inc.
Post Office Box 1255
Manassas, VA 22110

FIRST CLASS MAIL