The Anchorage Amateur Radio News Bulletin

November, 1994 | Anchorage Amateur Radio Club Newsletter | Vol. 23, No. 11
Editor - Harvey Rookus, NL7DK

Inside

Don't forget to BUY Raffle tickets!!

Also don't forget to sell the Raffle Tickets !!

Let's Learn More about Internet
Now Comes The Second Installment !!

Did you learn anything about Internet at the last meeting? If you are like me you sure did! I also found that I learned enough to know that now I am really behind. I have had packet for a long time, but if you are into packet you know that you have very seldom seen NL7DK on your screen. Two reasons: One I guess I am chicken and the second that I question just how much I know about what I am trying to do. So, Show up at the next meeting, November 4th and you can watch me soak up info even if you don't need to!

Matt Manhardt and Lance Ahern of Internet will be putting on Part Two of INTERNET!! DON'T MISS IT! It should be worth every minute of our time.

Do You Remember? About a month and a half ago a George Pataki WB2AQC visited Alaska to interview and take photos of Alaskan Hams for possible publication. The following is a letter from George:

"Anchorage Amateur Radio Club

I would like to thank everyone who met me during my travels through Alaska and to report the results. During my 28 days in your state I visited amateur Radio operators in 15 localities: Anchorage, Eagle River, Fairbanks, North Pole, Chena Hot Springs, Seward, Kodiak, Homer, Palmer, Juneau, Auke Bay, Sitka, Petersburg, Wrangell, and Ketchikan. I met over 90 hams and made about 64o photos.

I wrote four articles . A 16 page single spaced day by day account was submitted to the DX Magazine with over 100 photos so the editor can have his choice; the article will run in several issues starting probably in January 1995. The same material was accepted by Mobile Ham published in Japan and is being translated. QST accepted several photos with a short article, and they will be shortened even more, about the lady operators of Alaska. The third article about the Alaskan hams and their cars and trucks having amateur radio calls on their license plates, together with a bunch of photos, was submitted to CQ magazine but not accepted yet. In case of rejection it will be sent to another magazine. The fourth material, about families where I found two or more operators will be sent with a bunch of photos to 73 or World Radio.

73 George WB2AQC "

Notes from the Editor--

I know that sometime in your Ham Radio life you have had a happening that would be of interest to others in the Ham community. Put one of these events down on paper so it can be put into the newsletter for everyone to read and compare. It might be funny, it might be sad, but we have all learned along the way, so send me items or ideas to improve the scope of things in the Club Newsletter!

ALSO--

I would like to Thank Richard AL7MO for all the fine work that he has done to "upgrade" the newsletter. I will try to keep that quality going!!

AARC GENERAL MEETINGS are held on the first Friday evening of each month in Room 102 of the Carr-Gottstein Building on the Alaska Pacific University Campus. The campus is located at 4101 University Drive and Bragaw Streets. Parking is available only in the lot to the northeast of the building. The meetings begin at 7:00 PM and visitors are always welcome! The AARC legendary raffle is open to everyone.

AARC BOARD MEETINGS are held on the second Wednesday evening of each month in Room 104 of the Carr-Gottstein Building on the APU campus. The meetings begin at 7:00 PM and are open to all club members and visitors.

ANCHORAGE ARES NET The Anchorage area Amateur Radio Emergency Services net is held each Thursday evening at 8:00 PM on the KL7ION repeater on 147.3 (+.600). Net Control is Lil Marvin, NL7DL and alternate NCS station is KL7IO. The Westlink Amateur Radio report, Swap N Shop and the Parka Net follow the ARES net on the same frequency.

THE KL7AA REPEATERS sponsored by the club are on 146.94 (at minus .600), 224.94 (-1.600) and 444.7 (+5.000). The 146.94 repeater located near Flattop Mt. and the remote receiver at Government Hill use either 100 or 141.3 hz tones for access. The West Anchorage remote receiver uses only 100 hz tones. The 125 cm and the 70 cm repeaters located near Flat Top Mt. do not require tone for access at this time. The AARC sponsored repeater at Mt. Alyeska, 146.76 (-.600), is equipped with the 141.3 hz tone, but does not require it for access at this time.

The repeater trustee is William Reiter, KL7ITI. Doug Dickinson, KL7IKX, is chairman of the VHF/UHF committee.

KL7AA-7 PACKET OPERATIONS Ports are 145.01 and 145.96 mhz direct at 1200 baud and via the secondary network on 145.05 and 445.05 mhz at 1200 baud and on 7.110 mhz at 300 baud (alias HF40). The Iceworm network is available on 147.96 mhz. Remember that 147.96 is normally in use as the Iceworm link to other Alaskan communities and please limit use ot this frequency to the hours of 1600 to 220 daily.

A landline port is available at 1200 - 14,400 baud, V32.bis/MNP5 compatible, registration is required. Contact Sysop Mel Saunders AL7PB at 349-4372 for info, or Associate Sysops, Doug KL7IKX, Paul WL7BF, Jim NL7C, Bill AL7MM, John NL7NC and Merle AL7LD.

FREE LICENSE EXAMS are held on the first Wednesday evening of the month at 6:30PM in the Carr-Gottstein Bldg on the APU campus and on the third Wednesday evening of the month in Eagle River at 7PM in the basement of the VFW Hall.

VEC exams are also held on the second Saturday of each month at 2 PM at the Hope Cottage offices, 540 W. International Airport Blvd. For more information contact VEC Director, Roger Hansen, KL7HFQ at 892-6365.

AARC MEMBERSHIP DUES are $20.00 regular, $25.00 family and $10.00 student. Dues are due one year from date of last payment. There is a 30 day grace period. Life memberships are available. Contact Lance Dunbar, AL7BK, (H) 337-6297 or (W) 561-5457.

Please remember that the club receives $2.00 for each ARRL membership renewal and $5.00 for each new ARRL membership if they are processed through the AARC.

Calendar

NOVEMBER

VEC Tests 2nd
AARC Meeting 4th
AARC Board Meeting 9th
SCRC Meeting 11th
VEC Tests 12th

DECEMBER

AARC Christmas Party 2nd
VEC Tests 7th
SCRC Meeting 9th
VEC Tests 10th
AARC Board Meeting 14th

Then There's Next Year!

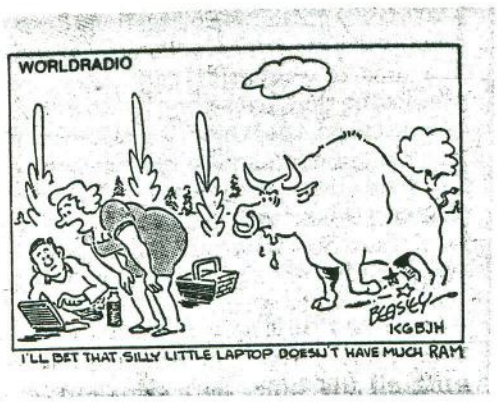
The Anchorage Amateur Radio News Bulletin is the monthly newsletter of the Anchorage Amateur Radio Club.

Letters to the Editor and articles for publication should be submitted to Harvey Rookus, NL7DK, 3310 Checkmate Drive, Anchorage 99508. Telephone number (907) 333-4693 .

Articles and Notices for the paper should be typewritten or on IBM compatible formatted computer disks (5.25 or 3.5 inch). Deadline is the 20th of each month.

Anchorage Amateur Radio Club
BALANCE SHEET
All Accounts 10/10/94

Account	Balance
ASSETS	
CURRENT ASSETS	
AARC Gaming-SBS FMA Checking	27,147.01
AARC Holding-SBS Money Mkt	179.71
Business Acct- FNB	8,199.71
TOTAL CURRENT ASSETS	35,526.43
FIXED ASSETS	
Life Member-AARC Life Mbr Acct	19,462.42
SBS FMA Bond-ASD Bond	5341.20
TOTAL FIXED ASSETS	24,803.62
TOTAL ASSETS	60,330.05
TOTAL LIABILITIES	0.00
EQUITY	
EQUITY ACCOUNTS	
Bus Acct Equity-Opening Balance	56,136.42
TOTAL EQUITY ACCOUNTS	56,136.42
CURRENT EARNINGS	4,193.63
TOTAL EQUITY	60,330.O5
TOTAL LIABILITIES / EQU ITY	60,330.05



Anchorage Amateur Radio Club
1995 Proposed Budget ($)

INCOME	
Business Income	
Advertising	100
Dues	
Annual	3,500
Life Membership	(500)
Total Dues	3,000
Total Business Income	3,100
Enterprise Income	
Gaming	
Pull Tabs	27,000
Bingo	0
Other	0
Total Gaming	27,000
Interest Income	0
Special Events	
Ham Fest/Xmas Raffle	4,000
Country Store	2,000
Other	0
Total Special Events	6,000
Total Enterprise Income	33,000
TOTAL INCOME	**36,100**
EXPENSE	
Business Expense	
Advertising	100
ARRL Dues Pass Through	300
Bank Charges	100
Business Postage	100
Insurance	600
Licenses	100
Office Supplies/Software	200
Printing	100
Telephone	1500
Total Business Expense	3,100
Public Service Expense	
Activity Expense	
Hamfest/Xmas Raffle	6,000
Monthly Meeting	1,000
Field Day/Xmas Party/Others	1,000
Total Activity Expenses	8,000
Contributions to Charitable Organizations	4,000
Education	
License Classes	1,000
Newsletter	4,000
VEC Program	1,000
Education Grants	2,000
Total Education	8,000
Emergency Services Equipment	1,000
Non-AARC Equipment	1,000
Packet Systems	
New Equipment	2,000
Repairs/Other	500
Internet Access	500
Total Packet Systems	3,000
Voice systems	
New Equipment	2,000
Repairs/Site Lease	1,000
Total Voice Systems	3,000
Taxes/Permits/Accounting	5,000
Total Public Service	33,000
TOTAL EXPENSE	**36,100**

September 1994 Technical Log

Part One

On the 4th of Sept WL7BF Paul, WL7EC Gil, K7TPN Dick met first at the 90/30 repeater site, where we installed a new dual band antenna, above the existing one used by EAGLE (145.01) and EAGLE 4 (440.050)

From there we moved on to the 146.94 repeater site and started on the new antenna project for all three repeaters. WL7EC, KL7YF, and WL7GX returned to the 94 site on the 11th and finished the installation of the new VHF/220/UHF antenna. We installed a Comet CX-333 tri band vertical atop the 60' tower at the 94 site. This antenna is shared via a tri-plexer with thr 94 repeater, the 224.94 repeater, and the 444.70 repeater.

Initial tests indicate a considerable increase in local area coverage. And testing done by KL7YF Rick as he and Lil NL7DL headed towards Fairbanks show we have picked up an amazing amount of UHF coverage up the road towards Fairbanks.

Then on the 25th WL7EC, NL7NC John, and I went to the 147.30 repeater site and installed the new backup repeater for the ARES system. This repeater (a 25 watt Icom) can be commanded up remotely in case the main repeater develops a problem during the winter months. The standby repeater ID's as KL7ION/R BKUP. Interface and testing was done on the new repeater, and we all got to experience SNOW up close and personal. The new backup repeater, is completely separated from the existing repeater, the only thing it shares is one control circuit, and it's in the same room.

Each repeater has it's own power supply, duplexer, and backup battery sets. Both repeaters have individual antenna's and feed line. The command circuit was designed in such a way that if the common control circuit should fail, the backup will be left tied to it's own antenna and the main will be tied to a dummy load. If time permits (before snow), the second command circuit will be installed, and then the two systems will be totally separate.

Contrary to what you may hear, there is nothing wrong with the main repeater, other than it's anntenna is really designed for long haul transmissions, and doesn't cover down toward the base of the mountain very well.

In fact the GE repeater has a bit better sensitivity, and considerably more power. .25 microvolts sensitivity and 75 watts output. The Icom has .35 microvolts sensitivity and 25 watts output. The main repeater antenna is a commercial model DB-224E, with 9DB gain, with the main lobe of radiation being NNW. The standby antenna is a Comet GP-3, with 4.5dbgain on VHF in an omni directional pattern.

The difference is apparent in that the Omni has a better downward angle of radiation. The DB-224E is designed to to push the pattern out to the horizon, which it does quite well. Both antenna's are fed with 1/2" heliax, the main feedline is a bit shorter than the standby antenna, about 25' shorter. Both are mounted at about the same height, but on separate poles. My thanks to NL7NC who constructed the extreme weather mount for the standby antenna, as well as the extreme weather mount for the Digital antenna (identical antenna to the standby voice antenna). The digital antenna has weathered a complete year without any problems, and so John used the same design for the new standby antenna.

Over the course of the last month NL7NC and I have been pulling our hair on the Alaska Internet Gateway system. Finally in a last ditch effort we took a giant leap backwards, and dropped from 9600 baud simplex to a dual band, dual frequency 1200 baud system, the results have been amazing. The throughput has increased 20 fold. If this system continues to work as well as it has for the last week, we will probably look at moving the full duplex link to the 222 band, later this fall or early winter.

SWAP N SHOP

FOR SALE: Yaesu FT-747GX HF Tranceiver. Yaesu FP-757GX Switching DC Power Supply. Heathkit HW-8 QRP CW Transceiver w/ power supply.

RF Concepts RFC 2-23 Two Meter Linear Amplifier. Spider Multiband HF Antenna for 80 to 10 Meters with radials.
Larsen Kulrod NMO-220 5/8th wave Whip Antenna. Contact Ed Maher, NL7VP (W) 249-3280 or (H) 243-4348.

FOR SALE: Analog Science Fiction/Science Fact Magazines 1984 to 1992, $15 per year or $120 for the set. Contact Richard Mote, AL7MO, 248-9191

FOR SALE: Icom IC02AT, $150 Icom IC24AT, $245; Icom IC2SAT, $195; Icom IC4SAT, $195. Henry 3K Classic Amplifier with 10 Meters, Never used. The Ultimate Amplifier. $2400. Contact Bill Phifer, AL7IG, 243-0433.

WANTED: Oscillscope 100 Mh or greater; Code practice machine/key trainer; Spectrum Analyzer and Frequency Counter. Contact Ron Phillips 522-3734

Frequencies used by the Anchorage Amateur Radio Club

The AARC has voice repeaters on the following frequencies:

146.16/76	Aleyeska Ski Resort	Sub-tone of 141.3Hz
146.34/94	Anchorage	Sub-tone of 100 or 141.3Hz
Direct tie to law enforcement. Restricted phone patch system.		
223.34/224.94	Anchorage	No tone required
449.70/444.70	Anchorage	Sub-tone of 100Hz
Direct tie to law enforcement. Open phone patch		

In addition the AARC provides technical support to the PARKA 147.30/90 repeater KL7ION

Dx'ing the Internet
The Alaska Packet/Internet Gateway

Introduction

This article discusses the use of the Alaska Packet/Internet gateway for amateur packet radio applications. The gateway (AKGATE) provides real time packet radio access for Alaskan amateurs to other packet stations worldwide.

Technical Description

The AKGATE system was installed in August, 1994 at the offices of Internet Alaska, Inc. at 4048 Lake Otis Parkway in Anchorage. The system consists of a P/C compatible computer using WG7J's JNOS 1.10C TCP/IP software, which is a derivative of Phil Karn's original NOS. The P/C is connected via an Ethernet LAN to Internet Alaska's UNIX server and high-speed leased data line that provides access to the worldwide services of the Internet.

To complete the connection to the local packet radio network, a TheNet X-1J2 node, radio equipment, and a dual-band vertical antenna has been installed at the site. The callsign (NL7NC-6) and alias (AKGATE) actually reside in the node. The gateway software also functions as a NETROM node using the callsign NL7NC-9 and alias ANCHOR. AKGATE and ANCHOR are connected using a KISS serial connection.

JNOS has many capabilities, including use as a stand-alone bbs for both AX.25 and TCP/IP (SMTP) applications, FTP, TELNET, CONVERS, FINGER, and PING. For use as an AX.25-TCP/IP gateway, these applications are not supported.

Theory of Operation

Amateur packet radio uses the AX.25 protocol for error-free transmission of data at OSI Level 1. NETROM is used for Level 2,3, and 4 transport and control layers. AX.25 is a derivative of the X.25 protocol that is used on the Internet for data transmission, with the biggest change being the insertion of amateur callsigns. On the Internet, as in most commercial networks, TCP/IP is used for the transport and control layers.

JNOS software as used in a gateway application serves as a simple network router. Amateur AX.25 packets are accepted by JNOS, encapsulated within larger TCP/IP packets, then sent across the Internet to other pre-defined JNOS gateway destinations. Using this method of encapsulation, the gateway actually looks like a long piece of wire to the amateur user, and a NETROM connection can be maintained across the TCP/IP Internet networks.

To maintain compliance with FCC regulations, JNOS is configured to prevent amateurs from accessing Internet resources directly. Non-amateurs are also prevented from accessing amateur networks from the Internet side of the gateway.

Uses for the Gateway

AKGATE is currently being used for three applications:

1. Traffic Forwarding - The KL7AA-7 bbs is now receiving all of it's packet bulletin traffic from the Lower 48 via AKGATE.

2. DX Cluster Support - The NL7C-1 DX Cluster is using AKGATE to receive DX spotting information from other Clusters in the Lower 48 and Canada.

3. User Access - AKGATE is available for use by all Alaskan packet operators to make direct contacts with other stations worldwide.

Bulletin forwarding over AKGATE is being done between 11:00 PM and 7:00 AM. This leaves the gateway available for users at all other times. The DX Cluster maintains a continuous connection, but the amount of data that is moved is small, and this should not slow down user activity.

The radio connection to AKGATE has been poor. This is due to the old tnc's and modems that were first being used (for a full definition of this equipment, please refer to Webster's dictionary under "BOAT ANCHOR"). A 1200 bps full-duplex connection to the local network is now being used on 445.11 and 144.58 Mhz, which has improved performance considerably. It is hoped that a high-speed backbone connection to the local packet network can be installed in the future.

Using AKGATE

Using AKGATE is easy. Simply logon to AKGATE as you would any other packet node. AKGATE can be accessed from any of the local packet nodes, but the fastest access can be made by connecting through DPD (145.05 Mhz) or DD (445.05 Mhz). Another good route is to connect to AKGATE through the AARC node on 145.01 or 147.96 Mhz.

After connecting to AKGATE, you can get a listing of nodes that are available for connection by entering a "N" command. Be prepared - you'll get 100 - 150 nodes !! There are a variety of resources available in this node list. Some of the nodes listed are other JNOS gateways, some are BBS's, others are DX Clusters, and some are other BPQ, NETROM, or ROSE nodes. As some of these nodes reside on other packet LANS and do not have direct Internet access, you may not be able to connect with them all the time, and connect times will vary widely depending on conditions and traffic load at the other end of the connection.

One nice feature of JNOS is the ability to stop a connection at any time by entering a "Cntl-T" command from your keyboard. This allows you to cut short a connection that doesn't seem to be working.

One other thing to remember is that the Internet is not 100% reliable. It is actually very similar to a packet radio LAN in that packets and connections will "time out" occasionally due to a heavy network traffic load and other problems. If your connection times out, it is usually as a result of problems on the Internet itself, or at the other end of the connection.

JNOS has always been prone to "memory leaks" in the source code of the software. For this reason, the gateway reboots itself periodically to reset the memory buffers. I've set up the software to reboot every six hours at 0000, 0600, 1200, and 1800 UTC. Users will be warned several times prior to each reboot. Using this setup, the software has now been running for three weeks without a problem.

Summary

AKGATE for the first time provides Alaskan amateurs with a real-time packet connection to the rest of the world. It is my hope that this connection enhances our hobby and provides enjoyment for many users in the future. It is our goal to make AKGATE as fast and user-friendly as possible.

Thanks

AKGATE would not be possible without the generous help and support of Lance Ahern and Matt Mannhardt, WL7CDE of Internet Alaska, Inc (thanks for all of the late night support, Matt !!). Also, Doug, KL7IKX, Mel, AL7PB, Paul, WL7BF, and Rick, KL7YF have provided invaluable technical support for this project. Last but not least, many thanks to the Board of Directors and membership of the AARC for providing the funding for AKGATE, without which the project would not have been possible.

73s !
John
NL7NC

On the Digital side the AARC supplies the following systems for general Use

Callsign	Alias	Location	Frequency
KL7AA-1	ANC	S. Anchorage	145.010
KL7AA-3	#HFLNK	S. Anchorage	440.050 Link to HF Gateway
KL7AA-5	ANC5	Downtown Anch	145.05
KL7AA-7	ANCBBS	W. Anchorage	145.01/147.960 (Iceworm)PBBS
KL7AA-8	AARC	W. Anchorage	145.01/147.960 (Iceworm)
KL7AA-10	HF80	E. Anchorage	3.605- 300 Baud HF
KL7AA-12	#9600B	S. Anchorage	Full Duplex Link to 145.050/440.050
NL7C-2	EAGLE	E. Anchorage	145.010
NL7C-4	EAGLE4	E. Anchorage	440.050
NL7NC-6	AKGATE	S. Anchorage	Full Duplex Link to All NODES
KL7IKX-4	DD	S. Anchorage	440.050
KL7IKX-10	DPD	S. Anchorage	145.050

And a reminder, the ICEWORM Network (147.960), provided by the Alaska Division of Emergency Services (ADES) is open to keyboard to keyboard users from 1600 to 2200 daily. Between 2200 and 1600 the network is primarily used for message forwarding between bulletin board stations around the state. Congestion may interfere with keyboard to keyboard.

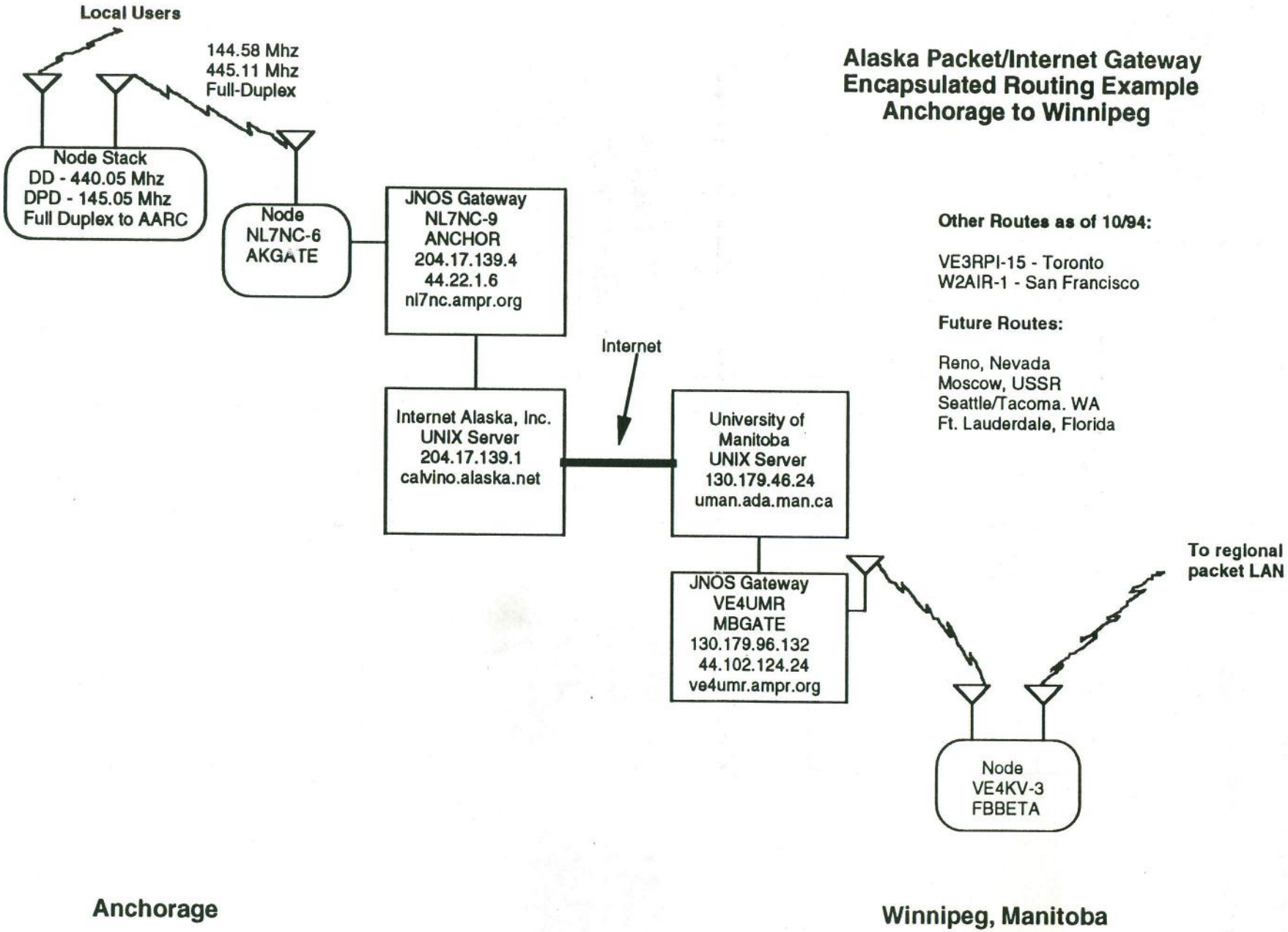
**** ALL USERS ARE SECONDARY TO ANY EMERGENCY REQUIRING THE NETWORK ****

Here is a sample NODES listing from AKGATE:

AKGATE:NL7NC-6} Nodes:

04288A:W2AIR-1	1E0205:K5DI-9	280166:KC7CO-2	2ROCK:WX3K-1
4C0588:F6CNB-7	4C0589:F6CNB-8	877C13:VE4YZ	9C010D:HA5KFU-5
AARC:KL7AA-8	ACT:VK1BUD-5	ADTANC:KL7SM-5	ADTFBK:KL7SM-6
ADTJNU:KL7SM-7	ALMGW:KI5PI-9	ANC:KL7AA-1	ANC5:KL7AA-5
ANCBBS:KL7AA-7	ANCHOR:NL7NC-9	ARMDLE:VK2DJG	AZGATE:NJ7P-15
BALD:KA6FUB-2	BARBBS:VE5BAR	BBSBBS:VE5BBS	BBSBBS:VK3BBS
BBSDAX:VE3DAX	BBSGAA:N4GAA-4	BBSNOD:VK3BBS-2	BLWIP:VK3BLW-5
BLWNDE:VK3BLW-2	BME:HA5KFU-2	BRADIP:WB9UUS	BRASIL:PU3AKM-4
BRISSY:VK4WAN	CARSON:N7NPB-4	CLEARY:KL7GNG-7	COCO:KA6FUB-7
CRUCES:K5DI-1	DD:KL7IKX-4	DELTA:W4BS-2	DENVER:K0ELE
DIXBBS:WA6RDH	DPD:KL7IKX-10	DXWHO:VE7CC-3	EAGLE:NL7C-2
EAGLE4:NL7C-4	FALLON:KC6RHO-4	FBBETA:VE4KV-3	FBKBBS:KL7GNG
GARC:WA3NAN-9	HSSBX:VE3SBX-12	IHLBBS:VE7IHL-3	ILTEST:N9LVI-5
IP-WAM:VE4WAM	IPBBS:VE3SBX-2	IPBGM:N2NON-1	IPESE:VE5ESE
IPGAA:N4GAA-5	IPMSK:RA3APW-7	IPSSF:VE3SSF-3	IPSSF6:KA6EYH-6
IPTAX:WB0TAX-8	IUBBS:K9IU	JNU:KL7HFI-3	JNUBBS:KL7HFI
JPLGW:W6VIO-14	KDBBS:KE7KD-10	KDNODE:KE7KD-1	KFKI:HG5BDU-2
KVBBS:VE4KV	LCBBS:K5DI	LION:N7XBM-2	MACUNI:VK2TJF-5
MBGATE:VE4UMR	MDLBBS:VE7MDL	MELAUS:VK3RUM	MEM2:WA4KOG-2
MEM59:WA4KOG-7	MEMBBS:W4BS	MEMIP:N9GSA-2	MEMTK:WA4KOG-9
NCLE:VK2RAP	NCLE:VK2RAP-1	NFKIP:WA4YSE-1	NMSUGW:W5GB-9
NMSUIP:W5GB-2	NWKNDS:WB0TAX-7	OBBOX:HA5OB	OLUOLU:KH6TZ
OSO:KI6AG-6	PCAK:NL7C-1	PCVAN:VE7CQD	PICRNG:VE3SBX
PINEGW:N0IAK	POTSDM:K2CC-1	QSO1:N4GAA-3	RENONV:N8KHN-2
RGR:VE7RGR-4	RMITIP:VK3ERM-7	ROBBBS:VE7ROB	ROCK*:WX3K
RPANOD:VK3RPA-2	RPAP10:VK3RPA-3	RPARK:KC6PJW-1	RPARK5:KC6PJW-5
RPARK6:KC6PJW-6	RUMNOD:VK3RUM-2	RYEHAM:VE3RPI	SCOCO:KI6YK-4
SFU:VE7SFU	SGLBBS:F6CNB-1	SKBAR:VE5BAR-3	SKBBS:VE5BBS-3
SKGATE:VE5US-3	SKSKTN:VE5USR-3	SONOMA:N7SOF-1	SROSA5:N6GN-5
SSC:AB6Z-10	SSF1:KA6EYH-1	SSF3:KA6EYH-3	SWGAA:N4GAA-1
SYDNEY:VK2RVT	TAMPAX:OH3RBR-11	TAXBBS:WB0TAX	TLWNOD:VK3TLW-2
TREBBS:OH3RBR	TREGTW:OH3RBR-10	USUGTW:WA7MXZ-3	UUGATE:WA7SLG-3
VHFBBS:VE7VHF	VIP7:KA6CHJ-7	WHAVEN:N4GAA-2	WHUHF:N4GAA-7
WIND05:VK3AJC-10	WIND06:VK3VO-10	WORM:K2CC-2	WSUGTW:N7VCZ-7
YVR70A:VE7VPO-5	YVR70B:VE7VPO-4	YVR71:VE7VHF-3	YVRARG:VE7TPG-3
YYJ:VE7DIE-8			

Alaska Packet/Internet Gateway Encapsulated Routing Example Anchorage to Winnipeg



ANCHORAGE AMATEUR RADIO CLUB, INC.
Post Office Box 101987
Anchorage, Alaska 99510-1987

Address Correction Requested

BULK RATE
U. S. POSTAGE

PAID

Anchorage, AK
Permit 223

L036 EX0499
ROGER HANSEN KL7HFQ
POB 520343
BIG LAKE AK 99652

Internet with LANCE AHERN and MATT MANNHARDT NOV 4th