Newscaster

The Official Publication of the Winnipeg Amateur Radio Club
The Manitoba Repeater Society
The Winnipeg Seniors Citizen's Radio Club

mailing address

W.A.R.C.
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October 1993

VHF in Manitoba

by VE4MJM

Date: October 18, 1993

Time: 7:30 p.m.

Place: Sturgeon Creek Regional Secondary School

Other Important Dates:

WARC: Oct. 24 Flea Market

WSC:

MRS: Oct. 29 Fall Semi-Annual Meeting (confirmed)

Other: Every Sat. & Sun. VE4TTU station in operation

Warc: Executive for 1993/94

President: Dave Panting - VE4EF
Vice-Pres: Barret Filbert - VE4ABA
Secretary: Dick Maguire - VE4HK
Treasurer: Gary Smith - VE4YH
Past Pres: Judy Norton - VE4JBN
Membership/Newscaster: Kay Quinn - VE4YF
Program Chairman: Rob Kaufman - VE4GV
Flea Market: Pat Giesbrecht - VE4PLG
Members at large: Scott Marshall - VE4WSM

Notes from your Editor: by Derek, VE4HAY

I want to thank Dan VE4DRK for his article, It came at just the right time. I only had 5 & a half pages for the newscaster this month. So once again I beg of you, our faithful reader, please supply me with articles. Remember this is your newsletter, it's your resource for information on what's happening in our province in regards to this hobby of ours. Lets try to use it to it's full potential.

While we are at it, why not also contact Rob VE4GV (or any executive member of WARC) and let them know what a great job the executive is doing, and what you would like to see for presentations at the meetings. The executive is trying to please everyone, but is having a hard time, without your input. So if you have a topic you would like to see at the meeting or even better have a topic you would like to present, give the executive a call. The rumours I have heard for upcoming presentations are in January - packet radio, the big boom in ham radio. Other than it that is open for thought...

Words from the President of WARC: by Dave, VE4EF

I was happy to see so many of you at the September meeting which marked the beginning of our WARC year and the end of mosquito season (maybe?).

Thanks to Rob Kaufman VE4GV for presenting the video "Introduction to HF DXing" last month. As some of you know, we are at the bottom of the sun spot cycle which governs HF propagation and DXers (except those with Quads) have been crying the blues. I am happy to be able to report, however, that the reports of the death of DXing are premature. This month there have been some notable stations spotted on the air including a ZD9 from Tristan de Cunha in the south Atlantic (go to the southern tip of South America and turn left). Those of you considering getting involved in HF should, as there is always somebody exciting out there to talk to.

WARC memberships expired at the end of September. To those of you who have already renewed, we thank you. Those of you who have not yet done so, you will find a membership renewal form enclosed with this newsletter. Please take a few minutes to fill out the form and either mail it to the address shown at the top right corner of this page or bring it to the next meeting.

73 and C U on the 18th.

Winnipeg Senior Citizen's Radio Club.
by Bill, VE4WU President.

Sorry no article this month, Please contact the club for info on events and happenings (ed.)

Manitoba Repeater Society
by Derek, VE4HAY

Attention all MRS members, please mark your calendars for the 29th of October , 1993. 7:30 pm That's a Friday evening, and we will be holding our semi-annual general meeting. This year the event will take place at the Sturgeon Creek High School - 2665 Ness Ave. The same place as where WARC holds their monthly meetings. Please try to attend this meeting.

We will be explaining the current repeater system, and what has been done, as well as what still needs to be done. Memberships for the 1994 year will also be accepted. We will have codes for linking the repeaters available, and instructions for the use of the autopatch. We also hope to have the fall version of the Blue Book (Manitoba's own call book) available for sale. The guest speaker is Barry VE4MA, who will talk about EME (moon bounce) in the UHF bands.

Once again that's October 29th, 7:30 Sturgeon Creek High School. See you all there !!

For those who do not know what the Manitoba Repeater Society is, please come out the Warc meeting this month. Michael will be talking about VHF repeaters and how to use them and how to link them for extended coverage. MRS has had repeaters in Manitoba for a number of years (longer than I've had a licence) and is in the middle of a complete change over to a new type of linking system. Micheal will explain what has happened so far and what is coming. He will also help those who have recently gotten their licence and are maybe unsure on proper courtesy on the air as far as VHF & UHF are concerned.

Flea Market
By Pat VE4PLG

This is a reminder for the fall WARC flea market that will be held on October 24th 1993 9:00 AM to Noon at the Waverly Hieghts Community Centre at 1885 Chancellor Drive.

Cost of tables is $5.00 and $2.50 for a half table. At the time of this writing there are only 2 tables left. Entrance to the flea market will be a dollar for everyone. This year there will be a talk-in frequency on 146.61 - (VE4MAN) for all those who are not sure where the centre is located. Also new this year will be a suggestion/comment box. The executive is looking for your input on how to make this semi-annual event even better. Please provide us with your comments. We are **still** looking for volunteers for the door and especially for the kitchen.

For table bookings and more info call Pat VE4PLG @ 338-0511

Ralph's Reg's
by Ralph, VE4RY

Q. Why is it illegal for hams to transmit USB on 18.167 MHz, even though the band extends to 18.168 MHz?

a) Because you'd cause interference to WWV
b) The higher frequencies of your voice would be out of band
c) You should use LSB on 17 Meters
d) 17 Meters is a CW-only band.

Answers elsewhere in this newsletter

CQ Worldwide Phone Contest
by K3LR

In an effort to promote activity during the CQ worldwide phone contest, Oct 30-31 1993. K3lr is giving achievement awards for QSO's with K3LR on multiple HF bands. The K3LR station will be on all six frequency bands (160,80,40,20,15,10) during the contest. They will be looking for QSO's from Canada on 3.750 -3.780 and 7.15 7.185

If outside the USA and complete QSO's with K3lr on any three bands you will receive a certificate suitable for framing. If you complete QSO's on any 4 bands you will receive a special Pennsylvania State Souvenir. 5 bands - a calendar, and 6 bands a coffee mug. Awards will be sent free of charge.

MINUTES FOR W.A.R.C.

Meeting began 0736, September 18,1993, VE4EF chairing.
VE4EF welcomed the assembly to our new season. Each member introduced him or herself. Minutes of June meeting approved as published in Newscaster

moved VE4NQ
seconded VE4AJR
CARRIED

Business Arising
no business arising

Correspondence
-bank statements
-corporation act documents
-cheque from Prairie Sky Roadrunners, to thank WARC for providing communications for the Birds Hill 20 Km race
-letter from DOC stating that "10 codes" are legal. (This is in response to a letter from VE4DSL)
-VE4EF gave new name of Department of Communications.

Standing Committees
-Treasurers Report, presented by VE4KX,
WARC has approximately $1278.00 plus tonights memberships he estimates approximately $1500.00 at fiscal year end.
-VE4TTU VE4PLG requested HELP to operate VE4TTU. We are desperate for help. She also thanked VE4RAM and VE4BDB for their many hours spent at 'TTU

Education VE4OV advised that ham classes will begin Thursday, September 30, at Sturgeon Creek Collegiate. Cost very close to $175.00.
VE4OV also mentioned the excellent article about VE4JBN, VE4YF, VE4SN et al. in a recent Winnipeg Free Press.
-VE4RBF advised that the canoe brigade, starring VE4VQ, was very successful.
-VE4EF reported that the Manitoba Marathon was very successful. All Marathon executives were very pleased with our performance, and a hearty thank you to everyone involved.

New Business
-VE4GV announced that he was the program chairman and solicited anyone's ideas for programs.
-VE4EF told the audience that the executive wanted input from them. We need your help with ideas for programs.
-VE4EF reminded everyone to stay for the "Introduction to DX" program coming up after coffee break

Notices for Good and Welfare
-Amateur TV issue - VE4EF explained the problem WARC objected to school divisions using amateur frequencies for distance education. WARC approached DOC to have this stopped . RAC helped enormously. Problem has been resolved fairly and quickly.
School divisions have been told to cease operations in our bands.
Midland School Division has been allowed to continue to operate in our bands, with an experimental licence, with many restrictions in hours of operation, frequencies etc. licence expires June 30, 1994
-VE4HK described the excellent actions taken by VE4LOM, VE4CPU, VE4JBN and VE4HAY to assist VE4WC, when he suffered a heart attack, on Wednesday, September 8, 1993.
VE4LOM advised that he had been up to the hospital to see VE4WC. He is doing well, and cant wait to get out of the hospital.
-VE4SN has a big package of QSL cards from Hungary. He also has a big package cards for VE4AMC and VE4AIY.
-VE4HK offered to take the cards for VE4AIY, and VE4GV took the pack for VE4AMC

Flea Market
VE4PLG advised that the Flea Market will be held at Waverley Heights Community Club, Sunday October 24, 1993. She needs volunteers. Everyone will pay $1.00 entry fee. Everyone must prebook their tables. There are only about 6 tables left.

-VE4UB requested that everyone give him any changes or updates etc for the Blue Book tonight

VE4SE asked about repeater linking codes being published in the Blue Book. He was advised that was up in the air due to Palomar controllers
VE4MJM requested that the repeater information for North Western Ontario be published in the Blue Book. VE4UB replied that he now had information for North Western Ontario, North Dakota, and Minnesota, but none for Saskatchewan.

VE4HK announced that the Manitoba Repeater Society Semi Annual General Meeting is scheduled for Friday, October 29, at Sturgeon Creek Collegiate.

VE4KHS announced that he had copies of Packet Users Guide, 125 pages of useful information about packet in Winnipeg. Cost was $25.00 per copy.

Business Meeting adjourned 0811
VE4NQ

After a half hour coffee break, the educational portion of the meeting commenced. Everyone enjoyed a very interesting videocassette entitled "Introduction to DX". I am sure that all present learned something from this program. Meeting ended approximately 9:30

Hints and Kinks
By Ralph, VE4RY

Stan, VE4SG showed me a trick I never thought of.
When you're cutting a piece out of a large round electrical lug so it can slide onto a binding post, instead of cutting the piece out of the center area, cut it out of the side. This give less chance of pulling the lug straight off the bind ing post and makes for a more secure connection.

I've been in electronics for over 30 years but never thought of this till Stan loaned me a power cord and I noticed it.

ASSISTANCE TO HEART ATTACK
By Dick, VE4HK

A very unusual event developed on Winnipeg's drive to work net on 146.76, Wednesday, September 8, 1993, at 7:40 am. Allan VE4LOM and Larry VE4CPU were chatting, when a very faint signal broke in. Claude VE4WC announced that he thought he was having a heart attack, and needed an ambulance.

Allan VE4LOM used the 147.51 patch to summon an ambulance, while VE4CPU continued monitoring 146.76. Larry also monitored the ambulance frequency on his scanner. VE4WC's voice was very faint, due to his condition. He was not able to give his exact location for the ambulance, so it drove right past him the first time.

Judy VE4JBN, who was just arriving at work, ran into the building to phone 911, as well. She then returned outside, so she could use her handheld to talk with VE4WC. Judy encouraged Claude to tell us exactly where his car was parked. She also had him turn on his flashers and give his licence number.

By now, VE4LOM had to leave the net to go to work. Derek VE4HAY jumped in, and called 911 on his cellular phone. He passed Claude's location and licence number to the dispatcher. The ambulance arrived just before 8:00am to transport VE4WC to the hospital.

We found out the next day that Claude had a second heart attack about half an hour after arriving at the hospital. He is doing better now, but will be in ICU for a few days, and in the hospital for a while. His wife feels that the prompt action saved him from a worse fate.I must say that I am very pleased and impressed with the highly professional manner with which the participants handled this situation. Normally, the morning "net" on 146.76 features a group of nutty hams, having a great time. As soon as this emergency developed, every non essential person monitored the frequency, and kept quiet. This is definitely by the book. We feel that having Judy VE4JBN keep Claude VE4WC talking, was beneficial, since it kept him conscious, and able to help direct the ambulance to him.

I wish to commend everyone who participated in this real life emergency exercise, either by communicating, or by maintaining radio silence. Thanks to VE4's LOM, CPU, JBN, SG, HAY, and all those who monitored, for a job well done.

Ralph's Answer

A. The correct answer is b). Any frequency above 1KHz in your modulation would be above 18.168 Mhz. Most rigs allow at least 2.2KHz to pass.

My Experiences Tuning the R7 Vertical
by Wayne ,W9II

I recently installed a Cushcraft R7 Vertical for use as a 'back-up'antenna in case I had the regular yagis down for maintenance, weather,or whatever. I have it mounted on a 15' mast next to a sturdy chimney. There is a tilt-over/swivel base attached to the roof so the whole thing can be tilted over for adjustments using a pulley and ropes thrown over the chimney cap. This puts the base of the R7 about 3' over the topof the chimney and about 28' above ground, with no tree branches within at least 20'. I figured this could be considered reasonably 'in the clear'. I assembled the R7 to the instruction book dimensions and was more than a bit surprised that my SWR plots were way off on a few bands, especially 17 and 30M where the SWR dip was well below the bottom of the bands per the MFJ Antenna Analyzer. I tried numerous times tipping the thing over and adjusting the lengths between traps , trying to 'move' the SWR curves. These attempts yielded unusual and sometime inconsistent results, so I put the whole thing back together to the starting dimensions and figured that adjusting the traps was worth a try. That appears to be the 'secret' to getting the R7 (and probably the R5 too) SWR curves where you would like them to be within the bands. I had to move the 17M trap capacitor out about 5/8" and the 30M trap cap out 3/4". The SWR curves seem a bit sharper on 17 & 30M than on the other bands, but it is possible to get the curves where you would like them. Maybe Cushcraft has some quality control problem getting the initial trap settings right (the other traps seemed to be 'O.K.'). Hope this post can help reduce the R7 frustration factor for other netters.

Packet Radio - Part 1
by Alan, VE4YZ

(extracted from Frequently Asked Questions for Amateur Packet Radio Version 1.13 - Last modified 2/21/93 by Steve Watt KD6GGD

Packet:KD6GGD@N0ARY.#NOCAL.CA.USA.Na
Internet: steve@wattres.SJ.CA.US,

3 Networking and special packet protocols

This is a sample of some of the more popular networking schemes available today. By far, there are more customized networking schemes used than listed. Consult your local packet network guru for specific network information.

3.1 Are there any other protocols in use other than AX.25?

AX.25 is considered the defacto standard protocol for amateur radio use and is even recognized by many countries as a legal operation mode. However, there are other standards. TCP/IP is used in some areas for amateur radio. Also, some networking protocols use other packet formats than AX.25.

Often, special packet radio protocols are encapsulated within AX.25 packet frames. This is done to insure compliance with regulations requiring packet radio transmissions to be in the form of AX.25. However, details of AX.25 encapsulation rules vary from country to country.

3.2 What is TCP/IP?

TCP/IP stands for Transmission Control Protocol/Internet Protocol. This is commonly used over the Internet wired computer network. The TCP/IP suite contains different transmission facilities such as FTP (File Transfer Protocol), SMTP (Simple Mail Transport Protocol), Telnet (Remote terminal protocol), and NNTP (Net News Transfer Protocol)

The KA9Q NOS program (also called NET) is the most commonly used version of TCP/IP in packet radio. NOS originally was written for the PC compatible. However, NOS has been ported to many different computers such as the Amiga, Macintosh, Unix, and others. Smaller computers like the Commodore 64 and the Timex-Sinclar do not currently have version of NOS available.

3.3 Networking Schemes

What are some of those other networking schemes?

During the early days of amateur packet radio, it became apparent that a packet network was needed. To this end, the following packet network schemes where created.

Digipeaters

The first networking scheme with packet radio was Digipeaters. Digipeaters would simply look at a packet, and if its call was in the digipeater field, would resend the packet. Digipeaters allow the extension of range of a transmitter by retransmitting any packets addressed to the digipeater.

This scheme worked well with only a few people on the radio channel. However, as packet became more popular, digipeaters soon were clogging up the airwaves with traffic being repeated over long distances. Also, if a packet got lost by one of the digipeaters, the originator station would have to retransmit the packet again, forcing every digipeater to transmit again and causing more congestion.

KA-Nodes

Kantronics improved on the digipeater slightly and created KA-Nodes. As with digipeaters, KA-Nodes simply repeat AX.25 frames. However, a KA-Node acknowledges every transmission each link instead of over the entire route. Therefore, instead of an end-to-end acknowledgement, KA-Nodes allow for more reliable connections with fewer timeouts, because acknowledgments are only carried on one link. KA-Nodes therefore are more reliable than digipeaters, but are not a true network. It is similar like having to wire your own telephone network to make a phone call.

NET/ROM

NET/ROM was one of the first networking schemes to try to address the problems with digipeaters. A user connects to a NET/ROM station as if connecting to any other packet station. From there, he can issue commands to instruct the station to connect to another user locally or connect to another NET/ROM station. This connect, then connect again, means that to a user's TNC, you are connected to a local station only and its transmissions do not have to be digipeated over the entire network and risk loosing packets. This local connection proved to be more reliable.

NET/ROM doesn't use all of the AX.25 protocol. Instead, it uses special AX.25 packets called Unnumbered Information (UI) packets and then puts its own special protocol on top of AX.25. This is again used to increase efficiency of its transmissions.

NET/ROM is a commercial firmware (software put on a chip) program that is used as a replacement ROM in TAPR type TNC's. Other programs are available to emulate NET/ROM. Among them are TheNet, G8BPQ node switch, MSYS, and some versions of NET.

NET/ROM nodes, at regular intervals, transmit to other nodes their current list of known nodes. This is good because as new nodes come on-line, they are automatically integrated in the network. However, if band conditions such as ducting occur, ordinarily unreachable nodes can be entered into node lists. This causes the NET/ROM routing software to choose routes to distant nodes that are impossible. This problem requires users to develop a route to a distant node manually defining each hop instead of using the automatic routing feature.

ROSE

ROSE is another networking protocol derived from X.25. Each ROSE node has a static list of the nodes it can reach. For a user to use a ROSE switch, he issues a connect with the destination station and in the digipeater field places the call of the local rose switch and the

distant rose switch the destination station can hear. Other then that, the network is completely transparent to the user.

ROSE's use of static routing tables ensures that ROSE nodes don't attempt to route packets through links that aren't reliably reachable, as NET/ROM nodes often do. However, ROSE suffers from the inability to automatically update its routing tables as new nodes come online. The operators must manually update the routing tables, which is why ROSE networks require more maintainance.

3.4 BBS message transfer

Many of the BBS programs used in packet radio allow for mail and bulletins to be transferred over the packet radio network. The BBSes use a special forwarding protocol developed originally by Hank Oredsen, W0RLI.

Besides full service BBSes, many TNC makers have developed Personal BBS software to allow full service BBSes to forward mail directly to the amateur's TNC. This allows operators to receive packet mail at night and avoid tying up the network during busy hours.

TOUCH-TONE TID-BIT
by Ralph, VE4RY

We all know the names of the touch-tone digits 'star' (*) and pound (#). And sometimes we refer to them as 'asterisk' and 'octothorpe'.

Q: What is the other name (as used by Northern Telecom) for the 'star' (*) symbol?

A: The official name is 'SEXTILE'.

(Not sure if this is interesting enough for the Newscaster, but I just came across it the other day in a Northern Telecom manual, after 30 years in the business, hi.)

73...Ralph

The Internet and Amateur Radio.
by Dan Keizer, VE4DRK

For those of you involved in packet radio, you've most likely already heard of the local packet-internet gateway, but for those of you who are not active in packet, this article's for you. Some of this information is provided by the author in a discussion of this issue in the WARP manual.

Does anyone remember back in the late 70's, early 80's when the DOC authorized amateur radio operators to experiment with digital communication systems on radio? I sure don't as I wasn't licensed back then, but from what I've learned, Canada was a leader in this regard. Being the first country to authorize it's licensed amateur operators to use digital techniques, amateurs followed quickly with the advent of the first "TNC", the venerable VADCG TNC (Vancouver Area Digital Communications Group Terminal Node Controller). This group provided, in kit form, a package that allowed a ham to assemble a complete radio modem and controller to get on the air and use this new method of communication and experiment with it. Soon afterwards, other groups sprouted up in other countries that gained permission and what started was the formation of rather large groups whose purpose was to further the design and application of digital systems on amateur radio. So what we have today is a world-wide network of interconnected ham stations using various forms of digital modulation methods to exchange data, files and bulletins via HF, VHF, satellite etc. Each form of communication has it's own nuances which ham's have developed/enhanced new protocols to suit the needs of the application/service they wish to use/provide. So what does all this have to do with the internet?

Plenty if you look at what is taking place in the field of communications and computer networking. Computers have fallen in price and increased in performance to the point where it is almost a standard house-hold item, or is it already? One could look at the computer as being just another tool, another resource to use.

Further to this, the use of facilities such as electronic mail, remote logins, file transfers, information retrieval and the like; the use of computers to access information is growing. To this, the use and availability of networks has grown tremendously.

There exists a wide-spread network encompassing basically the whole planet that links in numerous smaller networks, (usually regional or national in nature) and joining them together into what may be called an "inter-net". Manitoba has a regional network called

MBnet; Canada has a national network called CA*net with ties into other networks into the states. It is this concept of linking distinct networks together that the term "Internet" comes from. Thus, packets from one network are able to travel freely (within reason) from one network to another providing access to a wealth of information/services that are available on every other network connected. The protocol used for this internetworking is called TCP/IP, an acronym for Transmission Control Protocol/Internet Protocol. TCP/IP has been around for a long time and is wide-spread use throughout the Manitoba, Canada and the world to interconnect computer systems from various manufactures of hardware/software systems. Originally developed in the US for government/research purposes to tie their systems together, it has grown to become a global standard. There exist various other protocols that make up the TCP/IP "protocol suite" that allow for various functions to occur and to make life generally better for the end-user. Telnet (login sessions), ftp (file transfer sessions), smtp (electronic mail), converse (chat sessions), callsign servers, etc. Among the various end-user type facilities, there exist various other protocols that make life easier for the network manager. Some interesting protocols are in use on/for amateur radio uses such as RSPF (Radio Shortest Path First protocol) which is being developed by various ham and non-ham people. In some areas, the tcp/ip protocol suite is in very good use and entrenched in the area, others are just noticing what is available with the protocols. Certainly with the advent of cheaper more powerful computers, running TCP/IP is easier to do than it was before and is becoming more common-place.

In the early 80's work was being done with networking PC's to the amateur radio community to not only allow chat sessions, but file transfers etc. One work of particular interest to amateurs is the KA9Q software package. Since it's fledgling days running on CP/M systems, it has grown to a robust internetworking package supported on various platforms.

Using TCP/IP in Winnipeg

Recently a station has been installed at a local internet site, The University of Manitoba. The station consists of a 80286PC with an ethernet card plugged into the UofM internet backbone, a standard KISS TNC plugged into the serial port talking to a GE EXEC II radio.

Although this is a very minimal configuration, it does provide the accessibility for local amateur radio operators to connect with other distant amateur radio stations and utilize various services on the Internet. Since the Internet is basically a land-based system and doesn't use ham radio for it's basic transport, HF privileges are not a necessity. A basic license is all that is required to use the gateway. The gateway is running the TCP/IP protocol suite utilizing the KA9Q package developed by Phil Karn and others. The version used is customized by WG7J and is commonly referred to as NOS, (Network Operating System). The development and continued improvement of this package is an on-going pursuit with hams around the world communicating via the internet and working with the software to increase it's usefulness. This provides the basic TCP/IP protocols for the local amateurs to interconnect with other similar ham stations wherever they may be. Local users can access the Internet gateway via different means. The gateway is currently on 145.01 simplex and is running approximately 30 watts into a stacked 5/8 antenna at the university on top of the engineering building. An end-user can use either a standard TNC with a terminal/computer or run the NOS package itself, even the BAYCOM modem is supported as a device usable by NOS. To connect to the system using standard AX25, issue a connect command such as: C VE4WGW. (VE4WGW is the gateway's callsign). Once connected to the gateway you will be issued a welcome message and displayed a one-line menu. Pressing the "?" key will give you some descriptive help information.

One of the more interesting functions available on the gateway is the capability of participating in a world-wide roundtable chat session, called Converse. To get into this, issue the C command. A /help command once in the converse session displays the various commands available. (If you don't type the "/" before issuing your command, it will echo out to the whole internet...) If you want to connect out to various other ham systems running tcp/ip around the world, you can use the telnet command. For instance, to connect to Barry ve3jf's system in ottawa, one would type in: T bbs.ve3jf.ampr.org, since that is the "domain-name" for his site. Telnet is a little different than just issuing a connect command from a regular TNC. You have to logon to the amateur radio system you wish to connect to. It will ask you for your callsign and a password. The general rule-of-thumb is to use your callsign as the login id and your first name as your password. This allows other hams to easily identify who's on and who they'd like to talk to etc. Refer to the resource document in the Gateway's /pub directory for availability of various systems. There are ham TCP/IP systems in areas including Australia, the USA, Canada, Europe, South America etc. Many more gateways like the Winnipeg gateway are springing up and are making available their services to local hams in their area. Sending mail to other hams is just as easy as using the local BBS systems around. All you need to know is the other person's callsign and the station/gateway that he's using in his area. For instance to send a message to Warren, VK1XWT in Australia, one could use the command: SP vk1xwt@minnie.vk1xwt.ampr.org. Obviously you need to know the hostname (minnie.vk1xwt.ampr.org) and that

Warren actually has a userid. Once you have finished your mail message, the message will be transferred via the internet to his site immediately. To send mail to another host on the internet, for instance Karl ve4khs, who is running the NOS package on his pc at home, one could use the command: SP ve4khs@ve4khs.ampr.org. This would allow you to type a message up and the gateway would deliver it to Karl. If his system is currently not operating, the gateway will poll every 15 minutes or so to see if it's back up. If you wanted to see who is on a certain system, you can use the "finger" command and put the finger on someone. For instance you wanted to see if Gil, VE6GIL is available on his system, you could use the command: F @ve6gil and that will tell you who is currently on that system. (Note that the Calgary systems are available via a 9600 satellite link from Ottawa to Calgary with NET/ROM nodes in-between, so it is certainly not the quickest of routes, but does function well). To get a listing of who has been heard on the 145.01 frequency by the gateway, you can use the J command (just heard). To see what other tcp/ip stations have been heard since the gateway last rebooted, use the IH command (IP HEARD LIST).

Issue the W command to get a list of files. To download a text file, use the D command, and to download a binary file, use the DU command. This will require the decoder to decode the encoded binary file on your PC.

Another nice Gateway feature is an on-line callsign server. This service is available with the CA command and will automatically connect you to the callsign server in Buffalo. From this you can issue a help command and other queries. For instance when you are on the callsign server after issuing the CA command, the command "call ka9q" will show the entry for Phil Karn. To see who is licensed in Yellowknife, you could use the command: city yellowknife. Be carefull not to make large requests or you may have alot of data coming back at you. Of course the database is not always up-to-date but it is updated now and then. Callsign information is available for all Canadian and US callsigns. For those who wish to operate on different frequencies or for those who are not local to the gateway, NET/ROM has been enabled on the gateway, and recently there has been an opening for the gateway to be available on the provincial NET/ROM backbone. Thus, a user in Brandon or Neepawa can connect to their local NET/ROM node and issue a connect request to VE4WGW. For those who are interested in running the TCP/IP protocols from remote sites, the gateway does support the use of NET/ROM as a transport protocol for the TCP/IP packets, thus extending the reachabilty of remote systems.

The use of NOS is not required but would definitely help in becoming an active user of the internet. NOS is available for systems such as PC's, Amiga, Macintosh, OS/2, Windows and several Unix systems.

The gateway started off as a meager floppy-based 286 system. Since then, various hams have donated their time and materials to the betterment of the gateway service. A harddrive was donated and a 386 motherboard provided at a very affordable price by local people interested in furthering the quality of service the gateway provides.

But what can I do to help out?

Does anyone remember when FM first came out, hams used simplex repeaters and direct communications? It was workable but not intuitive and sort of clumsy I am lead to believe. Duplex repeaters eventually sprouted up and is the most common form of communication for most hams wishing to talk to other local hams, increasing the usefulness and effectiveness of that form of communication. What has been done to the old simplex digital systems? Lots! High speed systems have sprouted up. It is not uncommon to see 9600bps repeaters in use in major cities. The use of 56,000bps systems is even spreading fairly quickly. Digital repeaters have been put in use to overcome major problems in hidden transmitter syndrome. Designing networks like cellular nets being linked by high speed trunks is a current mind-set in high-speed packet radio.

Of course Winnipeg is not a high-technology development area like other parts of the country, but we do have a large and growing number of amateur radio operators taking up the use of packet radio. The need for higher-speed linking/end-user systems is going to be a requirement if we wish to provide access to all the information services available locally and globally via whatever means, HF, VHF or Internet.

Who is to provide these services?

Beyond someone implementing a high-speed network themself, there exists a few organized groups to further this cause. The MDECG (Manitoba Digital Emergency Communications Group) and the WARP (Winnipeg Amateur Radio Packet) group exist to further both provincial and local packet concerns. Through participation in these groups, we can help increase throuput and better utilize the packet frequencies that are available to us.

In closing, the gateway is to serve local hams in discovering other interesting aspects to packet radio and to further the use and research into communication systems utilizing packet radio. Remember the early 80's?

We've come a long way since then, just think what lies ahead!

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