

# gizmo

THE TETRA SOCIETY OF NORTH AMERICA: CUSTOM ASSISTIVE DEVICES

## Shining a light on the best of the best

**TORONTO CHAPTERS:** Clients, volunteers and funders came together to celebrate some of the most inventive Tetra triumphs.

The Tetra Society of North America is an independent non-profit that provides customized assistive devices to people with disabilities. It has 39 Canadian chapters and two more in the United States, all based on volunteerism within the local community.

The chapters in the Greater Toronto Area—Toronto, Hamilton and Peel—came together to celebrate the best of the best: five of the most inspiring and unique Tetra solutions.

The GTA Gizmos award show, held at St. Andrew’s Club, Toronto on Feb. 9, brought together more than 100 volunteers, clients and supporters to see examples of the devices that make so much difference to people’s lives, and hear testimony from clients.

“Awards were chosen according to merit, fitting a certain criteria,” explained Tetra Ontario development coordinator Glenn Barnes. “We were looking for the most ingenious solutions and the projects that made the most difference to the clients.



**SERVING AN ACE:** VOLUNTEER MIKE MCNALLY DEvised THIS TENNIS BALL LAUNCHER THAT ALLOWS A TETRA CLIENT TO DEVELOP HIS OVERHAND SERVE.

“The people present got an idea of the many projects that we do, and how each one really means something to the individual that receives it. People might look at the archive on the website, and have seen pictures, but having a client explaining what the device means to them makes all the difference.”

### AWARDS WENT FOR:

- A tennis ball launcher that enables a nationally ranked wheelchair tennis player to develop and practice his overhand serve
- A modified crib that allows a new mom in a wheelchair to care for her baby

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**WHEELS:** TETRA VOLUNTEER BILL RUDOLPH GIVES THIS YOUNGSTER HIS FIRST TRIKE.

## Trike modification lets boy ride on

**HALIFAX CHAPTER:** Cutting a few inches off a child’s tricycle may not sound like a major undertaking, but it has made a world of difference to a youngster with restricted growth.

Tetra Halifax volunteer Bill Rudolph, of Herring Cove, NS, was asked to undertake the project to let a five-year-old boy ride by himself. The boy is the size of a one-and-a-half year old, and his parents were unable to buy a suitable trike.

“They got him a tricycle, but there was a five-inch gap between his foot and the pedal,” said Rudolph. “I did everything I could to cut that bike down. It was a quarter-inch here, a half-inch there, and in places it was a sixteenth, but eventu-

ally I had it so he could ride it.”

He turned the frame upside down and reassembled the parts onto this (saving almost four inches), cut down the forks, headset and handlebars...anywhere he could make a difference.

But the real neat touch was producing a project that looked exactly like a production trike, even down to replacing the decals in new positions. The reward, of course, came from watching the boy try out the bike.

“He doesn’t have speech, but I got some squeals,” said Rudolph, who has been volunteering with Tetra for the past year since he retired.

It is still a work in progress, as this dedicated volunteer next needs to raise the handlebars a little to clear his knees.

Tetra clients talk about their lives, their projects and the barriers they have overcome.

## IN THEIR OWN WORDS

PICTURES: MITS NAGA



ANDREA GRIFFIN: LEAVE NO-ONE BEHIND

“Two years ago I had a very special student.”

Music teacher **Andrea Griffin**, of Nelson Elementary School, Burnaby, had a professional dilemma. It looked like one of her students was going to be separated from his peers during music classes, due to his disability.

The boy had small hands due to his medical condition, and was fully integrated into school life. She introduced the recorder in Grade 4, having the pupils play one-handed, using just the top three notes. This boy was an A student.

The following year, when told they would learn the rest of the notes, he asked: What do you do if you can't reach all the notes?

“The options were that he didn't play the recorder, or tell him to only play the notes B, A and G and leave out the other notes—which weren't choices—or else find an ingenious way for him to play the instrument,” explained Griffin. “I contacted Tetra, and a volunteer came up with this wonderful recorder which allowed this pupil to participate alongside his peers. He needed no help. He was fully integrated into the music class. He was so proud of that recorder.”

Griffin is left somewhat bemused that an engineer who had worked on Nasa's Apollo project—Greg Harris, of Burnaby, BC—would come to her school and work for nothing to produce a recorder with keys that could be played like a clarinet.



ART JONKER: MODERN ART

“I've always been a doer, not a watcher.”

**Art Jonker** was critically injured in a dirt-bike accident on Vancouver Island in September 1977, aged 30. The impact shattered the fifth vertebra in his neck, leaving him quadriplegic.

After two months' intensive care, he was transferred to Vancouver's GF Strong Rehab Centre. He recalls going in full of hope about the future, but gradually becoming jaded, until he found a new outlet—art.

“I'm an optimist, but it got to a point when I could not figure out what to do next,” he recalls. “It kind of wore me down.”

One day Jonker attempted using a mouthstick paintbrush in the GF Strong art therapy room. He was pleased with the result. Painting was new, something impossible to compare to how it was before the accident.

But Jonker could only paint a small area without an assistant to keep moving his canvas. He needed an automated way of doing this.

Tetra volunteer Gregg Harris created a workable easel late 2000, which within two years had developed into the world's first power easel. It has helped Jonker to develop his art to the point that he could make it a commercial venture. There have been other Tetra projects since, relating to day-to-day living (a computer stand and a proposed system for answering the phone) that allows him expression on a daily basis.



DAN LEBLANC: SAILING AHEAD  
(VOLUNTEER DAVID GRAHAM, LEFT)

“It was around one-and-a-half years ago, and I was at GF Strong Rehab Centre, sitting in my room feeling not too good.”

Carpenter **Dan LeBlanc**, aged 28, became a ventilator-dependent quadriplegic in a dirt-bike accident in Yukon two years ago. He spent a year in rehab, coming to terms with his new life. His love of outdoor leisure pursuits seemed a thing of the past, until someone gave him a leaflet about the Disabled Sailing Association of BC (DSA BC).

“It gave me a little hope for the future,” said LeBlanc. “But I was thinking, first how am I going to fit into the boat because I have this great big ventilator?”

Recreational therapist, **Mary Clark**, wanted to make it happen, as LeBlanc used to sail and surf before his accident. She called around the world to try to find a boat for her client, before she contacted Tetra—a sister organization of the DSA—and asked for a ventilator-holding modification.

“It took time and a lot of effort from a lot of people, but eventually I was sitting on a sailboat with the biggest smile on my face,” said LeBlanc. “It lifted me up, just to be meeting people and on the water again.”

Tetra volunteer **David Graham**, of Burnaby, BC, worked on a team effort with LeBlanc's recreational and physiotherapists, which involved prototypes and mock-ups before they were satisfied the system was safe to go out on the water. LeBlanc sailed five times last summer, with an instructor, and intends to go solo when DSA sailing resumes in 2007.



**Tetra Society**  
of North America

CELEBRATING OUR 20<sup>TH</sup> ANNIVERSARY



PAUL CERMAK



JAY DREW

## Celebrating 20 years of personal solutions to universal problems

**DRIVING FORCE:** SAM SULLIVAN, WHO FOUNDED TETRA IN 1987, HOISTED THE OLYMPIC AND PARALYMPIC FLAGS AT THE WINTER OLYMPICS STADIUM IN TURIN, ITALY USING A WHEELCHAIR FLAG-HOLDER...DESIGNED BY TETRA.



This year sees the 20th anniversary of the formation of the Tetra Society of North America.

The society was started in 1987 by current Vancouver Mayor Sam Sullivan, after engineering solutions—provided free of charge—revolutionized his life. Tetra has grown over the past 20 years but remains true to his original vision: volunteers providing a personal service.

Sullivan became quadriplegic after he broke his neck in a 1979 skiing accident, at age 19. He subsequently spent seven years on welfare, battling depression, and haunted by the dilemma: how do you get a job if you can't feed or dress yourself?

He detailed how he would meet up with others at GF Strong Rehab Centre, Vancouver, to "gripe about how hard it was to get things done." They ultimately decided to combine their resources to hire an engineer, but found this would cost \$700 an hour, far more than a month's welfare cheque.

Sullivan contacted the industry's regulatory group, the Association of Professional Engineers and Geoscientists of BC (APEG BC). His plea for volunteers, printed in the group's newsletter, was met by Vancouver engineer Paul Cermak.

"Paul said, 'Give me an idea of your problems'," recalled Sullivan. "I reached for the

freezer. I was able to pull the freezer door open, but it was on a spring, and it would spring back.

"I turned around and Paul was nowhere to be seen. He had gone into my bedroom and taken a coat hanger. He unraveled it. I put the hook to the freezer door and it opened. I'd been trying to do it for months. It was done!

"I remember once saying to him: 'Paul, I'm going to pay you for that.' He said: 'No, Sam, I found it in my workshop.'

"Jay Drew showed up a little later—who is the second longest-serving Tetra volunteer."

These projects revolutionized his life, Sullivan said. They solved everyday issues, such as having loops sewn into his socks that enabled him to dress himself, or enabling him to open his apartment door. It soon became apparent that many others needed this kind of help, and Tetra was incorporated in December 1987.

Looking back at the growth of Tetra, Sullivan takes credit for nothing more than bringing these compassionate, highly skilled people together with people that have a need.

"We do not provide the energy, we release it," he added. "There's so much energy in a community, people wanting to do something for other people. So much love."

Cermak, who has remained a Tetra volunteer, recalled his initial contact with Sullivan.

"I had just retired," he said. "I was reading the APEG BC magazine and doing the things I did not have time to do before. There was a letter asking for volunteers. I said 'why not?'"

"I called Sam. We went for a coffee. He said he needed three or so improvements to his personal living arrangements.

"Volunteering with Tetra is very interesting. It helps people to resume the life they had before their accident, or some disease."

Jay Drew, of Tsawwassen, BC, began with Tetra in 1991 after reading a call for volunteers, and has become central to the Vancouver chapter. He has more than 200 inventions to his name.

"All my life I felt I was meant to do something," said Drew. "It gives me satisfaction and a sense of purpose to do something for someone that they cannot do themselves.

"Helping other people gives you a sense of fulfillment, and that's what makes you happy. People striving to find happiness only for themselves are doing everything wrong."

In 1999, he received the R.A. McLachlan Memorial Award, given by APEG BC to recognize "an individual who has combined a solid professional career with outstanding service to the community," and then the CBC Golden Heart Award in 2004. In addition, on Jan. 10 this year [2007] Drew received the Governor General's Caring Canadian Award at a ceremony in Victoria, BC.

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- A saxophone holder that enables a music teacher to conduct classes
- A fishing rod caster that allows a quadriplegic to go fishing
- Tetra Toronto's longest serving volunteer

The final award went to volunteer Sam Barnes—"He's my father," confided Glenn, "but it was hard to keep it away from him"—who has completed 25 projects over the past six years.

Sam Barnes said he volunteered because he has "a knack for doing things" and likes

a challenge. His reward comes from helping people do something they might not otherwise do, citing an example of a sip n' puff channel changer he designed for a lady in Mississauga, who was paralyzed from the neck down by Multiple Sclerosis, so she could view television without having to ask for assistance.

Tetra Hamilton coordinator Sylvia Baliko was proud to nominate a project completed by volunteer Mike McNally, which fires a tennis ball straight up in the air to allow a client to develop his overhand serve.

"It's a fabulous piece of work, and Mike was delighted to be at the Gizmos," said Baliko. He's a fabulous man, a great volunteer."

Toronto Tetra coordinator Brian McLean described the "absolutely amazing" event as "off the scale of fun."

Gala sponsor was Kangaroo Design. Barnes hopes to maintain the relationship for future Gizmos events in the area.

- Anyone in Ontario wanting to talk about Tetra—as a client, health professional or volunteer—should contact Glenn Barnes at 905-274-8584.

## Questions, Observations, Want To Know More?

If you have an idea for a customized assistive device that could transform some aspect of your life, please tell us about it.

Every Tetra project is unique: tailor-made to one person's particular needs and capabilities. They can relate to your home, workplace, school or leisure location, but note that we do not fit ramps (any construction carpenter can do that) and we do not copy devices already on sale.

We first determine if the proposed project is safe, that no commercial solution is available and you have a volunteer nearby. Next, a volunteer will discuss your ideas and figure out how to make them reality. They will create whatever is required and work with you to make sure it is suitable – making minute adjustments to ensure that it is safe and does what you originally intended.

You will not be billed for their time, just asked to repay materials and mileage costs.

We frequently work with Occupational Therapists, Physiotherapists, Vocational Rehabilitation Consultants and other health specialists. Please contact us if you have a client that you believe will benefit from a Tetra project.

Fill out an online Request for Assistance, or contact your local Tetra coordinator, or reach us at head office by email, phone, fax or mail (details on this page).

### DO YOU WANT TO BE PART OF THE TETRA PROCESS?

We are always looking for volunteers, both for technical and administrative positions.

Tetra operates via a series of chapters, aided by head office in Vancouver, BC. Each works within its own community, and comprises of volunteers with a wide range of technical skills (not all engineers!) overseen by a coordinator, whose duties include networking and hosting the regular volunteer brainstorming meetings.

You will need to submit references and complete a criminal record check if you want to volunteer with us.

#### Abbotsford/ Fraser Valley, BC

Contact head office  
info@tetrasociety.org  
1-877-688-8762

#### Armstrong, BC

Gary Arbuckle  
arbuckle@sunwave.net  
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#### Cranbrook/ East Kootenay, BC

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# Tetra Society of North America

CELEBRATING OUR 20<sup>TH</sup> ANNIVERSARY

Have an idea for a project?

Want to know what's possible?

Want to overcome a barrier?

Here's how to reach us...

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[www.TetraSociety.org](http://www.TetraSociety.org)



**Tetra Society**  
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