



Presented by Mark Gooding, ZL2UFI

Topics of Discussion

This forum will cover:

- A list of current nodes in New Zealand – how many and where are they?
- Usage – how do I use IRLP?
- What is all this DTMF about?
- Unable to connect?
- Not understanding the errors from the Node?
- Is easy to setup?
- What do I need?
- Can anyone do this?
- Policing usage.
- Is there a future for IRLP?
- Anything new?



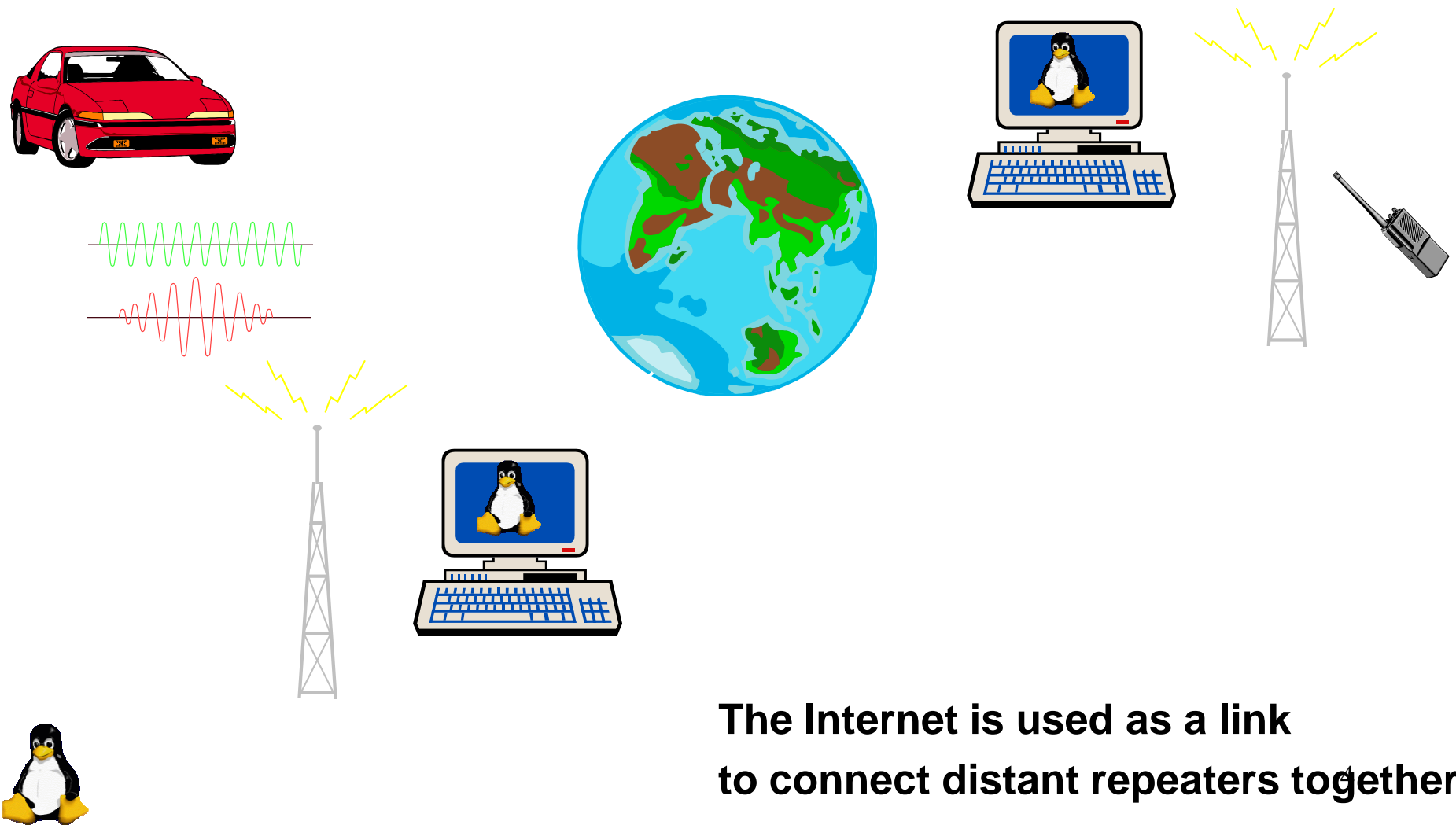
A list of current nodes in New Zealand – how many and where are they?

Country	Nodes	In Use	Idle	Offline	Down
New Zealand	23	2	17	1	3

NodeID	CallSign	Node City	Frequency	CTCSS
6081	ZL2KS	Blenheim	438.450	192.80
6095	ZL1AM	Whangarei	438.700	None
6105	ZL2AA	Gisborne	146.800	None
6184	ZL4DM	Dunedin	146.650	None
6285	ZL2KS	Blenheim	146.950	None
6394	ZL1KW	Kawerau	147.000	None
6397	ZL4AU	Invercargill	146.450	None
6501	ZL2QS	Hastings	432.700	123.00
6507	ZL4JH	Dunedin	147.425	None
6549	ZL1IS	Waikato Repeater	146.950	None
6609	ZL1KIWI	Hamilton	144.700	88.50
6642	ZL4QS	Alexandra	146.525	None
6793	ZL2AS	Hastings	147.250	None
6844	ZL1LW	Auckland	432.700	None
6900	ZL3TMB	Christchurch	145.625	88.50
6910	ZL2LD	Masterton	147.175	None
6931	ZL2VH	Upper Hutt	147.300	None
6943	ZL2KO	Feilding	147.125	None
6950	ZL1BQ	Auckland	146.700	None
6962	ZL2LV	Upper Hutt UHF Node	438.600	88.50



Usage – how do I use IRLP?



**The Internet is used as a link
to connect distant repeaters together**

What is all this DTMF about?

Dual-Tone Multi-Frequency (DTMF) table of frequency combinations

"High Group" frequencies [Hz]

1209 1336 1477 1633

"Low Group" frequencies [Hz]	697	1	2	3	A	(Row 1)
	770	4	5	6	B	(Row 2)
	852	7	8	9	C	(Row 3)
	941	*	0	#	D	(Row 4)
		(Column 1)	(Column 2)	(Column 3)	(Column 4)	



Unable to connect?



Not understanding the errors from the Node?

NOEXIST

- This error is caused by a call to a node which does not exist in the list of valid nodes. This list is always changing. For example, a DTMF sequence of 2987 will cause this error, because station 2987 does not exist (yet).

BUSY

- The busy error is caused when the node you call is currently connected to another IRLP node. Your node will identify the node the called node is connected to.

INUSE

- This is announced as the node you are calling is being used locally. This means the remote repeater for the node you called is in use by local stations.



Not understanding the errors from the Node?

DISABLED

- This is announced as the node you called is currently disabled. This means that the remote node owner has disabled the node for some reason.

TIMEOUT CALL

- This is announced as the node you called is not responding. This means the timeout of 5 seconds for a node to respond to a call has elapsed.

LOCKOUT

- This is announced as the node you are calling does not accept calls from your node. This occurs if your node is added to a remote node (or reflectors) lockout list.



Not understanding the errors from the Node?

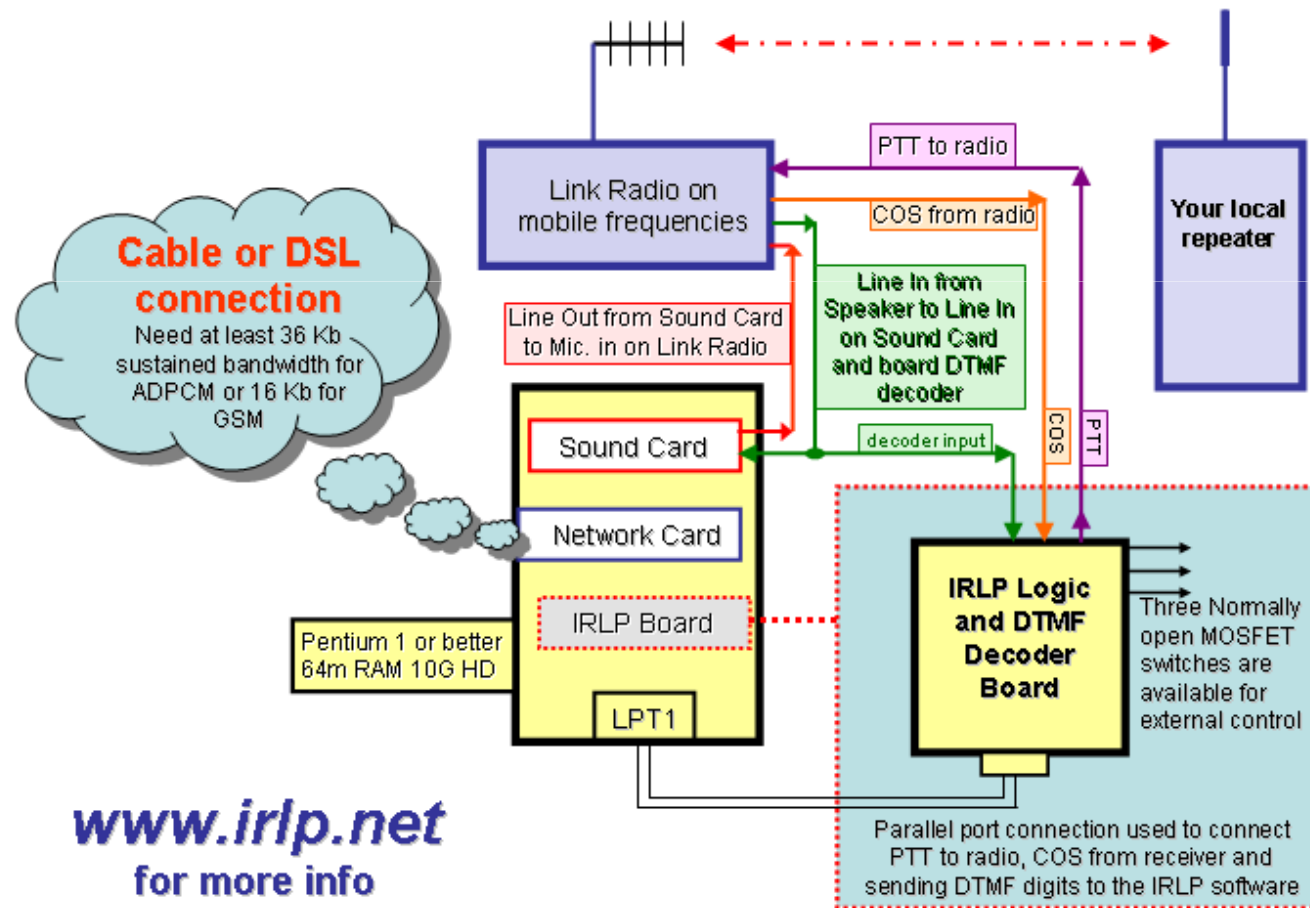
PTTLOCK

- This is announced as PTT lockup detect and resets the node PTT if it is continually keyed for 5 minutes with no breaks.

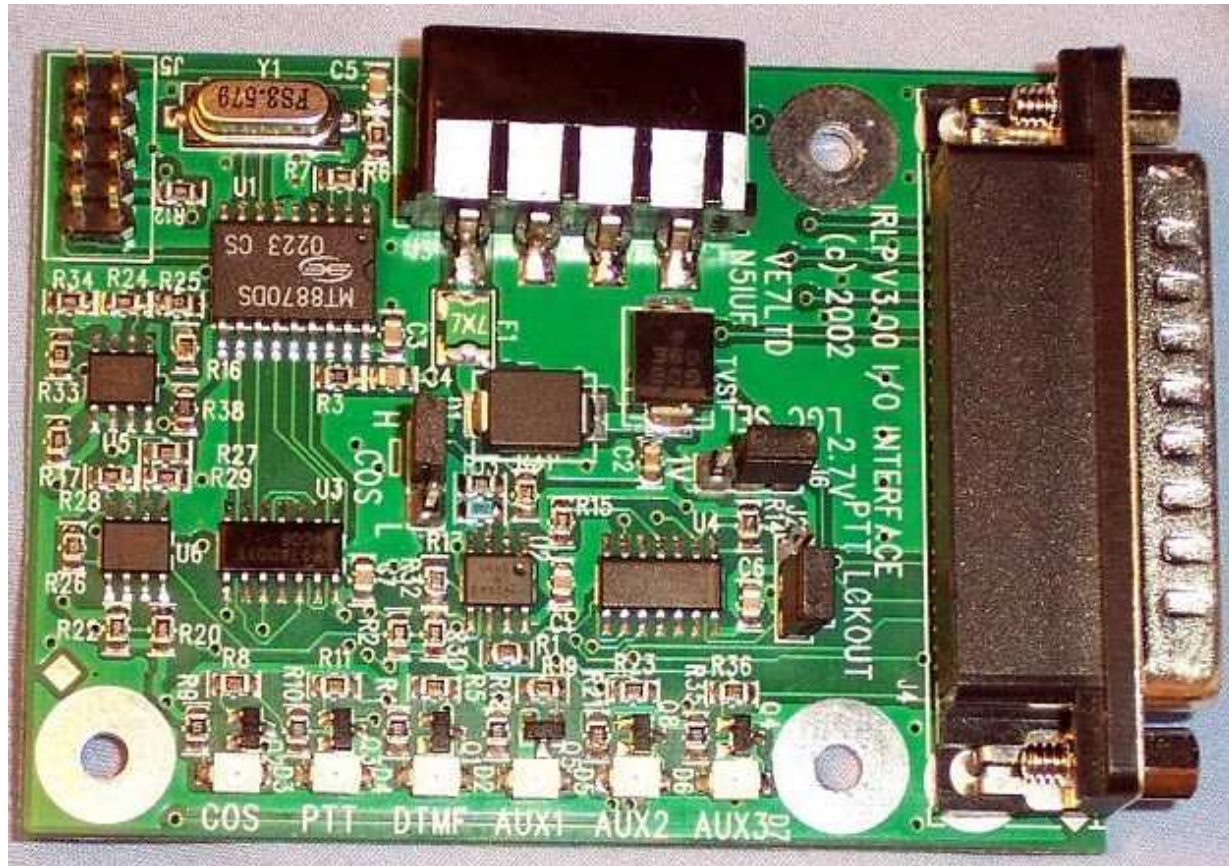


Is easy to setup?

A Typical IRLP Node on 220 or 440 MHz



Typical IRLP Node - v3



Typical IRLP Node Link Radio

- Amateur or commercial radio.
- If amateur:
 - 100% duty cycle capable and/or fan cooled.
- If commercial:
 - designed for more robust duty cycle.



Typical IRLP Node (Old)

- Standard PC compatible is usually used.
 - Pentium P100 or faster.
 - Linux operating system (Fedora RC 3).
 - Soundcard (SB16 - ISA) and appropriate drivers.
 - Simple hardware interface to control link radio.
 - Linking cables – radio/soundcard.
 - Radio tuned to the appropriate link frequency.
 - ISDN/xDSL/cable/broadband Internet connection.
- (Dialup possible – but not recommended.)

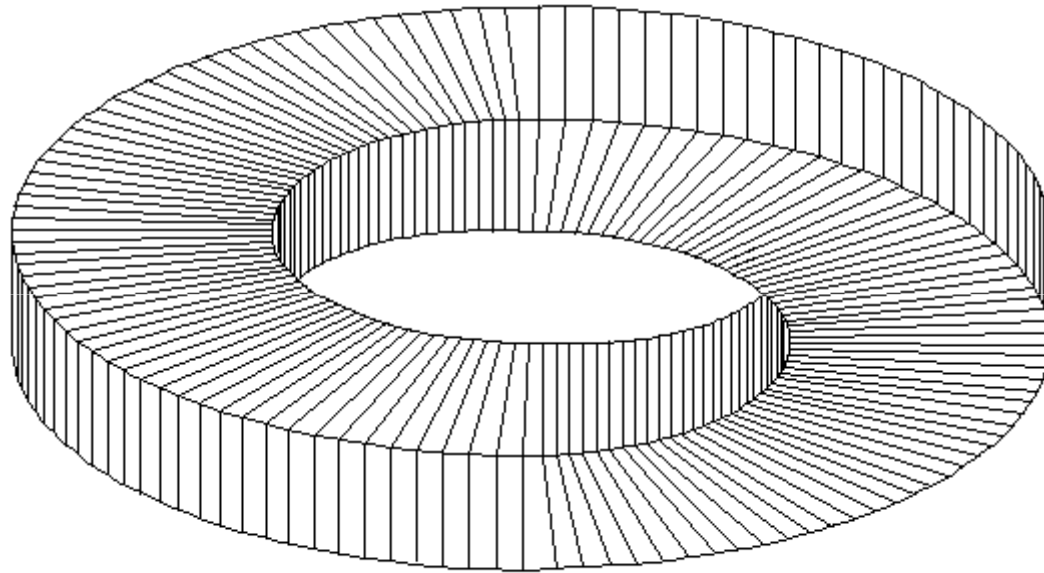


Typical IRLP Node (6962)

- Standard PC compatible is usually used.
- Pentium P4 2Ghz.
- Linux operating system (Centos 4).
- Onboard soundcard.
- Simple hardware interface to control link radio.
- Linking cables – pre-made.
- Radio tuned to the appropriate link frequency (Alinco DR-435 MKIII UHF).
- ADSL broadband Internet connection.



Can anyone do this?



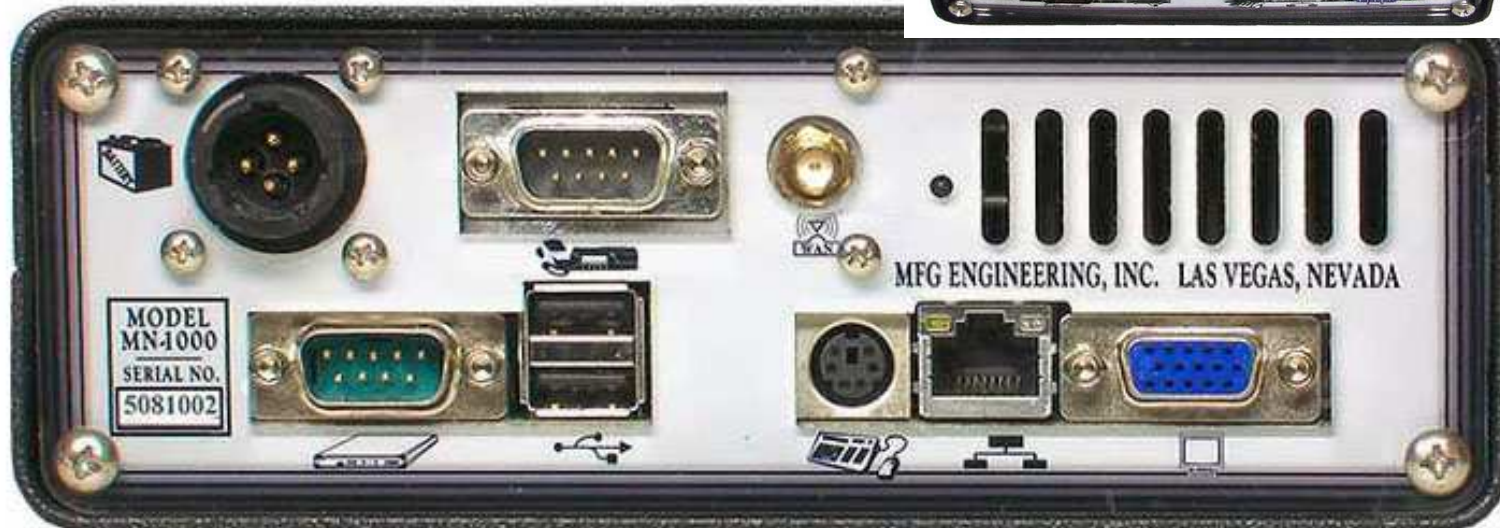
Policing usage.



Controlling those users and button pushers.

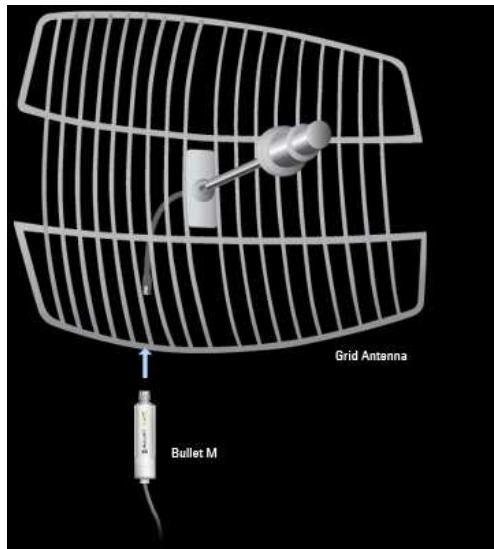


Is there a future for IRLP?



Anything new?

Getting Internet to a remote site



BULLET™
More Range. More Performance.

Hi-Power, Long-Range

With up to 600mW of power and enhanced receiver design, the Bullet M is ideal for long-distance links, capable of 100Mbps+ real TCP/IP speeds over multi-km distances.

An advertisement for the Bullet M device. It features two white cylindrical devices, one upright and one tilted, against a dark blue background with light rays. The text 'BULLET™' and 'More Range. More Performance.' is at the top. Below the devices, it says 'Hi-Power, Long-Range' and 'With up to 600mW of power and enhanced receiver design, the Bullet M is ideal for long-distance links, capable of 100Mbps+ real TCP/IP speeds over multi-km distances.'



More Information

- IRLP – <http://www.irlp.net>
- IRLP Node Status Pages
<http://status.irlp.net/>
- K6IB Software
<http://k6ib.com>



Questions ?

- **Is there a cost to join or use IRLP?**

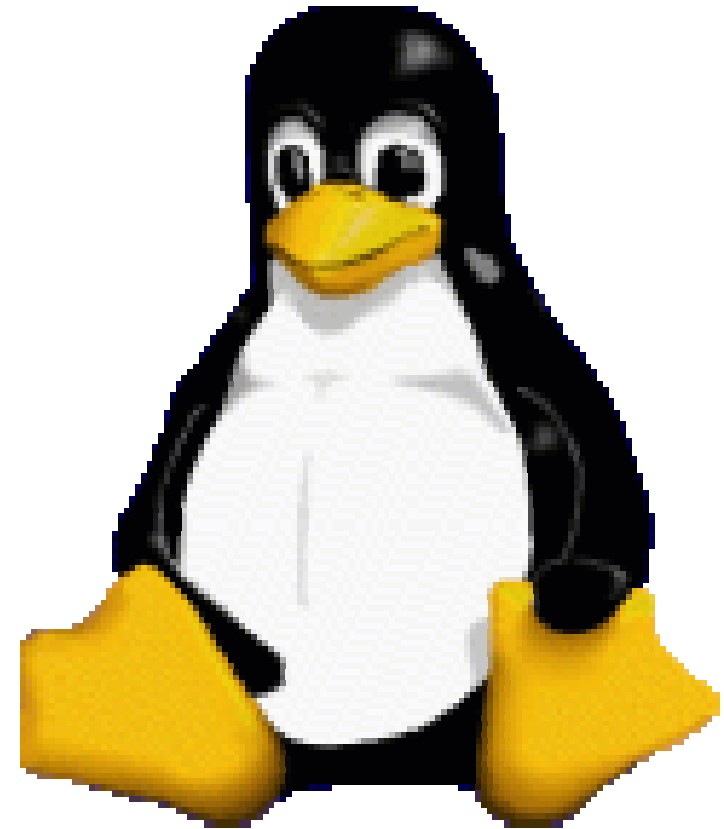
There will NEVER be a user fee for IRLP. The only cost may be the support of your local node by being a club member etc

- **Who is responsible for IRLP?**

David Cameron, VE7LTD, is originally responsible for the project roots. Dave and Michael Illingby, VE7TFD, set up the first two nodes to link between Vancouver and Vernon, BC. Dave is now assisted by many volunteers around the world.



Thank You



Mark, ZL2UFI