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Cold Call Turns into Long-Term Relationship with OSU

The call came out of nowhere. Oklahoma State University-Stillwater had lost its radio supplier due to retirement, and was in need of several new radios immediately. Could Cristy Phillips, owner of Global Communications Technologies, help?

Never one to turn down a sale, Phillips quickly went to work. She assessed the university's communications needs and then cut them a great deal for several new Icom F11S portables and F121S mobiles.

Since that initial sale 6 months ago, Phillips receives regular calls from the university's various operations departments for new radios and bases.

"I don't even know how they got my name, but every other week a different department calls me," says Phillips, who has owned Global Communications Technologies in Enid, Okla., for two and half years and has 30 years experience in the two-way radio industry.

So far, she has provided radios to the university's physical plant, power plant, and ground maintenance departments, who use the radios for everyday communication across campus.

> *"They are really happy with the Icom radios – especially the price."*
>
> - Cristy Phillips, owner of Global Communications Technologies

Previously, the university had used another brand's radios exclusively. Phillips says Oklahoma State is very pleased with the value Icom radios offer, with excellent performance and a price tag much lower than their previous radios.

When selecting a radio, the departments were primarily looking for a basic radio with excellent durability and reliability. The Icom F11S portable proved a good fit with its lightweight body and simple, easy-to-use controls. Likewise, the F121S mobile radio offered a powerful 50W output and simple operation.

"Judging from the increased sales, they seem to really like the Icom radios," Phillips says. "The portables work great and the output power of the mobiles allows them to transmit from the vehicles with no problems."

For People Who Make Smart Choices

B.C. Search and Rescue Forges a Clear Voice & Data Path with Icom Radios

Two things a Kent Harrison Search and Rescue (SAR) volunteer can't do without are a good pair of boots and reliable communications with fellow team members. When negotiating rugged terrain in driving sleet, searchers shouldn't be any more concerned about their two-way radios than their footwear… the equipment must perform optimally every time it's taken into the field.

To achieve this level of consistency on a limited budget, Kent Harrison and other SAR teams throughout the province of British Columbia standardized on Icom mobile and portable radios. As a result, the nearly 90 B.C. SAR groups now enjoy a level of dependability and communications interoperability never before achieved.

The Search for Reliable Communications

SAR veteran and Kent Harrison search manager Neil Brewer has been dealing with two-way radio for nearly 20 years. And for as long as he could remember, SAR operations and two-way radio mixed about as well as oil and water. Whether it was a dead battery, a missing antenna or a radio rendered useless after a soaking rain, Kent Harrison's two-way equipment was simply not up to the task. "Every time we took a radio into the field, we weren't sure if it was going to work properly."

Further, the mishmash of old equipment from different manufacturers ensured that compatibility was always an issue. "We were continually programming and reprogramming the radios …

some with four channels, some with 16," recalls Brewer. "None of our equipment was uniform, and we were growing pretty tired of it."

Looking for any improvement to the current situation, Brewer and his team applied for and received a grant through the provincial gaming body and received enough funds to acquire new equipment. decided to purchase new IC-F30GT portables. "They were durable radios and a great value," he said.

While the equipment served Kent Harrison SAR well for a time, it wouldn't satisfy the growing appetite of Brewer and other SAR visionaries who sought greater functionality from a communications solution, including advanced features such as GPS tracking that could inject a new level of functionality and safety into SAR operations. They also saw a need for improved interoperability among SAR groups and other emergency response agencies throughout the province.

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"SAR groups from throughout the province come together for big operations," Brewer said. "However, different areas have different equipment and frequencies, making communications among everyone very difficult. We though of how nice it would be to have a standard radio that we could program with the different frequencies for each region."

Knowing that improvements like these were only a pipe dream without additional funding, Brewer submitted an application in July 2004 for a New Initiatives Fund (NIF) grant with the Canadian government on behalf of SAR groups throughout the province, collectively known as the British Columbia SAR Association (BCSARA). Government officials realized that improved communications among SAR volunteers was in the best interest of B.C. citizens and awarded BCSARA a three-year, nearly CN$1,000,000 grant to upgrade its two-way radios.

Icom Fits the Bill

Happy with its past Icom experiences, BSCRA was again looking to partner with the manufacturer, provided it could meet the handful of requirements:

- Province-wide consistency. Programmable radios that could accommodate at least 32 standard VHF channels for each of B.C.'s six SAR regions.
- Interoperability. Equipment that would allow repeater zone and duplex frequencies in addition to partner agencies. Also, the radios would need the capacity to handle an additional 64 channels for each individual SAR group to program their own frequencies.

- Wide/narrow bandwidth compatibility. All radios would need to be independently switchable per channel.
- Flexibility. The solution must include programming software and cables to allow each SAR group to customize its own radios as necessary.
- Durability and reliability. Given the harsh conditions SAR groups endured, the radios must be waterproof and rugged. And if service or support is needed, a manufacturer that can accommodate them quickly and with ittle hassle is mandatory.
- Affordability. In order to get radios in every SAR group's hands, the association would need to find equipment at a good value.

Since the IC-F30GT—Brewer's radio of choice—was being phased out, Icom offered BCSARA the higher-end IC-F70 portable at the same price. Given that this radio met all its outlined objectives, the offer was simply too good to pass up. The association received its grant funds in late 2005 and purchased more than 600 portable and 100 mobile radios over the next three years.

Among the equipment it acquired were the waterproof speaker mics and battery chargers, F521 mobile radios, programming software and Pelican® cases. The organization distributed the radios to the more than 90 SAR groups in "kits" containing six portables and speaker

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mics, one mobile, one banked charger, a set of separate desk chargers, and the programming software and accompanying mobile and portable cables.

In order to keep consistency throughout the province, the radios were programmed with 16 banks of 16 channels. Each of the six SAR regions was assigned two banks, with the appropriate frequencies programmed into each and every radio in the province. The 64 remaining channels represent the individual SAR groups' operating banks (aka: zones) which they could program with their own array of frequencies.

This structure was designed not only to make radio interoperability easier for teams in the field, but also ensure a user can quickly accommodate a radio that may not be from their own group. "The goal was to keep everything logical and simple for the user," Brewer says, noting that the volunteers give of their valuable time to search for and rescue individuals in need, and would rather not waste it messing with their two-way equipment. "We set up the radios so that anywhere you go in the province, every radio will operate the same way."

While the association dealt with its share of problems such as the hassles involved in developing the extensive frequency list, coordinating the transition with the various SAR groups in a timely manner and licensing the radios with Industry Canada, Brewer and the rest of the BCSARA volunteers involved with the three-year rollout emerged with the satisfaction that its objective of interoperable communications using some of the industry's most durable yet affordable equipment would finally be met.
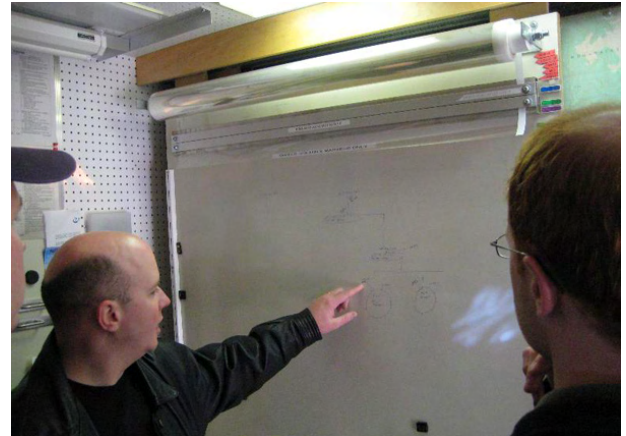
Data Becomes the Crown Jewel

With radios distributed to teams throughout B.C., Kent Harrison SAR was able to focus on its own communications strategy. Data quickly rose to the top of the list the as the group had already been working to implement a user-friendly tracking system for the last several years. Upgrading from the BIIS protocol to Icom's Enhanced MDC (EMDC) signaling capabilities available in the F70 portable and F1721 mobile series radios, Kent Harrison not only found its workable GPS location solution, but also gained a host of additional data functionality.

Building on Icom's popular MDC1200 protocol, EMDC provides remote signal strength testing and battery diagnostics on radios in the field, in addition to other features such as text messaging.

But for Kent Harrison, tracking via the GPS chipset in the F70 speaker mics provided the greatest benefit for SAR operations. "The ability to poll radios rather than wait on searchers to indicate their coordinates verbally over the

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radio is very significant," Brewer states. "Knowing exactly where people are really assists the search manager in organizing coverage on the ground."

With assistance from third-party software developer Spectrum Digital Imaging and its OziFleet tracking system, Kent Harrison search coordinators are able to monitor F70 radio users with great accuracy. The system has proven handy on many occasions, including during a recent middle-of-the-night search in dense forest and a driving rain.

Five searchers were doing a sound sweep for presumably "responsive" subject, which requires them to walk a short distance and blow a whistle, hoping the lost party will hear it and find the source. From his command post in the nearby valley, Brewer was watching his team move through the forest via the tracking system and steadily toward a cliff they were likely unaware of.
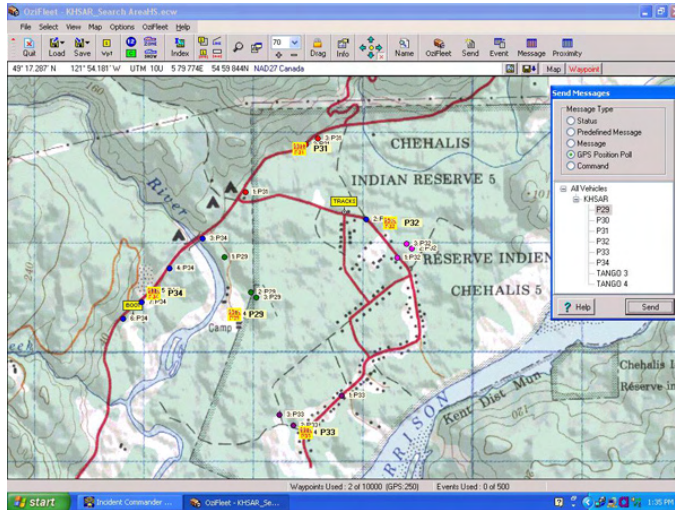
"I could tell where they were by their position and was able to translate this onto a topographic map," Brewer recalled. "Not wanting them to walk off the edge of the cliff, I made radio contact with them and guided them back to the starting point. This eliminated the need for them to refer to their compasses for direction, greatly improving their safety."

A Radio for the Future

BCSARA selected Icom for its SAR communications activities based on Icom's ability to meet the association's critical requirements. First, SAR volunteers require not only a rugged portable radio but one that's waterproof as well, all at a reasonable price.

The Icom equipment was also flexible enough to accommodate BCSARA's unique programming requirements, yet still proved to be very user friendly. "The number of features that we can program in these radios is endless," says Brewer, who added that the radios can be configured so only the PTT button and channel selector are enabled, preventing someone from accidentally modifying the settings.

Finally, the reliable service that Icom provided throughout the three-year project as well as its ongoing support to ensure SAR requirements for critical voice and data communications are continually met virtually guarantees Icom and BCSARA will enjoy a long-term partnership. "The service that Icom has given us has been second to none," Brewer says.

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