

Amateur radio operators stand on guard

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In any disaster or great emergency, we are all critically dependent on ham radio enthusiasts, or "hams" as they call themselves, for communications.

One cold Saturday morning last month, I spoke with two executives of the Yukon Amateur Radio Association, David McWinnie and Ron McFadyen, who is president of the club.

We met at A&W. This is where the hams hang out, I later found out.

In a disaster, generally all commercial communications equipment will fail because of overuse, says McWinnie.

"In Whitehorse, for 9/11, the telephone system went out for an hour, hour and a half."

Ham systems, not dependent on the telephone network and because they use independent power sources, can remain up and running during power outages.

The ham club's network of mountain-top repeaters uses solar panels and wind-turbine generators to charge their batteries.

The handhelds they use from their cars are battery-operated and their radios at home can be run with batteries when necessary, says McFadyen.

"In the initial stages of an emergency, in almost every area, ham operators, their stuff works," says McWinnie.

"We had our 'clover' system (a federally sponsored national ham system which can send information in digital form) up and running as the (reportedly skyjacked) planes were touching down.

"It wasn't required for anything, but if it was necessary, we would have been in a position to move information."

When needed, the amateur operators staff the Emergency Measures Organization radio centre at Whitehorse International Airport, which has a ham installation and the "commercial" systems used by police, fire, ambulance, government, etc.

The facility also has a battery backup. High-frequency radio can be used for direct, long-distance ham communication.

These waves get from ham A to ham B by bouncing off the ionosphere.

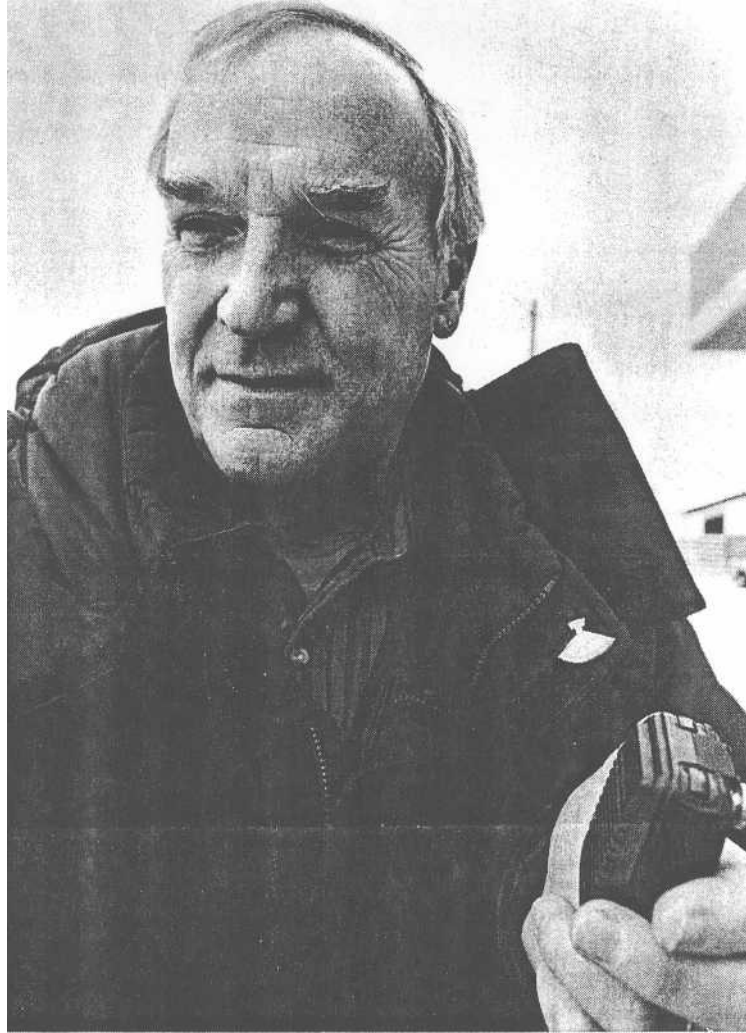
This system is less reliable than the consistently crystal-clear very-high-frequency radio, which the local repeater network uses.

When the two Korean airliners were coming into Whitehorse on September 11, McFadyen and fellow hams were at the EMO facility, providing assistance in any way necessary.

"What we did was minor but major," says McFadyen. "It was crucial for (EMO) to have these things done."

The hams activated the emergency radio transmitters.

They set up telephones in the building for contact with the Yukon government,



NEWS photo by Allan Rogers
RON MCFADYEN... "We feel that in order to have the toys that we play with, we have to serve the community."

which was helping the stranded passengers with their immediate needs.

The Beringia Interpretive Centre, which was being used as a reception centre for the passengers, had only one phone, so an operator on location relayed messages.

At the EMO building they also set up a fax machine for queries coming in from everywhere for Korean Air, says McFadyen.

"EMO has been very supportive of emergency ham radio, thinking the unthinkable."

"When things really go for a dumper, sometimes the only guys left are the hams," says McWinnie.

During the San Francisco earthquake in 1989, McFadyen had a call from a Yukoner worried about relatives living in the area.

"You have a ham set, don't you? Can't you contact them? That's the public perception."

It took McFadyen several hours to get through to emergency ham radio in San Francisco, using high-frequency radio.

The phone system was working for calls within but not outside of the region. A ham phoned the people and then got back to McFadyen.

"Ten after 10 that night, I had received word that the family was OK," he says.

Another story of hams getting through when the phones are down comes from the archives of Yukon political history.

On the night of the territorial election of May, 1985, the results from Old Crow hadn't come in because of a problem with the phone system.

The NDP was tied with the governing Conservatives, led by Willard Phelps.

People were milling around in the lobby of the main government building while wondering who would form the next government.

Eventually, a Whitehorse ham contacted a radio operator in Alaska, who was able to get in touch with the RCMP in Old Crow.

They reported that the NDP had won that riding.

The NDP, led by Tony Penikett, along with two Liberal MLAs, formed the new minority government.

McFadyen was the original president when the ham club was started in the fall of 1976.

At that time, there were no repeaters in the Yukon and the VHF range, which is limited to line of sight, was only about 30 kilometres.

Now in its 26th year, the club has established a network of mountaintop repeaters that allows VHF communication from Teslin to Beaver Creek and from

Skagway to Stewart Crossing and Mayo.

A repeater on Pilot Mountain, just northwest of Whitehorse, is the hub of the system. The club expects to have a repeater in the Dawson City area this summer.

The organization, which has about 20 members, has concentrated much of its time and effort developing this infrastructure.

About five members do most of the work, says McFadyen.

"From no repeater in 1976 to 2002, you see this huge network. The volunteer effort you have in this community is quite extraordinary, by the few that serve the many."

The organization has the support of numerous government and corporate agencies, and businesses.

"Hams know how to scam," says McWinnie.

"Hams could never afford this," says McFadyen.

"We feel that in order to have the toys that we play with, we have to serve the community."

The club assists with the Kluane to Chilkat International Bike Relay in June and the Klondike Trail of '98 International Road Relay in September.

In the running race, a radio operator starts collecting data in Skagway, entering it into a laptop.

"By the time he gets to Fraser, he takes the output of his laptop computer, connects to a radio in the Suburban (a vehicle maintained by YTG for the hams) and presses 'return.—"

The packet radio signal goes through the repeater network to the computer of the race's chief statistician in Riverdale.

Because there are no repeater services between Haines Junction and Alaska, the bicycle race poses more difficult problems.

Operators at each checkpoint build a "mini-internet," says McWinnie.

"The checkpoint captains bring you the results for that checkpoint, you enter it into the computer, squirt it through the radio. It goes down the daisy chain to the far end.

"It's sort of the truly mobile system. You've got to have battery-powered computers. You've got to have battery-powered relay systems."

American operators are also assisting with communications in the Yukon Quest.

Some information is being transferred from some of the checkpoints back to Fairbanks on HF; the most difficult place for communications is the dog drop at Scroggie Creek on the Stewart River, says McFadyen.

"For the first time this year, they're going to try communications from Scroggie Creek into our repeater at Stewart Crossing."

The bike race is a good exercise for developing skills for emergency situations, notes McWinnie.

"When you build up those skills, it dovetails with those things EMO asks us to do."

"We think of ourselves as professional amateur radio operators," says McFadyen.

"We do a lot of training in radio procedures, so that if something does happen, we know how to operate the equipment."