Ham 47C – ASL User: Perspective

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1. Ham radio is about communications. Period.
2. If you think Ham radio is about a bunch of old guys with a room full of equipment talking to each other, that stereotype was accurate when we had black & white, over-the-air, 3-channels of analog TV and the phone was a rotary dial instrument belonging to ATT sitting in a sacred alcove of the hall.
3. If you think everything has been done, so there is nothing left to build, let me introduce you to an article in *Spectrum*, the journal for 450,000 electrical engineers. A survey of the most read DIY articles last year had the following order: 1) DIY Pro Audio, 2) Ham Radio Does Distance Data Networking, 3) Hacking Ham Radio for Texting, 8) Passive Radar with SDR (Software Defined Radio).
   a. Do you see a pattern? Ham radio is alive and well with full integration of computers and networking.
   b. Some hams are the experimenters, who do things so the technology can expand to the rest of the world.
   c. Hams are not necessarily engineers, but we can have common interests.
4. In our group of 71, only two are electrical engineers to my knowledge. One-third of the active are ladies. Only one fits the stereotype. About one-quarter are makers. For the rest, it is a group of people with common interests who want to be able to communicate in emergencies. All our active hams now use computers as part of their experience.
5. What is the best way to communicate, more specifically best in an emergency?
   a. It depends on what is available, who you are talking with, what infrastructure is down, and what disruptions exist.
   b. Consequently, we want as many options as possible. What are the ones we use?
6. Simplex is radio direct to radio. This is the simplest and most dependable. It also has the shortest range.
7. Simplex HF is direct. With judicious equipment, choice of frequencies, and time-of-day, you can talk from the neighborhood to around the world. High frequency operation requires a more advanced license and the equipment cost is as big as your credit card can afford.
8. Duplex requires a repeater between radios. The added equipment generally increases range.
9. Proprietary systems such as Fusion, DStar, DMR and Wires require specialty equipment. While powerful, their interaction is limited. As such, none of our group has embraced the technology.
10. AllStarLink is the new elephant in the room.
    a. The system is a telephone PBX built on a Raspberry Pi computer platform with open-source software.
    b. The system seamlessly integrates repeaters, simplex links, radios, and cellphones. Literally every node in the world could link and be in communications.
    c. Use the touch tone keypad on your radio to dial any ham with a node (phone) number. That is it.

Complete node + another radio

11. The photo at right is a complete system with an extra radio to call in. You can use the repeater or build your own.
    a. We are installing the system on the repeater, allowing your keypad to call.
    b. The bottom photo shows how the systems tie together.
    c. If you are using a radio, call a link or repeater node with AllStarLink, then use your keypad to dial.
12. The group runs a net each Monday night to test equipment, connections, and develop skills using the tools.
13. Life is good. Enjoy!