

This year marks the 25th anniversary of the Tetra Society of North America and we are celebrating by highlighting the volunteers who devise assistive 'gizmos' for people with disabilities.

The Tetra Society helps people with disabilities to live independent and fulfilling lives through the creation of devices that help overcome a barrier in the physical environment.

Founder Sam Sullivan encapsulated the Tetra philosophy with the observation: "People are not limited by disability, but rather by obstacles and barriers in their environment."

The Tetra Society recruits technically skilled people to devise ways to overcome these barriers. Design solutions range in scope and complexity, but all share a common vision and are all brought about by volunteerism in the local community.

Sullivan formed the Tetra Society in 1987 after engineering solutions – provided free of charge – revolutionized his life. Quadriplegic at age 19 after breaking his neck in a skiing accident in 1977, he spent seven years on welfare, battling depression.



At the heart of this was the dilemma: How can I get a job if I can't feed or dress myself?

During this period, Sullivan would meet a group of friends who also had disabilities at GF Strong Rehab Centre in Vancouver, to 'gripe about how hard it was to get things done." They ultimately decided to combine their resources to hire an engineer, but balked when they found this would cost hundreds of dollars an hour – far more than a month's welfare.

Sullivan then contacted the industry's provincial 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, and it was done!" 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 bent-to-shape cutlery that he could manipulate, or a knotted rope that allowed 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.

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," said Cermak.

"Volunteering with Tetra is very interesting. It helps people to resume the life they had before their accident, or some disease, or else to help people to be involved in a sport, and so on."

Looking back over the quarter-century growth of Tetra, Sullivan takes credit for nothing more than bringing these compassionate, highly skilled volunteers together with people that have a need for help.

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



# **GIZM®**AWARDS

### Lifetime Achievement Awards

LIFETIME ACHIEVEMENT
AWARDS ARE PRESENTED TO
TETRA VOLUNTEERS WHO HAVE
CONTRIBUTED CONSISTENTLY
IN AN EXTRAORDINARY
WAY TO THE CREATION OF
ASSISTIVE DEVICES FOR PEOPLE
WITH DISABILITIES OVER AN
EXTENDED PERIOD OF TIME.

This year, we are recognizing three Vancouver Chapter volunteers for their outstanding contributions:







ROY HAMAGUCHI,



SAWWASSEN

IN 2010, WE PRESENTED OUR FIRST LIFETIME ACHIEVEMENT AWARDS TO VOLUNTEERS PAUL CERMAK, VANCOUVER, AND HARRY HARDY, BURNABY.



# TOOLS FOR TYKES AWARD

Given to the volunteer for the design and construction of a device that most assists a child or youth with their development and growth.

**DEVICE:** Modified child's recorder **VOLUNTEER:** Gregg Harris, Burnaby



MUSIC THERAPY: JORDAN ULMER'S MODIFIED RECORDER MEANS INCLUSION.

Jordan Ulmer, 11, who is unable to use his left hand, wanted to be like any other student in his school music class.

The Tetra modification allows him to reach all the notes on the recorder and take part with fellow students.

## JORDAN'S FATHER, JOHN, EXPLAINS:

The project allows him to play a recorder with one hand. There is a neck brace that makes it more comfortable to hold, and a rod that links the keys a bit like the keys on a saxophone.

The biggest thing about this project is to make Jordan feel like he's still part of the music class, along with his friends at school. He had surgery for a brain tumor, and at one point the whole left side of his body was paralyzed. He's come back from that. He was four when the surgery happened. It was right at the end of pre-school, before kindergarten.

He goes to a mainstream school and tries to do what he can. That's who he is. He's a fighter. It's an ongoing battle. Next he has to go through a 58-week chemotherapy program and then all this will be behind him.

Jordan is incredibly brave, and we're trying to make things as normal as possible for him.

Music has been a therapy for Jordan. He loves listening to music, singing and making music. Getting this recorder was a big thing for him. He brought it home to show me right away. Music has helped Jordan through a lot of difficult situations.

#### QUALITY OF LIFE AWARD

The solution that most dramatically improves the independence or integration of an individual within their community.

**DEVICE:** Foot exerciser

**VOLUNTEER:** David Graham, Burnaby



PAIN BARRIER: CASPAR RYAN DEALING WITH IOINT PAIN

Specialized equipment allows Caspar Ryan, 28, of Surrey to deal with inflexible joints caused by his body not fully accepting a life-saving childhood bone marrow transplant.

His foot-exerciser device reduces muscle pain and prevents formation of pressure sores.

#### **CASPAR EXPLAINS:**

My disability is joint contractures, caused from graft-versus-host disease, which means that the joints in my feet and my ankles are tightened and unable to move in a full range of motion.

The purpose of the device is to allow me to perform exercises on my joints to loosen them up and prevent pressure sores. The foot exerciser is a technical marvel as far as I'm concerned. It not only makes me healthier and my daily life easier, but it also enables me to be significantly more independent.

At the bottom of the device is a platform where my foot sits. It is padded with soft wool, because my feet are quite sore. The round dials at the top lower the padded pressure rolls onto the toe joints, straightening the toe for extended periods of time.

All in all, it gives a total stretch workout for my foot without me having to do much else than set the dials. The device is quite tall, so that I can maneuver it from stomach level. This is important because I am unable to reach down to my feet.

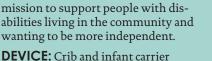
This device is a wonderful gift in my life. I cannot sufficiently praise Tetra enough.

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# SAM SULLIVAN AWARD

The solution that defines our overall mission to support people with disabilities living in the community and wanting to be more independent.

**VOLUNTEERS:** Ron Payne, North Vancouver; Alice Kruchten, Vancouver



# **INNOVATION AWARD**

Awarded for the design and construction of an ingenious approach to a unique problem, or a new, creative solution to a routine one.

**DEVICE:** Shooting table

**VOLUNTEER:** Ryan Jackson,

Kenora, ON



of people.

VOLUNTEERS: Brian Johnson, James Lin and Anthony Pang, all of Vancouver

COMMUNITY IMPACT AWARD

The solution that has the potential to

ultimately benefit the greatest number



SHOOTING AHEAD: DOUG BLESSIN WAS ON TARGET AT THE 2012 PARALYMPICS.



LIGHT WORK: FRIC MOI ENDYK DEMONSTRATING ROAD SAFETY.

A roll-under crib and a wheelchair-mounted

FAMILY TIME: NICOLE SALEH WITH BARY SIMON

IN THE ROLL-LINDER CRIB

baby carrier allow Nicole Saleh, 28, of Vancouver to pick up and carry her baby, Simon.

It gives her freedom and independence when caring for Simon, who turned one-year-old in early September.

A Tetra-designed table allowed sharp-shooter Doug Blessin, 38, of New Westminster to compete in the 2012 Paralympic Games.

Projects like this enable people like Doug to continue to participate in competitive sports following spinal cord injuries.

High output LED lights on his wheelchair make Eric Molendyk, 33, of Burnaby safer when crossing the road.

He requested the lights after being struck by a vehicle while using a crosswalk, and now feels safer after dusk.

#### **NICOLE EXPLAINS:**

The roll-under crib is quite a blessing. It has bi-fold doors. I open these and take Simon right out into my lap. I cannot lift him over the side of a regular crib.

I get a lot of back pain from lifting him if he is too low or too high - he probably weighs 25 pounds now. But now, with this Tetra crib, I can take him straight out of the crib.

It makes it a lot easier to look after Simon when my husband is out. As I have a hard time getting him up off the floor if I put him there to play, I take toys to the crib and play with Simon there – we use it as a play pen. I can change his diaper in there. It's really useful. I cannot force the door latch open, so I know it's safe.

The other project is a stroller to attach to the front of my wheelchair so I can move around with my boy - it's actually a bike seat.

I have a FreeWheel, which is an extra wheel you can clip to the front of your wheelchair so you can go over rough ground, which goes underneath the baby carrier to support the weight. Simon sits in front of me and I wheel around and can see him. He looks forward or around at me.

#### **DOUG EXPLAINS:**

I used to play wheelchair rugby, but now I'm getting older and don't want to punish my body

I'm not a hunter, but I did try target shooting - possibly four or five times - as a kid, and people said I shot very well. I'm okay with team sports, but I prefer ones in which you compete as an individual. Shooting seemed ideal, so I took up the sport in 2009. Before I knew it, I'd put in an order for an air rifle from Walther in Germany.

The rules of the sport say you can support both elbows on a table. I'm quadriplegic, and don't have the muscles in my trunk to hold a five-kilogram rifle

I had a shooting table built by someone at my shooting range, but it wasn't working well. I asked Tetra to create a table that was more stable, and also allowed me to set it up and make adjustments by myself. The shooting table is an unbelievable piece of equipment. Ryan Jackson did an exceptional job with it.

While I am directly responsible for results in a competition, none of that would be possible without the help of people like the Tetra Society, team-mates, and my family.



#### **ERIC EXPLAINS:**

I was hit by a car at a busy intersection in the block where I live, around 8 o'clock one morning in November 2008.

It was raining but the sun was up, and there were no visibility problems. I was wearing a poncho with a reflective strip and had reflective panels on my chair. I was using a crosswalk, but the problem is drivers are not looking for a wheelchair. You are a lot lower to the ground than other pedestrians. You need a way to catch their eye.

Now I have TetraLites attached under the armrests and across the back of my wheelchair. I always use them as soon as it gets dark so drivers can see me. When I'm crossing a road I always try to make eye contact with drivers, so I know they've seen me. Now I'm using the TetraLites I notice that they see me sooner. They are definitely more aware of me now.

I also use them when I'm waiting for a bus to make sure the drivers notice me – most bus drivers comment on how effective they are.

The lights do exactly what they are supposed to do, which is make me more visible to motorists and other road users. Everyone should have a set. They can save lives.

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