

gizmo

THE TETRA SOCIETY OF NORTH AMERICA: CUSTOM ASSISTIVE DEVICES

Tetra solutions allow first taste of freedom

FREDERICTON CHAPTER: Tetra volunteer Tom Sisk is starting his fourth ride-on electric car project, each giving a little independence to a child otherwise not able to get around without help.

The initial request to modify a child's vehicle came from occupational therapist Lise Bleau of Stan Cassidy Centre for Rehabilitation in Fredericton, NB. She saw a need for a little car for children visiting as outpatients.

Children who spend a lot of time in wheelchairs pushed by adults don't develop the notion that they can get around by themselves, explained Bleau. In addition, it can also be challenging to find appropriate recreational activities for pre-school children with limited mobility. Furthermore, these electric cars are a precursor to power wheelchairs.

But commercially available ride-on cars need work to make them suitable. The steering needs to be locked or else adapted for head-switch operation, the safety belt upgraded for children that can't hold themselves up and the gas pedal operation replaced by a chin-pressed on-off button.

Sisk, a volunteer with the Fredericton Tetra Chapter since January 2003, modified a little red and grey Jeep for the rehab centre two years ago. Dylan Boyd, who has cerebral palsy, was the first child to use it.

Dylan quickly got the hang of operating it, and took himself on a journey through the centre—taking the time to stop at every door along the hallway and look



INDEPENDENCE DAY: TOM SISK'S RIDE-ON JEEP WITH HEADREST STEERING (LEFT) AND DYLAN BOYD'S FIRST INDEPENDENT JOURNEY.



in the offices, and even drove it outside. It was his first independent journey.

"For him, it was freedom," said mom Kim. "The look on his face was like, 'Wow, I am doing this all by myself.' It was priceless. We were all in tears."

It was such a success that the family got Dylan—now eight years old—his

own car. This, a bright yellow two-seat Corvette, was modified by Sisk last year.

"I put in a mechanical steering system that comes out the back of the car so he could go outside with his parents or grandparents, who can steer him," said Sisk.

When Dylan first used the car in school, when he was in kindergarten, children in

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Tetra recognized by Christopher Reeve's foundation

A foundation formed by Superman actor Christopher Reeve has given the Tetra Society of North America a grant of nearly \$9,000 to fund projects for 50 clients.

While his screen persona made him famous around the world, Reeve will be remembered as an unstinting campaigner for improving the lives of people with physical disabilities. A quadriplegic following a 1995 riding accident, he later stated: "I have always been a crusader for causes I believe in. This time the cause found me."

His Christopher and Danas Reeve Foundation (CDRF), based in Short Hills, NJ, works to promote the notion

that paralysis can be cured. It also acts to improve the quality of life of people currently living with disabilities by making information, advocacy and funds available.

"The award is made on the enthusiastic recommendation of the CDRF Board's Quality of Life Committee," explained CEO Kathy Lewis. "The competition for funds was extremely fierce."

She wished Tetra—an independent non-profit that invents customized assistive devices for people with disabilities—success in its work to "enhance the lives of people living with paralysis."

* SEE TETRA'S US EXPANSION, PAGE 3.



DYLAN BOYD'S CORVETTE

Tetra Society: coast-to-coast innovation



▼ VOLUNTEER BILL RUDOLPH HANDING OVER A COMPLETED TETRA PROJECT, A FOUR-WHEEL QUAD-CYCLE FOR A YOUNG MAN WITH BALANCE PROBLEMS.

First Freedom, cont. from page 1

onlooking classes spontaneously applauded and cheered his journey along the hallway.

“He grins when he is in it,” said Dylan’s dad Jim. “It also works well because his little friends can get in it with him. He gets a charge out of that.”

Sisk’s third ride-on car project was a blue and yellow two-seat Jeep for another little boy who had tried the rehab centre Jeep. This model has the steering driven by an electric motor, operated by two switches in the driver’s headrest.

His next project, which came in mid-May, will be for the Fredericton-based Regional Paediatric Team, to be used by a variety of children like the original modified Jeep.

According to Bleau, two additional families have had copies of Sisk’s original project made themselves or through friends. She says the little car is still in use by children visiting the centre. “In a lot of cases it has been their first independent mobility.”

VANCOUVER CHAPTER: A Tetra volunteers have enabled an adventurer with a disability to tackle some of North America’s toughest kayaking.

In August 2005, Brad Jacobsen, who is quadriplegic, became the first person with a disability to hike Vancouver Island’s notorious West Coast Trail— thanks to a Tetra-designed TrailRider and a special climbing harness devised by Tetra volunteer Roy Hamaguchi. Jacobsen, of Vancouver, will return to the area to tackle the 47-km Juan de Fuca Marine Trail by kayak, June 18–26.

Jay Drew, another veteran Tetra volunteer, lengthened Jacobsen’s kayak cockpit by 30cm (12 inches), and devised a quick-release paddle-holder based on a rollerblade wrist guard. Both, explained Drew, allow Jacobsen to extract himself safely if he capsizes.

* REPORT ON THE ADVENTURE NEXT ISSUE.

HALIFAX CHAPTER: A young man with balance problems loved cycling but found he kept tipping his trike, until a Tetra volunteer fitted it with a fourth wheel, creating the Tetracycle.

For volunteer Bill Rudolph, of Herring Cove, NS—featured in the previous edition of Gizmo with another ingenious cycle modification—the ideal Tetra project is “anything with wheels.”

This one began with a dilapidated old trike, a “pile of rust,” necessitating a complete rebuild. He created a lower gear, to keep the client’s speed down, and re-spoked the existing 24-inch wheels. Next came the new front forks that allowed the extra wheel, and then a new paint job.

And the finishing touch? Emblazoning a professional logo across the front forks.

“I always try to make them look like new,” explained Rudolph. “The front has the letters Tetracycle on it. A gentleman in Dartmouth who makes signs for a living did it for me. I explained what Tetra was and he said ‘No problems.’”

“Little things like that make all the difference.”

Rudolph, 59, has been volunteering with Tetra for the past year since he retired, largely because he finds the projects challenging.

TORONTO CHAPTERS: The Tetra Society is announcing its new coordinator for central Toronto—Susan Coates.

This follows a slight reorganization of the way the Tetra Society serves Canada’s biggest city, breaking the territory down into more manageable regions, shared between two coordinators.

Long-serving Tetra Toronto coordinator Brian McLean now covers the north of the city. His chapter is named, logically enough, Toronto North, with a new post, Metro Toronto, created to cover the rest.

Coates, appointed Metro Toronto coordinator in mid-May, has extensive experience in the non-profit sector as a volunteer, employee and consultant, along with media and marketing experience.

She has previously worked with Canadian Paraplegic Association, Ontario and Easter Seals. “I had not had experience, until then, of working with people with physical disabilities,” said Coates. “It taught me to look at the person, not the chair.”

Asked why she wanted to work with Tetra, she replied that she was interested by Tetra’s unique role and wanted to make a positive difference to people’s lives.



Tetra Society
of North America

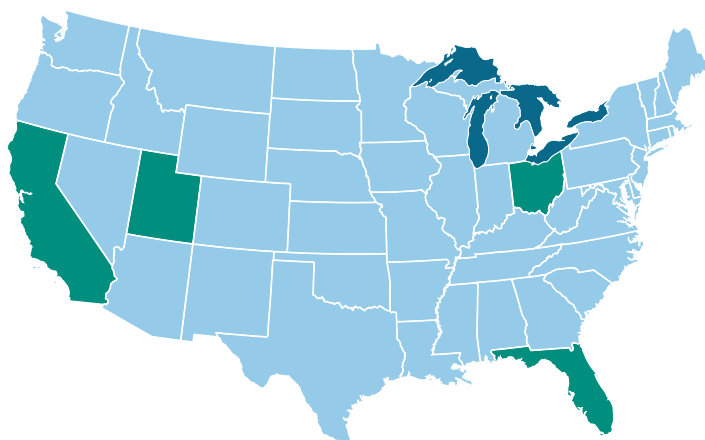
CELEBRATING OUR 20TH ANNIVERSARY

THE TETRA SOCIETY HAS CREATED A NEW ONE-PAGE BROCHURE OF THE PROCESSES BEHIND OUR INGENUOUS INVENTIONS. IF YOU ARE ABLE TO DISPLAY COPIES IN ANY PUBLIC AREA POTENTIAL CLIENTS ARE LIKELY TO ACCESS, PLEASE LET US KNOW. CONTACT MATTHEW WILD AT 604-688-6464 EXT. 110 (TOLL-FREE: 1-877-688-8762) OR BY EMAIL AT MATTHEW@DISABILITYFOUNDATION.ORG.





SIP 'N PUFF FISHING: THIS WHEELCHAIR FISHING DEVICE, INVENTED IN OHIO BY A TETRA VOLUNTEER, WOULD HAVE COST MORE THAN \$100,000 IF AVAILABLE COMMERCIALY.



Made in the USA: Tetra launches new chapters across the continental United States

US CHAPTERS: The Tetra Society of North America is expanding in the US with the announcement of four new chapters – in California, Utah, Ohio and Florida.

These new groups are in addition to the two current US chapters, also in California and Ohio.

The scope for Tetra in the US cannot be understated: a land of 301,650,000 people, with an estimated one-in-eight living with a disability – including an estimated 247,000 people with a spinal cord injury.

SAN DIEGO, CA Coordinator Peter Newman

Peter Newman worked as a mechanical engineer with a high-tech company for many years; the salary was attractive but it was not what he wanted to be doing. The realisation of his purpose in life came when he fabricated an adaptive crew-seat in a Challenged America sailboat.

He subsequently completed a Certificate in Rehabilitation Technology at San Diego State University's Interwork Institute, which included projects for people with disabilities.

"One that I'm particularly proud of was an interface for a remote control for an iPod, to be used through the joystick of a power chair," said Newman. "I was able to leave the iPod in his backpack and use speakers in his headrest, with him operating the unit through a special drive mode in his control joystick."

SALT LAKE CITY, UT Coordinator Kent Remund

Kent Remund and a team of six engineers from a company that makes unmanned vehicles for clients including NASA and the military, will be giving people with disabilities more control over their lives.

The crew from Autonomous Solutions, Inc. and Remund, who works at Utah Centre for Assistive Technology, has already completed an adaptive trike for a girl with cerebral palsy.

"Right now they are working on a little electric train set," explained Remund. It's for a 12-year-old boy who became quadriplegic through an automotive accident, so he can operate a train set through a sip n' puff [mouth-operated] controller.

"A pastor at a local church set up the train system, and asked for a solution so the boy could operate it himself," Redmund said.

CINCINNATI, OH Volunteer Bill Wood

Bill Wood is one of four technical volunteers in Cincinnati that have come together to form a Tetra chapter—but don't have a coordinator yet.

The group members have diverse backgrounds, but all are competent engineers who want to do something that helps others. Wood has been making assistive devices for years, including a page-turner that requires no physical contact, a self-feeder, a headstick-

or mouthstick-operated camera, a mouth-painting brush-changer and a wheelchair "sky arm" (foam tubing arm support).

Wood is drawn to these type of projects because of the huge demand he sees. "There are people that need these things. I don't need the money, I just want to do something that helps, somehow. I'm paying back."

The chapter needs a coordinator to come forward.

MIAMI, FL Coordinator Eric Dittmar

Eric Dittmar formerly volunteered in Toronto, ON, before a work relocation took him to Miami two years ago.

"I have talked to a couple people at work over the months about Tetra and they said it sounded extremely interesting 'if it was real,'" said Dittmar. "Our HR coordinator has that almost magical ability to talk to, flatter, and convince anyone of anything. The other man I spoke with is a project superintendent, a literal Goliath of a man who deals with tough subcontractors all day long to make sure they meet quality and budget and time needs."

"I believe I can put together a team."

Dittmar has conducted background research into resources in the area for people with disabilities, and is striving to make links with engineering businesses.



EXISTING US CHAPTERS

LOS ANGELES, CA

Dr. Sam Landsberger has most recently been working with Peter Newman, helping establish the new San Diego chapter. Dr. Landsberger is professor of mechanical engineering and kinesiology at California State University, Los Angeles, and also director of rehabilitation engineering

program at Orthopaedic Hospital/Luck Research Center, LA.

COLUMBUS, OH

Russ Weir started the Columbus chapter in 1996 (having started one in Sarnia, ON, in 1986) and has done some notable projects. His personal favourite was a wheelchair fishing device that allowed a high quad to

return to this leisure activity. "It had not been done before," said Weir. "A lot of engineers said it could not be done. I estimated the cost, if I had been billing for my hours, would be more than \$100,000. No-one would be able to pay that for a fishing pole, but I was able to give it to the client for free. That was a great moment."

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. Projects can relate to an individual's home, workplace, school or leisure location, but note that Tetra does not fit ramps (any construction carpenter can do that) and does not copy devices already on sale.

We first determine that 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 rehab consultants and other health specialists. Please contact us if you have a client 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. Please note that our mailing address recently changed, but email, telephone and fax contact details remain the same.

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 is comprised of volunteers with a wide range of technical skills (not all are 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. Contact head office for an information pack about the benefits of volunteering.

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Tetra Society of North America

CELEBRATING OUR 20TH 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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Tetra Society
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