The Communicator
Voice of the Mississauga Amateur Radio Club
We are Amateur Radio in Mississauga
February 12, 2004
Vol. 6-6

Category 1 Affiliation

From the Gavel - *President's Message*

At times I've wondered what it would be like to have too much time on my hands. I personally never have enough time in a day, let alone a week. Yet I know that some people have way too much time. They must because if they didn't have all this free time, they wouldn't be sitting around trying to annoy people on the repeater. After all, to sit around thinking up ways to press DTMF tones in some sort of random sequence (the only purpose must be to contact UFO's), or interject with comments on people's audio quality uninvited has got to take some serious time. All joking aside though, it is a fact of life that there are such poor souls out there that such activity is the only high point of their meager existence. But this pastime of theirs is not only annoying, but illegal if they are not licensed. We, as experienced operators should never encourage this type of person's behaviour. It can not be stressed enough that we should simply ignore the ignorance, frustrating as it may be, for to comment is only going to encourage the activity.

While on the topic, if things that should and shouldn't be, we as licensed operators should always remember to ID with our call, instead of just keying the mike to see if all is working. Even if you're not in a position to have a long QSO, just ID with your call and indicate you're testing, everyone will leave you alone. Over the past little while I've done my share of "testing", as you have all so painfully heard, with the IRLP. 9 times out of 10 when indicating I was testing resulted in no one coming back to me. So everyone needs to get in the habit of the proper procedures. This will not only follow IC regulations, but will help us see who is legitimate and that you are not our friendly finger bandit, (gees I'm back to him again).

And since we are on the subject of ID procedures, when it comes to the use of the IRLP, etiquette is when you connect to a node, is to not only listen to see if someone is speaking, but to actually call CQ and ID with your call and location. I know that there may be a natural tendency to just want to disconnect if you hear no one speaking on the node, but someone may be listening. I've been reading some of the IRLP owners' group threads and one of the biggest complaints is people connecting and not saying a word. But you got to wonder, if you are not going to say anything and why did you call up the node in the first place?

Having said all that, for the most part, things are going pretty well. If these kinds of issues were our biggest problems in life, it would be pretty darn good. In actual fact life is good. We seemingly have all our VHF repeater issues behind us, at least until the broiling summer comes along, but that's then not now. We have our IRLP for the most part working. Better linking will come again when the better weather arrives, (winter just gets in the way, doesn't it?); but it's here and is inviting the whole world to come knocking. We are going to start working on our packet digipeater, it is good to see interest in this starting up again. If nothing else, when those times that you don't feel like talking, then a keyboard to keyboard QSO might be just the thing. And we have some definite interest in HSMM. What's that you say, well it is high speed multi media, or better though of as data over radio on steroids. This one could be very exciting, and beneficial at that, think a private high speed data link that has possibilities, not to mention, finger bandit proof, (hum, I back to that again).

Oh well, the moral of this column, and I'm not sure it actually had one, and if it did, it wandered all over the place (as usual you might say), is simply to say we have a lot of good things going on. We cannot lose sight of that because of a few bad apples, or fingers in our case. They will eventually get tired and go away when it's not fun any more. And we have to remember that there are a few really simple things we have to do, like making sure we always ID, making sure we all join RAC, and remembering to buy a HAMEX banquet ticket…. you know simple things.

Anyway, have a good month, and spring is almost be here. From node 2382 this is VE3VVS closing the link. (we all do remember to do that, don't we!!?? ☺

Robin

Sunday Brunch
Sunday brunches are held on the first Sunday of each month. Time is 9:30AM at **The Golden Griddle** located at 6400 Millcreek Drive (905)542-9964. Millcreek Drive is located 1 block north of Battleford and off Erin Mills Parkway. The restaurant is on the east side of Erin Mills Parkway. All are welcome to come out and have an opportunity to chat in an informal setting..

Sunday Brunch March 7, 2004

Club Nets
2 Metre Tuesday Night Phone Net
Join in on the chatter starting at 8:30PM every Tuesday on the club repeater. Hosted by various net controllers.
Contact our VHF Net Manager, **Brad (VA3ZRT)**, if interested in becoming a net controller. 145.430MHz Tone 103.5 Minus (-) offset

75 Metre Sunday Night Net
Starts at 8:30PM every Sunday. Hosted by various net controllers. Contact our HF Net Manager, Michael **(VE3TKI)**, if interested in becoming a net controller.

The Communicator

February 12, 2004   *Vol. 6-6*

Commentary...

*W*hat a beautiful day it is outside. It's Sunday, 5:00PM and the sun IS STILL SHINING!!!! Can spring be far away?

Our club is now a member of the IRLP (Internet Radio Linking Project) club. The instructions and protocols are written elsewhere in this newsletter, so I won't go into them here. This is exciting, particularly for those who don't have their cw endorsement, or can't for various other reasons, operate on hf. Here's an opportunity to talk to the world via your 2 metre handi or from your mobile in the car.

For me it presents an interesting opportunity as I hope to be able to talk to my buddy Brian (VE2BTH) in Quebec City via IRLP. I've got your number, node number that is, 2340, and the repeater is VE2REA which is located atop the Quebec Hilton. **(Brian are you reading this????)**

Brian and I go back to our youth growing up in Quebec City. I first met him when I changed schools, going into grade 4 at Bishop Mountain School in Sillery from St. George's in Quebec City. You do the math, as it frightens me to do it. We had a common interest in radios and anything with wires, tubes and humungus power supplies. The good old days.

Brian's family, I must point out, have run Mount Hermon Cemetery for four generations. It opened in 1848 and it's caretakers since 1865 have been the Treggetts. I understand his son will be taking over when Brian retires making it five generations. That's pretty impressive. Pardon my little digression here, but this cemetery is just beautiful. It overlooks the St Lawrence river and is a wonderful spot to walk and relax.

As older kids (teenagers), we would sneak in after dark, head for the top of the cliff, guzzle back some 807's, actually quite a few at times and watch the traffic go up and down the river. Never did fall over the cliff though as it would have been quite a drop and I wouldn't be here writing this stuff.

In the mid to late 60's I had a '58 Olds for a short time that was stored there and we would drive it around the lanes in the cemetery. Oh to be back in those days again. In 1958 CB was introduced in the US. It followed that it would arrive in Canada, but we had a different name for it: GRS or General Radio Service.

Anyway, it so happened that the taxi fleet in Sillery at that time were using GRS or CB radios for their dispatching. One of us managed to get a hold of a hand held transceiver and we had a ball sending taxis all over the place. All of this taking place in this beautiful quiet cemetery. The drivers were quite upset and speaking in tongues we could understand, but were not supposed to be allowed on the air. Much the same as CB is today actually. They were the forerunners I guess. Entertainment for us though at the time and we were never discovered.

Now that Brian is going to retire soon, to a home that was part of the cemetery property, he will have time to get his hf privileges. (won't you Brian!) He has access to some pretty darn impressive trees to hide antennas in and he will be overlooking the St. Lawrence river. His neighbours will definitely not complain as they are, well, dead to put it succinctly. The living won't notice the antennas as they usually are in the cemetery looking down rather than up. A quiet place where he will be able to enjoy the radio hobby to its fullest.

Brad (VA3ZRT), because of work and family commitments would like to step down as the 2 Metre Net Manager. Therefore, if anyone is interested in taking on this role, please advise one of the executive. While I'm on the topic, it would be nice to have some fresh voices as net controllers for both of the club nets. This is good training in net controlling and also a good opportunity to get to know your fellow hams. Both of our nets are informal in nature, and can go as long as the individual controlling it wants it to go. It's a lot of fun and you don't have to leave the house. The rotation of controllers means that you are committing for ½ - 1 hour once monthly or so.

73 de Tony (VA3QC)

Minutes of General Meeting #09

Date: January 22, 2004
Location: 3535 South Common Court, Mississauga
Time: 7:30PM
Officers Present:

Robin Stubbs	VE3VVS	President
John Duffy	VE3DRZ	1st Vice President
Bob Giddy	VE3IAB	2nd Vice President
Jeff Stewart	VA3WXM	Treasurer
Tony Champion	VA3QC	Secretary
Lorne Jackson	VE3CXT	Past President

Attendance:
o 30 including visitors

Opening Business – Robin (VE3VVS)
o Opened the meeting by introducing the executive and welcomed visitors.
o Introduced Lorne (VE3CXT), Art (VE3SQG) and Michael (VE3TKI) as club ambassadors for those who are visitors, or new to the club. The purpose is to make welcome those who are visitors in the hopes that they may feel more comfortable and to help foster good will in the hopes that they may join up.
o Announced that Steve Brown age 11, son of Rick (VE3IMG) passed his basic test and has his new call - VA3IMG. Wonder why he chose that one???? ☺
o Turned the floor over to Art (VE3SQG) who announced that he had obtained a copy of a 1927 issue of the London Free Press, which was all about radio. It was given to Earle for safekeeping.

IRLP
o The IRLP is up and running at Robins (VE3VVS). The protocols and rules will be published in the February newsletter.

HAM-EX™
o Planning is well underway.
o The keynote speaker has been arranged. Don Courcy (VE1CY) of Industry Canada will speak on Amateur Radio from the perspective of IC.
o Banquet tickets are on sale. Early bird special is $18.00. After March 1, price will be $20.00
o Raffle tickets are on sale: 1 for $2.00 – 3 for $5.00. Grand prize is $1,000.00 from Radioworld.
o Need to have volunteers sign up for the various sections.

Repeaters – **Michael (VE3TKI)**
o Gave an overview of the plans for the UHF repeater, once it is returned from Larry Ornisto. Noted the original intent was to locate it at Lakeview, but the plan now is to locate it at the same site as the VHF repeater.

Consequently the second controller, which was purchased for this repeater is no longer needed as there are enough ports on the VHF repeater controller.
o Also mentioned that in the future, the club should consider linking our repeaters with those of PARC. When asked why we would consider doing this by Asim (VE3XAP), the response was that it would give both clubs expanded coverage particularly in those areas where each is weak to poor on their own. The repeater knowledge of both clubs together will help both groups with problem solving issues. George (VA3DVR) and Paul (VA3PB)of the Peel club will be meeting with Robin (VE3VVS), Art (VE3SQG) and Michael (VE3KI) of our club , on Jan 29, 2004 to discuss these ideas.
o The club is considering selling the RLC-4 surplus controller.

Public Service - Bob (VE3XBB)
o Bread & Honey Festival is the on the first weekend in June (5 & 6). We will be occupying the same area as in the past. The Bread & Honey Committee (not our club, but the organizing committee) is looking for volunteers.

Station/Contest Group – Rick (VE3IMG)
o No report

Education – Earle (VE3XEL)
o Meet the Executive night, held on Jan 13 at 8:00PM, was a success. Earle also announced that Steve Brown, age 11, passed his basic test, and that another individual, Chris Williams, also passed his basic test. Congratulations to both.

ARES (Amateur Radio Emergency Services) – Sean (VA3MED)
o The Disaster Services Training Class is being held on Sunday, January 25 from 9:00AM – 4:00PM.

50/50 Draw
o Tom (VE3TWG) won $17.50 which he donated to the club.

Presentation
o Frank Roberts (VA3FAO) gave a very interesting talk and demonstration of home brewing.

Adjournment
The meeting adjourned at 9:25PM
A.J. Champion (VA3QC) – Secretary
February 8, 2004

Minutes of Executive Meeting #5

Date: February 05, 2004
Location: Earle VE3XEL's QTH. 2772 Hollington Crescent, Mississauga, Ontario.
Time: 7:33PM

Attendees:

Asim Zaidi	VE3XAP	Contest Assistant Manager
Bob Boyer	VE3XBB	Liaison Manager
Bob Giddy	VE3IAB	2nd VP
Bryan Jay		
Earle Laycock	VE3XEL	Acting Secretary
Gerry Doran	VE3DOR	Programs Manager
Jeff Stewart	VA3WXM	Treasurer
John Duffy	VE3DRZ	1st VP
John Kenzie	VE3WJK	Membership Manager
Lorne Jackson	VE3CXT	Past President
Rick Brown	VE3IMG	Club Station Manager
Robin Stubbs	VE3VVS	President
Sean Conlin	VA3MED	Emergency Coordinator
William Bressette	VE3WPJ	

1. **Regrets:** Due to fear of Earle's guard cat, Art VE3SQG and Tony VA3QC declined to attend the meeting, making up some feeble excuse about their sniffles. Michael VE3TKI was trying to placate Margo by wining and dining her. (Good job no body actually reads this stuff…especially Margo...) The other brave souls attending enjoyed sumptuous Timbits and delicious, aromatic coffee at Earle's crowded QTH.

2. **City Affiliation:** Robin reported that the club is affiliated with the City of Mississauga for another year despite the large number of non-Mississauga members. The club pointed out to the city that these non-resident members contribute significantly to the club activities, including emergency services, that benefit the city.

3. **Inactive Bank Account:** The club no longer requires Canada Trust/TD account 5005701 for which the bank is charging fees for its existence. Robin will speak to the branch and see if it can be closed and the charges reversed.

4. **Constitution:** Michael VE3TKI will make a presentation to the membership at the next club meeting Feb. 12th. A vote on the amendments will be taken the following meeting. A couple of copies of the constitution will be printed off and made available to members. The files are online at the Yahoo site. The changes are clarification of several items constituting the constitution…

5. **Club Calendar of Programs:** Gerry outlined possible speakers for the upcoming meetings. The church hall is not available April 8th so a tour of the Hammond Radio Museum in Guelph will be scheduled if possible. March 25th will be the nomination of directors. June 10th will be a Field Day presentation on the FD logging program. Lorne offered to speak on ham radio and legal issues if James Dean VE3IQ could not.

6. **HSMM:** The executive thought that with the interest being expressed by members, a special interest group (SIG) should be formed. The first order of business would be to explain what HSMM means to some of us HF old timers. John VE3DRZ thought a SIG on "wide band carrier modulated narrow FM" might be a hot item.

7. **Repeater Interference:** Robin reiterated that one should not speak to anyone interfering maliciously with the repeater nor discuss the issue on Yahoo email. Contact a member of the repeater group and provide information concerning the incident.

8. **July VHF Conference:** Both Peel ARC and MARC are interested in helping out at this North American conference being held at the Meadowvale Inn in Mississauga this July. We could provide the FSV and a 40-foot mast at the hotel or run a net on a reflector using the VE3MIS repeater. The executive approved forming a committee to work with the Peel ARC and the VHS Conference Committee.

9. **HAMEX:** Robin is working on a volunteer spreadsheet. No response from Oakville ARC on selling raffle tickets for a free table. Lorne may attend a meeting to promote the event.

10. **ARES:** Sean reported that he is still trying to discuss a club antenna with Peter Dundas. The FSV is still at the Ambulance Service at 52 Bramalea Road. Sean has met with the City and Fire Department. The City can use our services. It has no emergency services information technology plan at present. The City is using space in the Municipal Affairs building for emergency operations but this is not available for emergency exercises. Kevin Duffy, Assistant Fire Chief and Kirk Gray, from the City of Mississauga Information Technology department, have been invited out for Field Day.

11. **Club Station VE3MIS:** Still no location for either the station or an antenna site. The club is still following up leads. The Meals on Wheels location owner does not want any work or antennas installed on the roof. There is limited room to install equipment in the MOW building, which is used almost 6 days a week, limiting usefulness for a club station area.

12. **Repeater/IRLP:** Any comments on IRLP should be sent to Robin. The club is looking at linking the 2M repeater with Peel's, which is being installed on a cellular tower in Peel. Peel might buy our IRLC-4 repeater controller. The UHF repeater is not ready. Larry Onisto VE3XPV needs the manual. Robin and Michael VE3TKI can now access the 2M repeater from a modem!

13. **Grant Application:** Robin suggested that the club stop working on this as we do not have an identifiable need for a grant at this time and the activity will require a lot of effort, diluting our other, more pressing, efforts. Agreed.

14. **Logos:** John VE3WJK passed around the logos that Alex VA3UA had created. The executive liked logos 7 & 8, which featured a stylized drawing of city hall. Robin will ask Alex to provide sample drawings on a blue and white background to see how they present. Gerry passed around a mug with our current logo, which he has been getting in low quantities as gifts for outside club speakers. The executive expressed their appreciation for the work Alex has done on this project.

15. **RAC Donations:** John VE3DRZ asked for the club to consider supporting the Defense of Amateur Radio **DARF** fund or make a donation to RAC. The club might also consider the **CNIB** amateur radio program contribution. MARC will make a decision on this after knowing how much profit/loss was realized from HAMEX.

16. **Computer Projector:** John VE3TWJ suggested that the club consider acquiring a computer projector instead of relying on Art and Panasonic's good graces. This will be examined when the budget is drafted.

17. **Agendas:** Everyone has agendas. William asked if the next MARC executive agenda could be printed double sided, as Canada is running short of trees. Robin to investigate.

To the relief of all attendees, the meeting adjourned at 9:30 PM EST despite starting 3 minutes late. The next meeting will be on March 4th at ??????.

Notes by: Earle Laycock (VE3XEL) with gratitude from Tony (VA3QC)
Date: February 8, 2004

How Does IRLP Actually Work?

The IRLP uses a Voice-Over-IP (VoIP) streaming software called Speak Freely. Speak Freely is very similar to other VoIP software packages (such as Microsoft NetMeeting and VocalTec Iphone) with one difference... It runs under Linux.

Linux is the operating system of choice for the IRLP system as it allows the best in reliability, programmability, efficiency, and functionality. Most IRLP nodes use RedHat Linux 7.3 as it is a very stable release and runs very smooth on any P1 or better computer.

The concept of IRLP's use of VoIP is as follows:

1. Sample the audio using an analog to digital (A/D) converter. The A/D converter used by IRLP is the input source of a standard PC sound card. This creates a continuous mono 8-bit digital stream of raw audio at 8000Hz (64000 bps).
2. Compress the audio by downsampling the stream and using an 8-bit ULAW algorithm to reduce the size of the stream by a factor of two (32000 bps)
3. Split the sample into small chucks (or packets).
4. Transmit the packets to the remote host using a User Datagram Protocol (UDP) stream. UDP does NOT confirm the reception of packets, so it uses a "fire and forget" method.
5. Receive the packets on the remote host.
6. Join the split packets back into a 8-bit ULAW stream.
7. Uncompress the ULAW stream back into an 8-bit raw stream of audio.
8. Play the raw audio stream through a digital to analog (D/A) converter (the output device of your sound card).

The control software controls the stream using carrier operated squelch (COS) or continuous tone coded subaudible squelch signals (CTCSS) to start and stop the stream. When COS is present, the computer detects it through the IRLP interface board.

The PTT is controlled by the buffer which joins the split packets back into the audio stream. The IRLP interface board receives a "transmit" signal from the computer while there are packets in the buffer, and a "unkey" command when the buffer is empty.

The user interfaces to the IRLP computer using DTMF signals sent over the radio. DTMF sequences are owner programmable, and can accomplish almost any function imaginable. The DTMF signals are detected on the IRLP interface board and sent directly to the computer in binary, where they are converted into numbers. A DTMF software program which I wrote then runs commands on the computer depending on the code entered.

These commands are what start and stop Speak Freely, basically establishing and breaking the link.

And that is, in a nutshell, how IRLP works.

David Cameron (VE7LTD)
IRLP Designer

IRLP Operating Guideline
The following guidelines may differ from those provided by your local node operator.

IRLP - Keeping the Radio in Amateur Radio
As with any new technology, it does take some time to adopt to operating procedures that differ from conventional FM repeater use. This work in progress can serve as a guideline for those wishing to use their local IRLP enabled repeater node.

Common Modes
There are two connection modes for an IRLP connection. Direct one-to-one or, one-to-many via a Reflector.
Direct connect is just like it sounds where repeater (node) "A" connects direct with node "B". With this type of link the two nodes are interconnected and no other IRLP connections are possible. While repeaters "A" and "B" are connected, anyone attempting to connect with either node will be told by a recording that - "The node you are calling is currently connected to callsign" however all local traffic on each repeater will be heard on the other repeater as well.
While Direct Connect is preferred for a city to city chat, the most common type of connection in use today is via the Indianapolis Reflector (Ref 9200). A reflector is a Linux computer that is not connected to any radio but rather sits on lots of internet bandwidth capable of allowing many repeaters to be inter-connected together by streaming the received audio back to all other connected stations. At any given time there are usually 10 to 20 repeaters around the world interconnected via this Reflector. You can always check which stations are connected to the reflector by visiting http://status.irlp.net and looking for nodes connected to individual nodes or reflectors.

Reflector Use
With reflector use the first thing we must all remember is to leave a gap between transmissions. Having said that this is a good time to list the three main rules when connected to a reflector:

Pause

Pause

Pause

Due to the slight increase in delays created by multiple Tone Squelch radios in the links between the repeater and IRLP link radio, a slight change in our normal operating procedures is required with IRLP.

By leaving a pause between transmissions it .....
- o allows users on other nodes a chance to check in.
- o allows other nodes time to send touch-tone commands to drop their node.

The most important guideline to remember is leaving a pause after pressing the PTT button as well as between transmissions.

Reflector 9200 Guidelines Courtesy
by Dave K9DC reflector 9200 owner

Avoid local traffic while connected to the reflector.

By its nature, the reflector has a large footprint and a wide audience, therefore if local users would like to have a discussion, they should disconnect from the reflector. If we hear a local conversation (all participants coming from the same node) that continues, I, or one of the other reflector control ops will likely ask them to disconnect. If attempts to break into the conversation are unsuccessful, the node may be blocked from the reflector (more on blocking later).

Along the same line, if two stations become engaged in an extended dialog involving only themselves, then I would recommend they both move off the reflector and make a direct node to node connection, freeing up the reflector for others. If more than two nodes are involved, then moving to one of the lesser used reflectors might be an alternative, especially if one of the stations can check the web site for an available reflector. In the future, moving to one of the available sub-channels will become an option.

Calling CQ DX :-)
- o It IS acceptable to call CQ, in fact, if you really want to make a contact, it is preferable to say "This is K9DC calling CQ, is anyone available for a contact?" as opposed to "K9DC Listening" ...silence for 2 minutes, followed by a disconnect. However 3 x 3 x 47 CQs are unnecessary and should be left for CW/SSB frequencies where tuning around is the observed practice. Odds are we heard it the first time.
- o It IS acceptable to talk about the weather, or anything else that is geographically significant. But like anything else, within reason. A station in Indiana that says to a Colorado op, "Hey I heard that you have a mountain out there" will probably cause eyes to roll worldwide.
- o In general though, long winded, channel consuming conversations should be avoided. Remember there are usually a dozen or two connected systems, with perhaps hundreds of users that might like a chance to use the system.

A few other Reflector operational guidelines:
- o Listen first. When connecting to the main channel on a Reflector, odds are that you are dropping into an existing conversation. Wait for at least 15 seconds to make sure you are not interrupting an existing QSO before calling.
- o Pause between transmissions. Many nodes are connected using simplex links, therefore the only time it is possible for them to disconnect is between transmissions. Be sure to pause AT LEAST 5 seconds between transmissions.
- o Key your transmitter and wait before speaking. There are propagation delays across the Internet, as well as delays caused by sub audible tone decoders and other devices that cause a delay before the audio path is cut through. If you speak immediately upon PTT, the beginning of your transmission will not be heard.

Being BLOCKED from Reflectors.

IRLP reflectors have a management function allowing reflector control operators to block specific nodes from accessing the reflector. When a node is blocked, the reflector ALWAYS automatically generates an e-mail message to the e-mail address of the Node owner as submitted to databaseirlp.net. The e-mail should contain the specific reason for the block. This blocking is NEVER personal. It does NOT mean that we don't like you, but is only done to ensure continued operation of the reflector. Even my own node has been blocked.

Nodes are usually blocked for a technical malfunction, such as a locked COS, open squelch noise, extended hang time, or your repeater ID (with no user traffic) or courtesy beeps audible to IRLP, or any other problem that that impairs operation of the Reflector. Your node may also be blocked for rapid fire local traffic making it impossible for nodes to break in between transmissions.

Cross-linking other VoIP networks on IRLP reflectors is not allowed as very few non IRLP VoIP systems mute Station IDs, hang timers and courtesy tones. IRLP does not permit retransmission of any source that is not part of a users PTT transmission. With 20 or more repeaters connected together, shear chaos would result if this hard rule was not enforced.

The reflector control ops may try to contact a local control op on the air to advise the problem, however this may not always be possible. It is important that the node owner respond to the e-mail message advising the problem has been corrected.

If you have any other specific questions I can address, please send them along.

Making A Direct Connection

First of all listen on your local machine for at least 15 -30 seconds before transmitting and then ask if the repeater is currently in use. Assuming all is clear, identify your self and give the node name or number you wish to call . Example: "VE3xyz for the Sydney node" - - then enter the ON code for the node and release your PTT. Your local repeater should come up with a carrier as it waits for the connection to be authenticated. This can take a few seconds of dead-air so don't be concerned. When the connection is confirmed, the voice ID of the destination node will be transmitted back to you as well as your nodes voice ID to the other repeater.

NOTE: If your node is already connected to another node or reflector, a greeting will play saying; - "your node is currently connected to...ID of the connection") In this case confirm if anyone desires the connection to remain up before dropping by using the OFF code..

Once connected and after hearing the confirming voice ID, wait at least 15 seconds before transmitting as.......
- o The repeater may be in use, and your entry may have occurred between transmissions.
- o The voice ID of your node is longer than the voice ID of their node, and the connection is not made until the ID is fully played.
- o Their computer may be slower, and hence take longer to process the connection than yours.

Press and hold the microphone PTT for a second and then announce your presence and your intention such as you are calling

someone specifically or just looking for a QSO with another ham in that city.

If no response is heard, announce your call and your intent to drop the link and then touch- tone in the OFF code. Not a good idea to transmit touch-tone commands without first giving your call-sign. Not only is this courteous it is a regulatory issue in some countries who may be connected to the reflector.

Some nodes are configured so you cannot connect to them if that repeater is active. In this case you will receive the message "The node you are calling is being used locally" If you receive this message wait 5 or 10 minutes and then try again.

If you stay connected to a node and there is no activity on your repeater for 4 minutes, the connection will time out and automatically disconnect with a voice ID disconnect message on both nodes.

What Are The Node Codes?

This is a very common question to which there is no single answer. Some node operators choose to add a prefix to their node. Also some nodes require membership so the easiest way to get current codes is to contact the node operator or custodian. To email a node owner go to http://status.irlp.net, find the node you wish to contact and click on the node number. At the bottom of the node info is a link to create an email message.

Connecting To The Reflector

As above, listen to your local machine for local use and then announce your intention for the Reflector before keying the ON command. When you hear the confirmation ID always WAIT at least 15 seconds before transmitting as you are most likely now connected with many repeaters and a QSO could be in progress. If after 15 seconds you hear nothing, identify yourself and indicate you are listening to the Reflector from "City and, Prov./State, Country". With the world wide IRLP activity your local repeater now has world wide coverage thus the suggestion to better detail your QTH.

Don't be in a hurry to hear someone come back to you. You may have to do a bid of pleading from time-to-time to un-lodge someone from whatever they are currently involved with.

By default, connections to the reflectors now time out with no activity however many node owners set this period for a long period so it is not unusual for repeaters with minimal traffic to stay connected to the Reflector for extended periods of time. When or if the node times out from a Reflector connection a standard time-out greeting will precede the timeout saying, "Activity time out ... Reflector xxxx, link off"

If you are new to IRLP you should always consult with your local node sponsor to confirm the local guidelines on reflector connections in your area.

If you hear or wish to engage in a prolonged rag-chew on your local repeater (long discussion of a local nature) out of courtesy to other node listeners drop the reflector.

Error Messages

From time-to-time you may receive error messages when attempting to connect with a node or reflector. The most common ones are:

- o "***The node you are calling is not responding, please try again later***". This is caused by a loss of internet connectivity to one end of the call attempt.
- o "***BEEP Error- The call attempt has timed out, the connection has been los****t*". This error occurs when a node is OFF-LINE. Some nodes such as in the UK use dial-up connections and then, only for short periods. Also there may be temporary net or node problems.
- o "***The Connection Has Been Lost***" If the internet connection drops, this error message will be heard. I found this out when I accidentally kicked out my network cable while working around the node computer.

DO'S and DON'TS

In summary then a few do's and don'ts
- o DO pause between transmissions to let other in or others to enter DTMF command.
- o DO identify before sending DTMF command tones.
- o DO hold your microphone PTT for about 1 second before talking to allow all systems time to rise.
- o DO NOT rag-chew on your local repeater while connected to the reflector.
- o DO pause for 10 seconds or when entering the reflector before talking.
- o DO NOT start or plan a Net without pre-authorization from the reflector owner

IRLP QSLing

Many users of IRLP express desires to exchange QSL cards. With many IRLP users not being on HF they may have never considered having QSL cards printed. Now here is a new Internet technology for you to easily exchange QSL cards. eQSL is a new electronic QSL service that allows you to custom design your own card which is then formatted with your contact info and automatically sent to your contact. The eQSL web site is http://www.eQSL.cc You can check to see if you already have cards waiting by placing your call in the form and pressing Search. The eQSL service is free supported by some advertising and private donations. Of course there is nothing like getting a real QSL card via the bureau or direct. If sending cards direct your remember that your local postage is not valid outside of your country so include a US dollar bill or an IRC to cover return postage

Mississauga Amateur Radio Club IRLP Node 2382

Important: For the initial implementation phase of our IRLP node, the following caveats:

1. The audio quality from the node to the repeater may, at times be somewhat "scratchy". We are working on improving this. Initially the node antenna will be raised when weather permits, and in a later implementation, a different linking method will be employed.
2. The node will be available at all times except, during node or repeater maintenance, local nets, or other times where the repeater is needed to be dedicated for local use. Appropriate shutdown codes will be provided to net operators, and emergency co-coordinators. Master shutdown codes are held by Repeater and System Managers.
3. Until the enhanced linking method is implemented, the node will not be available from 11 p.m. to 2 a.m., at which during this time the node will auto disable / enable itself. This is only a temporary measure and will be rectified when the weather permits us to work outside at the repeater site.
4. Unlike some other nodes, our node requires a code to enable radio to IRLP access. The reason for this is that we need to alter the repeater configuration during IRLP connections. Cover tones, Voice ID's have to be disabled and hang times need to be reduced. Likewise when the repeater is intended for normal use, the repeater settings need to be replaced, and this is all accomplished by the ***67** and ***76** codes described in detail below.

Operation: Assuming the repeater is clear; identify yourself and state intention to use the IRLP link. Example: *"VE3xyz for the Link"*. Transmit ***67** via DTMF, release your PTT and wait for our node to announce that *DTMF commands have been enabled*. Then enter the ON code, (see below), for the node you wish to connect to and release your PTT. The local repeater should come up with a carrier as it waits for the connection to be authenticated. This can take a few seconds of dead air...so don't be concerned. When the connection is confirmed, the voice ID of the destination node will be transmitted back to you as well as your node's voice ID to the other repeater. Once connected and after hearing the confirming voice ID, **wait** at least 15 seconds before transmitting as.......

1. The repeater may be in use, and your entry may have occurred between transmissions.
2. The voice ID of your node is longer than the voice ID of their node, and the connection is not made until the ID is fully played.
3. Their computer may be slower, and hence take longer to process the connection than yours.

Press and hold the microphone PTT for a second and then announce your presence and your intention. such as you are calling someone specifically or just looking for a QSO with another ham in that city. Calling CQ on a quiet node is acceptable practice.

If no response is heard, announce your call and your intent to drop the link and then touch-tone in the OFF code, which is universally **73**. Once the node you are connected to have announced that it has successfully disconnected, you have two options available:

1. You may enter another node address and repeat the above process.
2. Close the local IRLP node gateway by keying ***76** and releasing the PTT. Our node will then announce that DTMF tones

are disabled, and will reset the local repeater to its normal operating mode.

Note: Some nodes are configured so that you cannot connect to them if that repeater is active. In this case, you will receive the message *"The node you are calling is being used locally"*. If you receive this message, wait 5 or 10 minutes and then try again.

Warning: If you stay connected to a node and there is no activity on your repeater for 4 minutes, the connection will time out and automatically disconnect with a voice ID disconnect message on both nodes.

Node Codes: This is a very common question as to which there is no single answer. Most nodes are open for anyone to connect to and their node address code can be found at http://status.irlp.net/statuspage.html. Some node operators choose to add a prefix to their node. Also some nodes require membership. So the easiest way to get current codes is to contact the node operator or custodian. To email a node owner go to http://status.irlp.net, find the node you wish to contact and click on the node number. At the bottom of the node info is a link to create an email message.

Reflector Use: The connection process to a reflector is identical to that of an individual node. The only difference is operational guidelines When you hear the confirmation ID from the reflector, always WAIT at least 15 seconds before transmitting as you are most likely now be connected with many repeaters and a QSO could be in progress. If after 15 seconds you hear nothing, identify yourself and indicate you are listening to the Reflector from "City and, Province./State, Country". With the worldwide IRLP activity, your local repeater now has worldwide coverage thus the suggestion to better detail your QTH.

Don't be in a hurry to hear someone come back to you. You may have to do a bid of pleading from time-to-time to dislodge someone from whatever they are currently involved with.

By default, connections to the reflectors now time out with no activity, however many node owners set this period to a long period. So it is not unusual for repeaters with minimal traffic to stay connected to the Reflector for extended periods of time. When or if the node times out from a Reflector connection, a standard time-out greeting will precede the timeout saying, *"Activity time out ... Reflector xxxx, link off"*.

If you hear or wish to engage in a prolonged rag-chew on your local repeater such as *long discussion of a local nature, f*or out of courtesy to other node listeners, please drop the reflector and close the IRLP gateway. When disconnecting from a reflector, the off code is again universally **73**. However, by the nature of the communication between nodes and reflectors, there needs to be a moment of quiet for the system to "hear" the disconnect tone. On a busy reflector, it is probably wise to announce that you intend to disconnect. Prior to doing so, giving others on the reflector a heads up will prompt them to pause so you can disconnect more easily. When you have been successfully disconnected from a node or reflector, transmit ***76** to close the gateway and return the repeater to normal operation.

MAXIMUM USABLE FREQUENCY
February 2004
by Jacques d'Avignon, VE3VIA
monitor@rac.ca

The monthly HF propagation forecast chart lists, in MHz, the MUF (Maximum Usable Frequency) for various circuits originating / terminating in Canada. The number in each cell is the frequency that will sustain communications 50% of the time during the forecast period, at a specific time and over that specific circuit.

If you prefer to use the OWF (Optimum Working Frequency) it is in theory, 80% of the MUF for the same period and on the same circuit. Multiply the value in the cell by 0.80 and you have the approximate value of the OWF. But the ALF (Absorption Lowest Frequency) might be higher than the OWF and communications might be impossible to establish on the circuit at that frequency.

If you use a frequency higher than the listed MUF, your chances of establishing and maintaining reliable communications decrease very rapidly. At MUF the chances of establishing a reliable contact or hearing clearly an international broadcaster are only about 50%.

When the ALF is higher than the MUF the table will contain an asterisk (*). This does not mean that communications are impossible but that they are highly improbable, try and use the last listed MUF or below for that specific circuit.

The notation (P) after the name of one of the terminals of a specific circuit denotes that this is a polar circuit and that you should expect poor to unreliable communications on this circuit during geomagnetic disturbances. This notation will not appear in the circuits originating in

the "Nunavut" and "West Arctic" listing, as these two terminals are normally located inside the theoretical auroral zone.

For the purpose of establishing these tables, all the circuits are assumed to be fully reciprocal, thus the listed MUF's can be used for transmission / reception from either end of the circuits. This assumption is not totally correct but the differences in frequencies are minimal

The District/NVIS (Near Vertical Incidence Skywave) forecast frequency calculated for the six areas of Canada, can be used for local communications within 300 kilometres of the station. To properly use this propagation mode it is essential that an antenna having a maximum radiation angle between 75 and 90 above the horizon be used, such as a half-wave dipole erected no higher than 1/8 to 1/4 wavelength over the ground. Most of the RF energy radiated by such an antenna and on the listed NVIS frequency will be returned to earth within 300 kilometres of your station.

NVIS propagation mode can be very useful for emergency communications when the regular VHF repeaters are out of commission. For more information on this peculiar and interesting propagation mode and its possible uses see "The NVIS Propagation Mode and the Ham" in the "ARRL Antenna Compendium, volume 5."

UTC >>>	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
EASTERN TO																								
District/NVIS	7	5	5	4	4	4	4	4	3	3	3	3	4	5	7	7	8	8	8	8	8	8	8	8
Atlantic Canada	10	8	7	6	6	6	6	6	5	5	5	5	7	11	13	14	14	15	15	15	15	15	14	12
Central Canada	12	10	8	7	6	6	6	5	5	5	5	5	5	6	9	11	13	14	14	15	15	15	15	14
Pacific Canada	19	16	12	10	9	8	8	7	7	7	7	7	7	7	10	14	17	19	20	21	22	21	21	21
Nunavut	12	10	9	8	8	8	7	7	7	7	7	7	8	10	13	15	15	16	17	18	18	17	16	14
Western Arctic	18	15	12	10	9	9	9	8	8	8	8	8	8	9	11	14	17	19	19	20	21	22	21	20
Eastern USA	10	8	7	6	5	5	5	5	5	5	5	5	6	9	11	12	12	13	13	13	13	13	13	12
Western USA	21	18	14	11	10	9	9	9	9	9	9	9	9	9	13	18	21	23	24	24	25	24	24	23
South America	21	18	17	15	15	15	15	15	15	14	13	13	19	*	28	28	27	27	28	29	28	28	28	25
Western Europe	10	10	10	10	9	9	9	10	10	10	10	11	15	19	21	22	23	23	21	18	15	13	13	11
Eastern Europe (P)	10	10	10	10	9	9	11	12	12	12	12	13	16	18	23	24	24	21	18	15	13	12	11	11
North Africa	14	14	12	11	11	11	10	10	10	*	*	*	15	20	22	23	24	21	19	17	15	15	14	14
South Africa	18	16	15	13	12	12	12	*	*	*	*	*	21	25	26	27	28	28	28	28	28	27	25	22
Middle East (P)	14	13	13	13	13	13	12	12	12	*	*	12	16	20	22	23	20	18	16	14	14	14	14	14
Central Asia (P)	13	13	15	14	14	14	13	13	13	13	13	13	14	18	20	16	14	13	13	13	13	13	13	13
India (P)	12	13	15	14	14	13	*	*	*	13	13	13	14	18	20	18	16	14	14	13	13	13	13	13
Indonesia (P)	22	19	16	*	*	*	*	*	11	11	11	11	11	12	16	20	23	21	18	16	14	13	20	25
Australia	25	21	17	*	*	*	*	*	*	11	11	11	11	11	14	19	22	21	19	17	15	16	23	25
China (P)	17	16	15	15	14	14	13	13	13	13	13	13	14	16	15	14	14	13	14	14	14	13	14	14
Japan	21	18	15	14	13	12	12	12	11	11	11	11	11	12	13	13	13	13	13	13	13	16	23	24
South Pacific	27	23	18	15	14	13	13	13	13	12	12	12	12	13	16	15	15	20	27	30	29	28	26	27

ASAPS for Windows is used to prepare these tables.
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The Communicator

CLUB CALENDAR FOR 2003-2004

FEBRUARY
12	Thursday	General Meeting #10 -
20	Thursday	Public Service/ARES at RC (Cancross)
26	Thursday	General Meeting #11 - Nominations Committee Formed

MARCH
04	Thursday	Executive Meeting #06 at ??
07	Sunday	Sunday Brunch at ?? (note 2)
11	Thursday	General Meeting #12 -
18	Thursday	Public Service/ARES at RC (Cancross)
25	Thursday	General Meeting #13 -

APRIL
01	Thursday	Executive Meeting #07
04	Sunday	Sunday Brunch at ?? (note 2)
08	Thursday	General Meeting #14 – Nomination of Directors
15	Thursday	Public Service/ARES at RC (Cancross)
22	Thursday	General Meeting #15-Annual General Meeting + Elections

MAY
02	Sunday	Sunday brunch at ?? (note 2)
06	Thursday	Executive Meeting #08 at ??-Executive Turnover Meeting
13	Thursday	General Meeting #16-Budget Presentation
20	Thursday	Public Service/ARES at RC (Cancross)
27	Thursday	General Meeting #17-Budget Approval

JUNE
03	Thursday	Executive Meeting #09 at ??
05-06	Sat - Sun	Streetsville Founders Bread & Honey Festival
06	Sunday	Sunday Brunch. 9:00AM at Vic Johnson Arena
10	Thursday	General Meeting #18-
17	Thursday	Public Service/ARES at RC (Cancross)
24	Thursday	General Meeting #19-Season wrap-up Pot Luck Social
26-27	Sat – Sun	ARRL Field Day

JULY
01	Thursday	RAC Canada Day Contest
04	Sunday	Sunday Brunch at ?? (note 2)

NOTES
1. Meetings start 7:30PM at St. Thomas A Becket Church Hall, 3535 South Common Court unless otherwise noted.
2. Brunch is at 9:30AM unless otherwise noted.
3. Classes are from 7:00PM - 9:00PM at Meals On Wheels at 2445 Dunwin Drive

Visit our website for any updates of the calendar.

Ham-Ex™ 2004 is *FAST APPROACHING*
MARCH 20, 2004

Have you purchased your raffle ticket(s) yet??
1 for $2.00 3 for $5.00
Grand Prize $1,000.00 Gift Certificate from RadioWorld

Have you purchased your banquet ticket(s) yet??
Early bird price (Before March 1) $18.00 - $20.00 After March 1

Have you signed up to help yet??
Volunteers are needed to help set up, take down, parking, vendor assist, and other areas