

### Inventive ideas are helping others

**By Michael McQuillan**  
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*Nov 25 2005*

The job of those who belong to the Tetra Society is to invent "little things" that make a big difference in the lives of others. Members Gregg Harris, Harry Hardy and Dave Graham love being part of the charitable society because their volunteer work breaks down barriers one innovative design at a time.

Tetra, originally established by Vancouver's mayor elect Sam Sullivan, is a non-profit group made up of engineers, technologists, health professionals and anybody with a technical mind who can help create devices to assist people with disabilities. The devices they invent include lifts, handles, hooks, tools and aids of all sorts. Often the items they adapt are simple things, something a person needs to do an everyday task. "Our Vancouver chapter has done about 1,000 different projects for about 800 different clients, so all those peoples' lives are changed for the better," said Harris.

"We're allowing them to do things they couldn't do before," explained Graham Sullivan, confined to a wheelchair after a skiing accident, recruited the first Tetra volunteer when he phoned a friend and asked for help because he couldn't reach to open the freezer door on his fridge. The friend took a wire hanger, twisted one end into a hook, the other into a handle, and the problem was solved. From that, Sullivan realized hundreds of other physically-challenged people encountered similar problems in their day-to-day lives. The solution was to bring together technically-skilled volunteers with technically challenged people. From that idea Tetra was born.

Harris' favourite example of how he made someone's life better is when he invented a power easel for quadriplegic artist Art Jonker. In 1997, Jonker was involved in an off-road motorcycle accident. As a result of the accident, he lost the use of his limbs and had no feeling below his chest. With his life abruptly altered, Jonker gradually took to painting, using a paint brush clenched between his teeth to create his compositions. Painting became both his therapy and means of expression.

But it also had its limits. Soon after starting, Jonker had the desire to work with larger canvasses, but his limited physical movement prevented him from reaching every corner. No device was available to help him so he went to Tetra for help. Harris, who took on the assignment, figured if Jonker had limited movements then he would make the canvas move where the artist wanted it. Using a motor from a power drill, a bicycle chain and sprockets, roller drums, a toggle switch and other materials, Harris created the world's first powered easel that moves the canvas up and down and side to side. Harris, a former aerospace engineer who worked on the Apollo space program, sees the device as the pride and joy of the 30 or so Tetra projects he's been part of.

"It totally changed his life around," said the Burnaby resident. "It was because of that he became so interested in art and painting."



MARIO BARTEL/NEWSLEADER

**Gregg Harris examines a wheelchair he designed and built while Harry Hardy and Dave Graham examine an album of other projects they've completed as volunteers for the Tetra Society, which makes equipment to help the disabled.**

Harris now relishes in the fact that Jonker is an accomplished artist who exhibits his work around Vancouver. The most memorable device Graham invented was even simpler, but the result was just as satisfying. A young woman had been in a severe car accident and lost the use of one arm. As a consequence, she was unable to play the trumpet because two hands are required to play the instrument.

Graham, a mechanical engineer, came up with a stand where the trumpet is suspended and does the work of her injured hand.

For Graham, a musician and survivor of a car accident, it was music to his ears when he heard the woman play. "I could relate to her. One of the things I did when I was recuperating from my head injury was I picked up my old clarinet and played it. That was therapy," said Graham.

"I was sitting there when she first started playing it. I had tears coming down my eyes. It made so much difference to her.

Hardy is the mentor of the Vancouver chapter of the Tetra Society. He's taken on and completed 192 projects.

One of his more recent ones involves a man and his dog and Hardy's invention managed to make both happy.

The client has limited use of his arms and gets around in a wheelchair. He has an assistance dog to take care of day to day tasks like opening doors and fetching things. The man wanted to give his best friend some exercise by throwing a tennis ball in the park but his disability didn't allow him to.

The solution was a tennis ball catapult that fits onto his wheelchair and is easily operated. It works like a charm, said Hardy, and both clients are happy.

"It's these simple things," said Graham. "They make a huge difference to these people we help.

Tetra Society now has chapters all over North America with the original one starting in Vancouver. It is funded entirely by donations and corporate donors. People who wish to donate or help out the society can contact them at 604-688-6464. The website is [www.tetrasociety.org](http://www.tetrasociety.org)

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