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What Can You Do with IRLP?

Looking for virtually worldwide “BBC copy” from your handheld transceiver? Try the Internet Radio Linking Project.

The sun was hanging low in the western sky as I pulled out of the parking lot on Friday evening, more than ready for a weekend off work. There was a crisp, cool nip in the air but not a cloud in the sky—typical for an autumn night in central Indiana—and a perfect one for sky gazing.

Facing the lonely, 45 minute commute home I fired up my dual-band mobile rig looking for conversation to pass the time. Turning the channel selector until it landed on my favorite repeater frequency, I heard Tom Logan in Indianapolis going into some detail about the local weather and thought that a bit odd until I realized that he was talking to Ian who was 20 km south of Liverpool in the United Kingdom. Also in the roundtable discussion was Jake, who was mobile near Anchorage and Simone who was using a handheld transceiver while riding on a bike trail near Durango, Colorado.

I joined the discussion introducing myself to Simone, whom I had never worked before. As usual, the conversation proved lively and despite the wide expanse of distance and time zones, everyone was perfectly readable without a hint of static or fading—“BBC Copy” as Ian liked to say.

The miles and minutes passed quickly, and soon I was pulling into my own neighborhood chuckling at something Jake had mentioned before I signed off and pulled into the garage. Having ham radio available in my car was definitely a good idea and I was pretty pleased with myself for having installed it just a few weeks earlier.

The salmon and vegetables grilled outside on the deck were to die for. By the time the table was cleared and the dishwasher loaded, the night sky was in its full glory. Pulling on a heavy sweater, I slung a folding chair over one shoulder and my field binoculars over the other. My Yaesu FT-60R handheld transceiver with a freshly charged battery was already clipped to my belt.

Walking to the middle of the dark field behind my house, I unfolded the chair and settled down for an enjoyable evening of gazing at the heavens. Turning on the radio I pressed the node number of my friend Ron in Grand Prairie, Alberta. That signal triggered the connection via the node I have set up inside my house. The familiar “connect” audio with my friend’s voice played through the small speaker, letting me know that I had dialed the connection in the dark properly.

We enjoyed chatting using our handhelds while observing the night sky. We’ve worked this way many times when the weather at both ends permitted us mutual views of the heavens as it did this night. We compared notes on what we were observing, the level of light pollution at each location, and plans we had for some “in the future” trip to the South Pacific for a view from a different hemisphere.

Before we knew it, almost two hours had passed and our

batteries were nearly exhausted. And with that, I bid him “73 until next time” and shut down the link between us before heading inside for the night.

The Future is Here

If all this sounds futuristic, you might be surprised to learn that the future is here today! Amateur Radio operators around the world are linking their FM repeaters and individual radios using the Internet Radio Linking Project, or IRLP. The net-

A Few IRLP Web Resources

- Suggested operating procedures—www.kwarc.org/irlp/.
- Frequently Asked Questions, by Michael Illingby, VE7TFD, and David Cameron, VE7LTD—www.irlp.net/faq.html.
- General information, including the annual IRLP convention in April in Las Vegas—www.narri.org/IRLP.html.

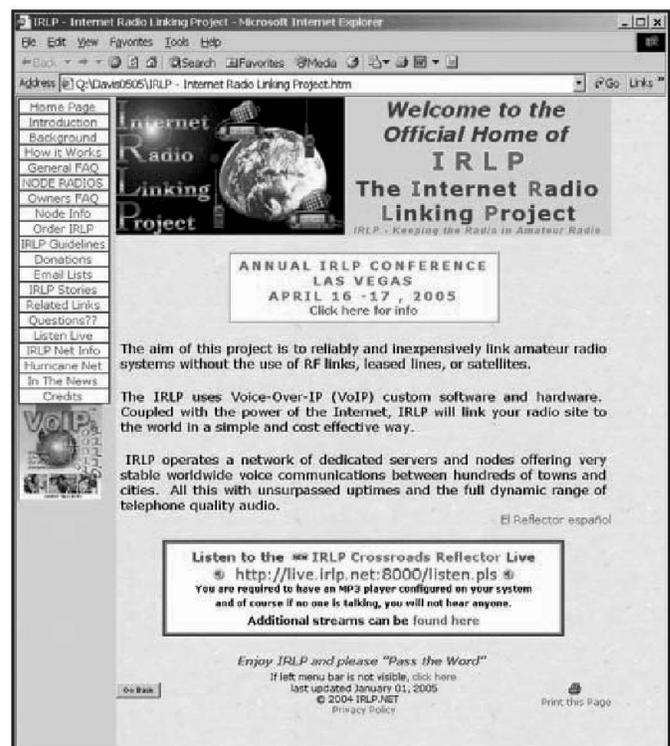


Figure 1—The IRLP home page at www.irlp.net/ has a great deal of information for beginner and experienced user alike.

Some Background

The Internet Radio Linking Project is a Voice Over IP (VoIP) system that can connect radios together across wide distances using the Internet as the communications backbone. The project was started in November 1997 by Dave Cameron, VE7LTD, when he attempted to link radio systems across Canada. The first full-time link that was established ran from Vancouver, British Columbia, to St John, New Brunswick.

While there were many technical challenges in the beginning, the system has stabilized as it's matured. Today, the software is built on the *Linux* operating system and the hardware interface is single-sourced. This standardization has resulted in a robust communication network that continues to grow with each passing week.

The local linking station, be it simplex or a repeater, is called a *node*. There are more than 1500 nodes in service (as of this writing), in over 40 countries. While node to node communication is common, users often choose to connect to a "reflector"—a special

server with access to a lot of bandwidth that's used to connect multiple nodes together. In this way, a repeater user in California could, for example, participate in a roundtable discussion with stations in several different countries. There are 16 reflectors located around the world, and each can support up to 10 channels. That all adds up to a *lot* of bandwidth—and opportunity for more activity on a global basis.

In fact, there are some 30 nets that meet via IRLP on a regular basis. And when the need or desire arises to create an ad hoc Net or special event, it can be done by assignment of a reflector channel. Examples of this flexibility include the recent linking of space shuttle audio, hurricane weather net traffic and a "Lunar Eclipse" watch event that attracted more than 20 nodes from around North America. This ability to easily link special event audio in a way that makes it available on demand will no doubt continue to grow as users dream of new uses for the technology.

work includes more than 1500 "nodes" from all over the globe—and more come on-line each week.

Using the Internet as the backbone for communication, a repeater user in Poughkeepsie, New York, can carry on a conversation with a fellow amateur in New Zealand. And it can be done without towers, big antennas or expensive transceivers. There is no static, no fighting for a clear frequency and none of the vagaries of ionospheric propagation. It's the perfect mode for nets or long conversations—and possibly the only viable alternative for long distance communication for a radio amateur who cannot erect an antenna.

Its detractors say that it "isn't really radio," but that's not quite correct. While it doesn't depend on radio propagation for long distance work, it does require radios on both ends of any conversation. Unlike other Voice over Internet Protocol (VoIP) applications, there isn't a software-based version of IRLP that provides access to the system with just a computer and microphone.

I'll leave it to others to endlessly debate whether or not this "is real radio"—all I know is that it is "real fun"!

If you'd like to see what IRLP is all about, I encourage you to visit the project Web site at www.irlp.net/. From there, you'll be able to find out if there's a repeater in your area

that's already a part of the IRLP network. If there is, you should contact the node operator to find out how to access the IRLP features.

And if you aren't afraid to roll up your sleeves and do a little work, you can also find everything you need to know to build your own IRLP node for as little as the price of a dual-band radio.

Once you have access to IRLP you might want to visit "IRLP-Talk," an on-line discussion board where you can look for others who share similar interests. From there you can ask questions, arrange a scheduled contact and look for nets or special events. You can even find out about IRLP availability for areas where you may be traveling.

Visit the IRLP-Talk discussion board at irlp-talk.irlp.net/.

For a growing number of us, IRLP is another mode of amateur communication that puts the world at our fingertips. Why not give it a whirl and see if it doesn't rate a spot in your own radio shack!

Jeff Davis, KE9V (ex-N9AVG, WD9GCT) was licensed in 1977. He lives in Muncie, Indiana and is a longtime member of the ARRL. Feel free to contact him via his IRLP node 4212 or at ke9v@yahoo.com.



NEW PRODUCTS

AMATEUR BAND DEFINITION SOFTWARE

◇ *Bands* is described as an instructive as well as interactive computer user interface for Amateur Radio operators. It provides a graphical indication of allowed operating modes by frequency on each band for each license class. A frequency database is provided showing amateur frequencies by typical mode within each band. Shortwave radio stations are also listed by frequency. The database may be user edited to add or remove listings.

The *Bands* software can also be used to interface via a computer serial port to a Kenwood TS-570 radio. It provides a visual output scanning function and is being able to tune your radio directly from the *Bands* interface. Other radios are expected to be supported in the future.

This software is available at no cost. To download go to www.columbia.edu/~wd16/Bands.htm.

Frequency	Mode	Comment
14,070,150	PSK-31	Calling frequency
14,080,000	MFSK	20 m calling frequency
14,186,000	* Packet	to 14,099,500
14,100,000	* NCDJ-9	Beacons
14,178,000	SSB	Audio interest net
14,230,000	SSTV	
14,230,000	SSTV	
14,285,000	* AM	Calling Frequency