EchoLink : Interfacing, demonstration and possibilities

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Agenda

- What is EchoLink?
- Capabilities
- Limitations
- Configuration how-to/Circuit explanation
- Practical session (Interfacing to radio)
- Possibilities
- Thoughts

What is EchoLink?

- EchoLink is a piece of software that allows licensed amateurs to communicate with each other over the internet.
- Sounds from a computer's microphone are converted to digital signals and sent over the internet. Receiving side converts digital signal back to sound.

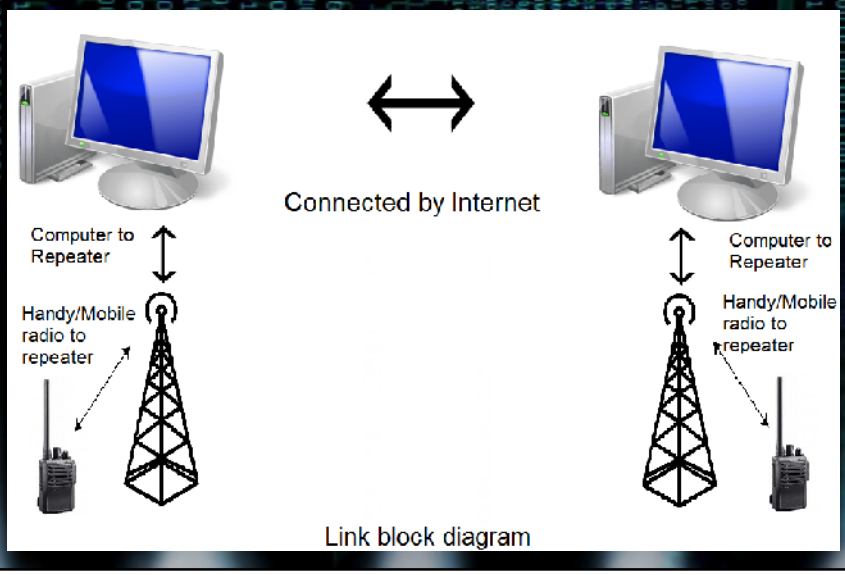
Capabilities

- Allows amateurs to communicate with each other online, with or without a transceiver.
- Repeater and link stations can be set-up on EchoLink, allowing you to connect a radio repeater or a handy-talkie to your EchoLink node.
- EchoLink supports different OS and platforms, allowing you to use EchoLink on Windows, Linux, Mac, and even on Android devices.

Limitations

- Anyone who wishes to use the EchoLink system has to have a node connected to the internet. (I have heard that systems can connect even without the internet, but I have not tried.)
- This system works on analog signals only. Technically, digital data cannot be sent over the EchoLink system. (We'll discuss further in the possibilities section.)

Diagram of possible links



Still awake?

Okay, I know you are tired of me telling you about EchoLink, let's configure this thing!

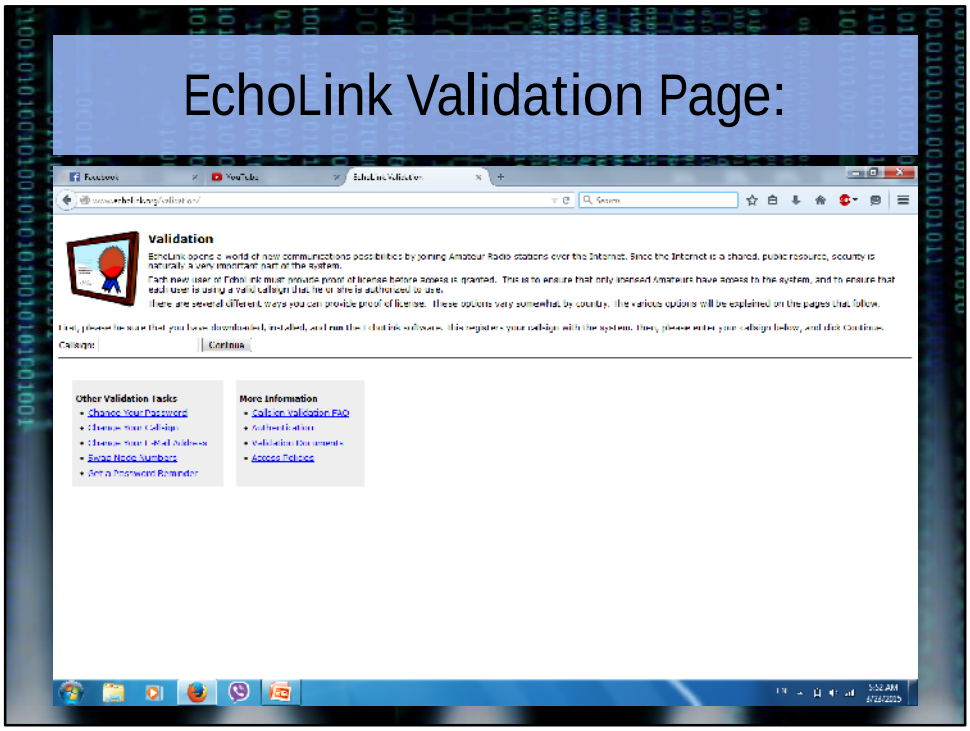
EchoLink configuration and sign-up

Windows:

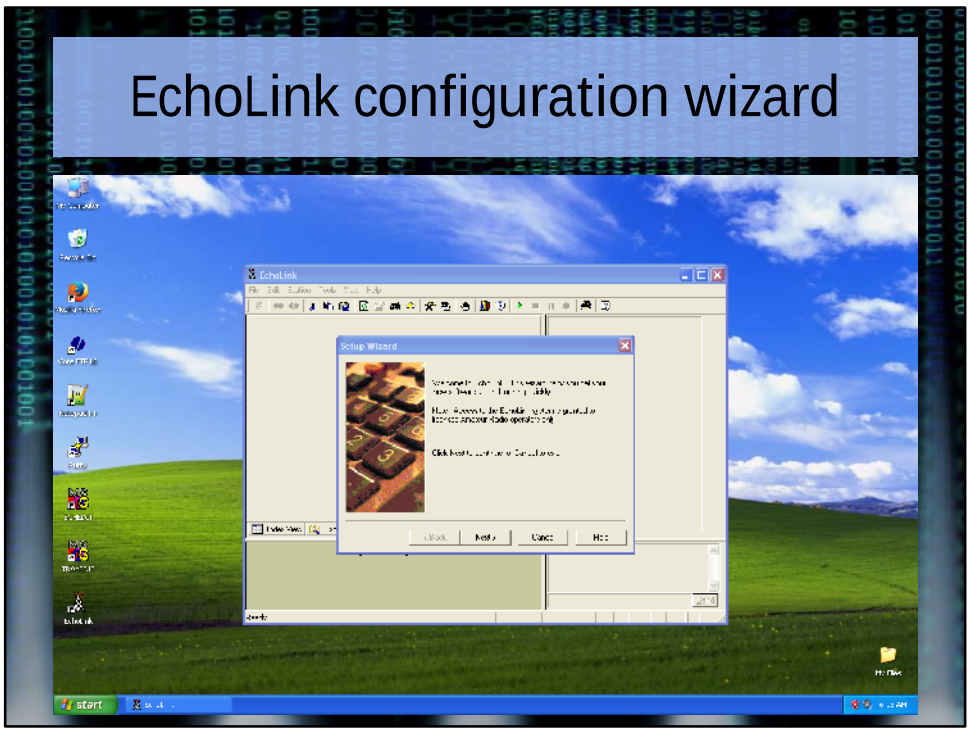
- Go to this website: http://echolink.org/
- Click the "Downloads" page.
- Enter your callsign and email
- Download the setup file.

Note: New users will be asked to upload a copy of their station license. This is to verify you as a valid licensee.

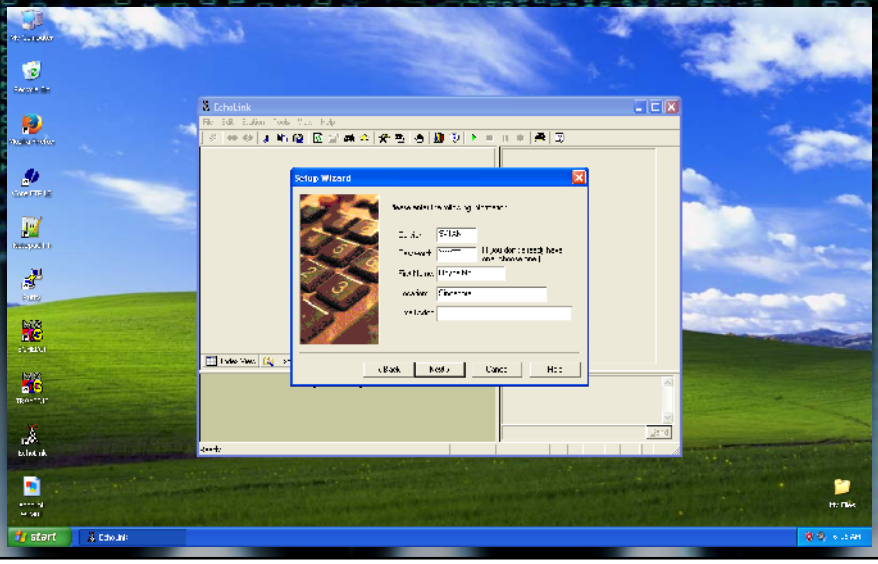
EchoLink Validation Page:



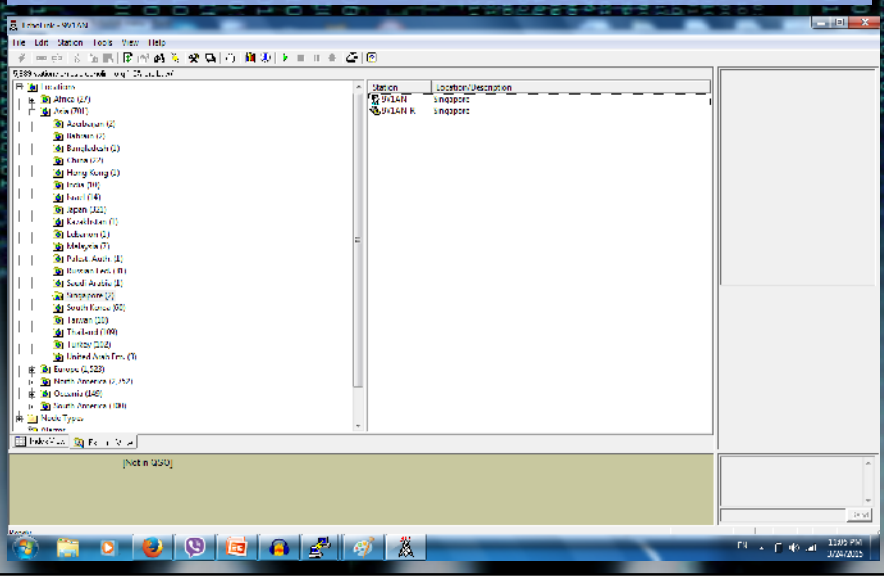
EchoLink configuration wizard



EchoLink configuration wizard



EchoLink main page



EchoLink configuration and set-up

Mac:

- Personally, I have never used EchoLink on Mac, however, you can use a piece of software called EchoMac to use the EchoLink network.

Linux:

- You can use use Wine for Linux to run the Windows version of the EchoLink software. Alternatively, you can use SVXLink and Qtel to access the EchoLink system.

EchoLink configuration and set-up

Linux:

- Qtel is an EchoLink client system for the Linux operating system. It comes with the SVXLink software.
- SVXLink is a piece of software that allows you to set-up and configure Linux based link systems and repeaters.

Note: You do not need SVXLink to run Qtel.

Live configuration

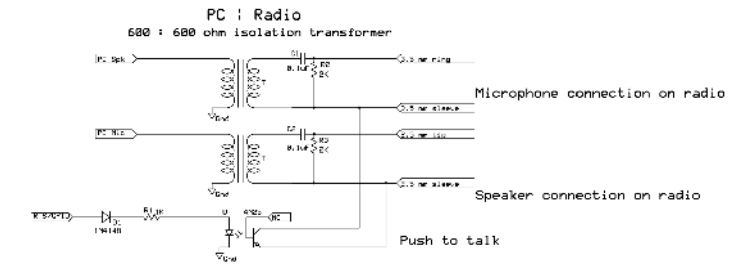
You may refer to the configuration guides provided.

One more thing

Please do note that in order for connections into your EchoLink/SVXLink node, you must configure your network router, if any, for port forwarding. The ports that are used are 5199 and 5200.

Let us get on to the circuit description.

Circuit Explanation



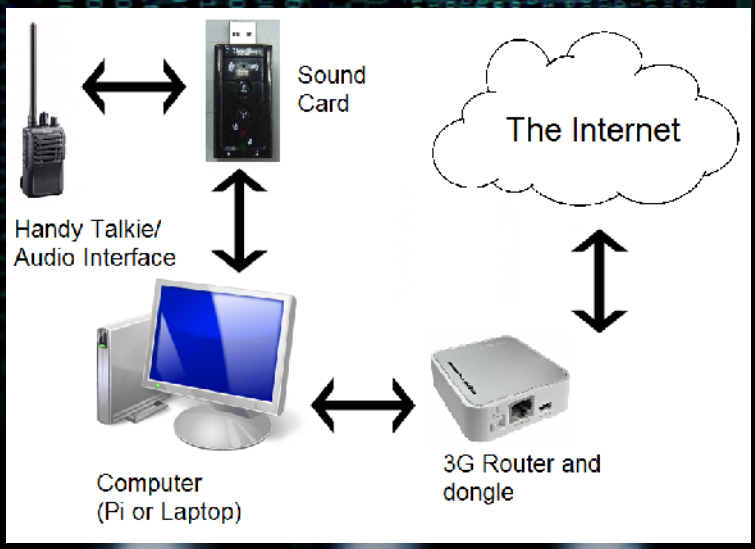
Note: There is a 3.3v potential coming out of the sleeve of the microphone's jack.
This is connected to the sleeve of the speaker jack, to form the push to talk.

Designed by Li Wei (9V1LW), re-drawn by Royce (9V1AN)

Practical demonstration

Its time to get on the air!

Diagram of tonight's set-up



Possibilities

- Can we do digital modes on EchoLink?
- Can we use this system to improve radio connectivity for amateur radio in Singapore?
- Implementation of a digital communications system with the benefits of analog transmissions?
- Connecting up to repeater, allowing people worldwide to talk to us?

Thoughts

Questions?

Have any questions?

Thank you!

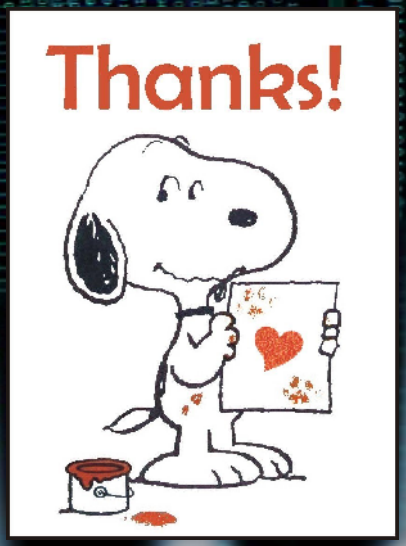
Many thanks to:

- Frankie (9V1FZ)
- Li Wei (9V1LW)
- Jeff (9V1AS)
- Dylan (Not licensed yet, he passed though! =D)
- Any person who have helped me during testing

Thank you!

Many thanks to:

- My dad
- My teacher(s)
- Dylan's sister, Abigail
- People who have helped me in any other way



Thank you!

And of course, thank you for listening to my presentation!