

A New Suction Device is Born BY REBECCA JENSEN

Ean Price, a long-time resident of Kelowna, hasn't been able to swallow since he was 17 years old, due to complications from Muscular Dystrophy.

He required a personal attendant to operate a suction device—similar to a dentist's device, except it's portable—every 15-20 minutes to remove saliva from his mouth. He didn't communicate verbally as often as he wanted because of the buildup of saliva and the need for constant aid from his care givers.

"I stayed in the background and only put in my two cents every now and then," Ean commented, "but even then people had difficulty understanding my speech."

Eventually Ean's father, Tom Price, a retired helicopter engineer, started designing modifications that could be built to help Ean suction inde-

pendently. At first, Tom connected a suction machine to a floor switch that Ean could activate with the base of his wheelchair. Once activated, he would drive over to the suction straw, use it and then tap the switch again to turn the suction machine off. It was a good solution inside his house.

A new challenge was presented when Ean was in another room or outside. He would have to stop what he was doing to use the stationary suction machine. This was distracting when Ean was working, frustrating when he had guests, and constricting when he needed to leave his home.

With the help of a good friend, Ean developed the idea to attach the suction straw, the yankauer, to a retractable Cadillac antenna. The suction unit hung in a bag on the back of Ean's wheelchair. When he pressed a switch, the antenna would extend up to his mouth from the footplate of his wheelchair, bringing the yankauer with it.

"Unfortunately, this only lasted a couple of days because the antenna's motor wasn't designed to see that much action," Ean confessed. It also became increasingly difficult for Ean to operate any switch with his

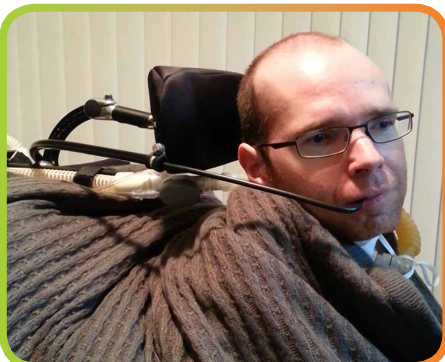
wheelchair's footplate because of the deteriorating nature of Muscular Dystrophy.

Ean wanted to design and build a more durable unit that would be discreet, portable, reliable and accessible. After a year's worth of dedicated effort, Ean and his father came up with their solution, the C9000 Assistive Device. The device

continued on next page

Inside

- 1 • A New Suction Device is Born by Rebecca Jensen
- 2 • Meet Lily Cheung
- 3 • Summer Students Learning on the Job
- 4 • Farewell to Good Friends by Simon Cox
- 5 • BCITS has a New Logo
- 6 • Help Us Fulfill Our Vision
- 6 • EATI Helps Artist Create
- 7 • Breathe Easier in an Air Quality Conscious Environment by Lily Cheung
- 8 • Voyage à Montréal by Miranda Whiteley



A New Suction Device, continued from p. 1

attaches to the back of a wheelchair and automatically extends and retracts a suction or sip-and-puff tube with the push of a button. "There isn't anything like it on the market," Ean proudly stated. "The freedom it provides me to suction anywhere and not need to bother someone else gives me a huge, huge feeling of independence that I wouldn't otherwise have."

The device lets him suction with little to no disruption to those around him and minimizes interruptions in his activities. After six months of using the C9000, Ean knew he had to share the technology with the world.

The biggest challenge Ean needs to overcome before marketing the device is the C9000's physical size. Currently, the C9000 prototype and suction machine take up almost half of the available space on the back of a wheelchair. Ean hopes to resolve this designing challenge with the help of local engineering students.

Once the size is reduced, Ean will be ready to share his creation, and the independence it brings, with the world. He's excited that some established wheelchair production companies are already showing interest.

Go to <http://www.C9000.ca> to join the waiting list to purchase the C9000 Assistive Device. ●

Meet Lily Cheung

Hello! My name is Lily and I'm the new Respiratory Therapist at PROP. I've been practicing as a Registered Respiratory Therapist since 2006. In the past 8 years, I've had the privilege of working with so many great people from Victoria to Vancouver, all the way to Riyadh in Saudi Arabia.

I'm an enthusiastic advocate for excellence in respiratory care and have been lucky enough to practice in different parts of the world. In the last year, I've had the opportunity to represent Respiratory Therapists Without Borders (RTWB), a grassroots movement to mobilize RTs internationally to advocate for improved respiratory care in countries where respiratory therapists do not exist. Check out www.RTWB.ca for more information or to get involved.

A lot of people are interested in my experience in Saudi Arabia. It was an incredible cultural experience. I was fortunate enough to work with a number of the royal family and can you believe that they have gold trim and marble finishes in their private intensive care unit? During my time in the royal ICU, I often thought I was in a hotel.

My most recent and most passionate endeavour was travelling to Peru with Thompson Rivers University. We participated in a smorgasboard of respiratory care advocacy. We held two conferences, one in Lima and the other in Ica. We lectured and held workshops for physicians, physiotherapists and students about ventilation, spirometry and respiratory medication delivery systems. We also did mission work in a smaller community hospital where we



I'm an enthusiastic advocate for excellence in respiratory care and have been lucky enough to practice in different parts of the world.

performed diagnostics and provided education on asthma and COPD patients. I hope to return to Peru next year to share more knowledge and develop the relationships we have initiated in partner hospitals.

Lastly, I want to return to something a little more universal....food and movies. My favourite fruit are grapes and figs. You might find me scoping out the local neighbourhood, scavenging for blackberries or better yet figs overhanging fences. I enjoy independent and foreign cinema. Some of my favourite movies include *Amelie*, *Whale Rider*, and *Rust and Bone*. So that's me in a nutshell.

I'm so pleased to be welcomed to such an incredible team at BCITS. I look forward to the new challenges and opportunities I will encounter in my new position. I look forward to meeting some of you in the community and sharing stories about your journeys. ●

Summer Students Learning on the Job

BY JEFF SHINOKI Let me start off by saying I could not have asked for a better practicum experience—and I am not just saying this in hopes of getting a good reference from my supervisors (I was already promised one).

But in all seriousness, I believe BCITS is a top-notch program in which all the employees and employers have the same goal—to ensure clients have the proper respiratory and assistive equipment they require. This goal was apparent in how everyone at BCITS approached their day-to-day duties with care and diligence.



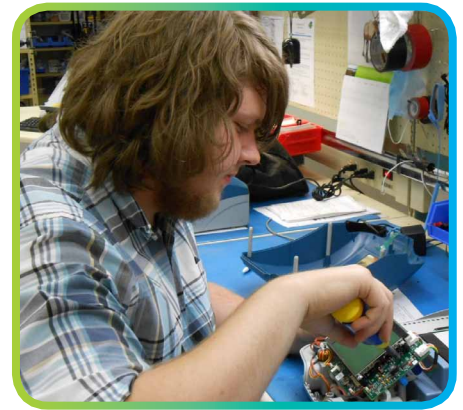
I believe that repairing and troubleshooting the various BCITS devices has improved my problem-solving skills. I had hands-on experience on a range of different ventilators and assistive devices, many of which had their own unique problems. One specific repair comes to mind. Now, I won't mention the brand of ventilator because I don't want to upset anyone, but let me just say this particular ventilator seemed purposely designed to make maintenance and repair difficult. And this was not the only issue I came across dealing with this ventilator. As I was fiddling

through the cluster of wires and tubes, I came across a component which I thought may have been the root cause of the problem. To my dismay, when I tried to remove the component, it broke off. To make things worse, I then realized the component had nothing to do with the initial problem. Now, instead of having one problem, I had two. I decided the logical thing to do was to first fix the mistake I had made by replacing the broken piece and then continue on with the initial repair. No problem, I thought. I took the broken piece to a variety of electronic stores only to find the piece was not sold anywhere and it was going to be harder to find than I initially expected. I then tried my luck looking online and through catalogues. After a few failed attempts, I finally came across what I was looking for.

In the end, I fixed my mistake as well as the initial problem. The whole ordeal took about a week, but there was a strong sense of satisfaction and relief when everything was repaired and good to go.

One of the most rewarding feelings was hearing how the clients were benefitting from the services that BCITS provides and hearing phrases like, "I didn't know something like that existed!" or "This is going to make things much easier."

Being able to help people was one of the main reasons I decided to join the Biomed program and my time at BCITS has shown me I made the right choice when choosing this career path.



BY SPENCER BUSTIN When I first arrived at BCITS, I was both nervous and excited for my first real experience in the Biomed world. My nerves quickly dissipated as I was welcomed into a wonderful group of people that soon became a second family to me.

The Biomedics were great mentors and they ensured I was constantly learning, even if it required a great deal of patience on their part. They were always helpful and never hesitated to answer the silly questions I asked or to surrender their computers without a great deal of harassment from me.

With the help of the BCITS team, I gained lots of valuable knowledge (mostly the importance of label covers and double sided tape) from a group of professionals. I have no doubt that the knowledge and experience I gained from my short time here will be a great help to my next year of schooling, as well as my future career in the Biomedical engineering field. ●

balance

BALANCE is published three times a year by the BC Association for Individualized Technology and Supports for People with Disabilities (BCITS).

Content Rebecca Jensen, Simon Cox

BALANCE Coordinator Seka Jovanovic

Editor | Designer Ann Vrlak

Publication Coordination

BC Coalition of People with Disabilities

BCITS does not research, endorse or guarantee any of the products or services within the magazine. We strongly recommend investigating products and companies before purchasing or using them.

We are pleased to have content from BALANCE reprinted in other publications. Contact us with your request and please cite BCITS, BALANCE and the edition date when reprinting.

BC Association for Individualized Technology and Supports for People with Disabilities is the home of Technology for Independent Living (TIL) and the Provincial Respiratory Outreach Program (PROP).

Mailing Address

#103-366 E. Kent Ave South,
Vancouver, BC V5X 4N6

TIL Phone 604-326-0175

PROP Phone 1-866-326-1245

Fax 604-326-0176

Email info@bcits.org

Web site www.bcits.org

TIL is funded by the Province of British Columbia Ministry of Health and Direct Access to Gaming. PROP is funded by the Province of British Columbia Ministry of Health through Vancouver Coastal Health.

Publications Mail Agreement No.
41682526

Farewell to Good Friends BY SIMON COX



If we were to set milestones in our lives for important events or changes, one could reflect on the people that

were influential in our lives. For me and all of the staff at BCITS, we acknowledge the hole that will be left as both Kirsty Dickinson and Gillian Harney "gear up" for their retirement.

Kirsty Dickinson has been a colleague of mine for over 20 years. She first joined us on the TIL program at the Kinsmen Foundation when we needed someone who could organize the workload of the Biomedical Engineering Technologists. The result was more on the side of miracle work than just efficient and clear processes.

Kirsty continued on with us heading numerous portfolios and projects, always with a precise outcome in mind. Although we love her dearly for her abilities, she was not someone you wanted to argue with when it came down to "how".

Kirsty's focus was to always assist clients in receiving the services they needed in a most respectful way. I attribute most of the development and the caretaking of the Provincial Respiratory Outreach (PROP) services to her.

She is a wonderful human being and deserves a rest in whatever form that may be. Good luck to you, Kirsty. You will always be a part of us.

I met Gillian Harney when we needed to develop the respiratory

therapy department to a newly defined community respiratory outreach program (PROP) in 2001. Many of the clients on our Technology for Independent Living Program (TIL) lived their lives with the support of electromechanical ventilators and they asked us to become the organization that housed this important program.

Gillian had vast experience in the realm of respiratory therapy and ventilator support. Her knowledge base was only surpassed by her ability to work so effectively with clients. She is a real "people person" and was able to make clients feel very comfortable with their machines. Gillian possesses a terrific sense of humour and loves life. We call her "the cruise director" as she has been on more cruises than Christopher Columbus. All the best to you Gillian!

It is difficult to not be emotional when people move on who have been a large part of our lives. In a working situation, sometimes we see more of our colleagues than our own family. But they do tend to be part of our family and we will miss them always



BY KIRSTY DICKINSON

It has been a great pleasure and an honour to be a part of BCITS and to work with all of you over the last

17 years, but it is time to say good bye. I have really enjoyed "meeting" all of you. I feel like I know you even though I haven't had the opportuni-

ty to meet face-to-face with many of you. I have moved to Okanagan Falls where my two sons and their wives live. I am starting a new chapter of my life as a vineyard worker and cellar hand.

My husband and I are in partnership with one of my sons and his wife in the wine business. We have a winery called Synchromesh wines here in Okanagan Falls. When I'm not busy in the wine business, I will be spending time with my daughter, her husband and 3 grandchildren who live near Seattle.

You have taught me a great deal over the years and although I will miss BCITS I am looking forward to my next adventure. Thank you so much for the opportunity to share a journey with you.



BY GILLIAN HARNEY I recently retired from BCITS and I would like to express my thoughts about what it has been like to be em-

ployed by this organization.

Working with the incredible group of people at BCITS over the years has

WHEELCHAIR VAN RENTALS



WWW.BCWHEELCHAIRVANS.COM

been an extremely enjoyable experience.

They are all so committed to making sure that our clients have the best possible service that can be provided, and they all go that extra mile to make sure it happens.

Our clients have been a constant joy for me to serve. In the face of adversity, they maintain a smile and a good word for all that they meet. This has taught me a lot through the years.

I can truthfully say that BCITS is the best place that I have worked in my entire career. I will miss the clients, my co-workers, and the ever-changing and challenging environment here.

I wish you all a fond farewell and a thank you for the privilege of getting to know you. ●



Please keep in touch.

We love to hear your stories and your ideas.

Email us at
info@bcits.org.

BCITS technology for living

We've been thinking about updating our logo and tagline—and now we've done it! We brainstormed on the clearest way to describe what we do and decided that **"technology for living"** does it best.

In the new logo:

- the **"c"** represents the wireless waves of our Environmental Control Systems
- the **"o"** represents all the gizmos and gadgets we find/design for clients

- the **"n"** is the in-home service and technology we provide
- and, most important, the person icon with "BCITS" puts you front and centre, as well as our commitment to personalized service to our clients.

EATI Helps Artist Create



Marney Smithies, from Delta BC, has been creating art since 2007. She began by rolling around

her neighbourhood taking photographs of flowers and then painting them with watercolours which is her preferred medium. She encountered many barriers during this process because the wheelchair she was using was old and lacked the support she needed to reduce nerve pain.

With the help of the Equipment and Assistive Technology Initiative (EATI), Marney received a manual wheelchair with proper seating that has enabled her to make strides towards her goal of becoming a better artist. She has had her art work displayed at various libraries, she participates in an art group that meets regularly to paint together, and she was the artist in residence at the Newton Cultural Centre.

Marney has recently become interested in wood working and the fully-accessible workshop that Tetra opened in 2010 has allowed her to create end tables, frames for her paintings, carvings, and even carving knife handles. She is also exploring other media for her artwork, such as acrylics and oil painting. With a new manual wheelchair and proper seating, Marney's nerve pain is diminished enough that she can finally pursue her goals with energy.

Check out Marney's art at <http://fineartamerica.com/profiles/1-marney-smithies.html> and <http://www.marneysartstudio.com/>. ●

Help Us Fulfill Our Vision

BCITS, proud home of PROP and TIL, is a registered non-profit and charitable organization. The funds to operate these programs come from the Ministry of Health, through the Vancouver Coastal Health region. We are very grateful for this generous support.

However, this funding does not cover the costs to provide equipment to TIL clients. For example, a special telephone for a person with a high level disability can cost as much as \$1000 and an automatic door opener can cost \$3000.

We provide many devices like these to adults—at no cost—to fulfill our vision of people living in the community as independently as possible.

You can help us continue this work through your donation. Any contribution large or small will be gratefully accepted. **100% of your donation will go toward equipment and assistive devices.**

Thank you, Simon Cox, BCITS Executive Director
Charitable Registration Number 807477070RR0001



Yes, I would like to support TIL's equipment program.

- ☐ I enclose a cheque for \$ _____.
- ☐ I will make a donation by credit card through CanadaHelps.org. [Donate in minutes by clicking on the CanadaHelps button on our home page at www.bcits.org.]
- ☐ I would like to donate directly by VISA. I will call Clara Chalifour at 604-326-0175.

Please be sure to fill in all your contact details, so we can send your tax receipt (for donations of \$10 or more).

NAME

ADDRESS

CITY & PROVINCE

POSTAL CODE

PHONE

EMAIL

Please return this form to: BCITS, #103-366 E. Kent Ave S., Vancouver, BC V5X 4N6

Breathe Easier in an Air Quality Conscious Environment

BY LILY CHEUNG

For most of us, checking the weather might come a little more naturally than checking the daily air quality. However, we face all sorts of air pollutants on a daily basis.

These pollutants are released in our neighbourhoods, school yards and work places, and deposit themselves directly into our lungs. Health effects from air pollution can present simply as sneezing or coughing, but can lead to chronic debilitating diseases that affect our heart and lungs. In 2008, a study conducted by the Canadian Medical Association reported that air pollution was responsible for:

- 306 acute premature deaths;
- 1,158 hospital admissions;
- 8,763 emergency department visits;
- 2,526,900 minor illnesses; and
- 62,112 doctor's office visits.

Particulate matter and ground-level ozone are the primary culprits in air pollutants. BC communities up North and in the Interior suffer largely due to particulate matter pollution from industrial and domestic activities—most often wood smoke. Particulate matter consists of tiny particles suspended in the air that can easily be breathed into the lungs. These particles become chronic irritants if exposed over long periods of time.

In the Lower Mainland, ground-level ozone becomes the primary source of air pollution from transportation sources. Ground-level ozone is a colourless and highly irritating gas,

and a primary component of smog. By reducing energy use, we can also reduce the daily amount of air pollutants we expose ourselves to. How can we protect the air we breathe and make our outdoor and indoor activities safe and sustainable? Here are some ideas.

- Drive less! Join a car sharing cooperative. Use public transit or join a carpool. How about riding your bike or walking? If we leave our car at home just once a week, the reduction in emissions will be considerable.
- Don't idle! If all Canadians reduced car idling for just five minutes a day, we could prevent the release of more than two million tons of carbon into the atmosphere—equivalent to taking 380,000 cars off the road!
- Slow down when you drive. You'll use less gas and produce less pollution.
- Use radial tires to reduce tire drag and save gas, and use the manufacturer's recommended pressure.
- The home is the third largest energy user in the country, after industry and transportation. An energy-efficient house can trap passive solar energy and minimize air leaks which can reduce annual energy consumption by over half that of a conventional home.
- Set your thermostat no higher than 20°C during the day and turn it down when you're out or asleep.
- Turn your water heater down to 50°C and use cold water whenever possible.
- Avoid garden tools that run on gasoline.
- Paint with water-based (latex) paint, rather than oil-based.
- Avoid purchasing aerosol cans with paint, deodorant and hair spray.
- Turn off the lights when you don't need them. Use energy-efficient light bulbs.
- Conserve water: a leaky hot water tap can waste up to 13,000 litres of water a year.
- Hang clothes to dry instead of using a dryer. Wash your clothes in cold water. There are effective cold water detergents out there!
- Turn off your computer and television when they're not in use. Program your computer to power down into sleep mode when you're not using it. Did you know that screen savers don't save energy? They can prevent the sleep mode feature from working.
- Plant a tree or garden at home. Trees and plants absorb greenhouse gases such as carbon dioxide and convert it to oxygen. Trees are natural air filters that breakdown pollutants and reduce dust.
- Be an environmentally-friendly shopper. Buy products with minimal packaging that can be recycled. More packaging also means more solid waste, contributing to our landfills. Buy local products to reduce the travel time on your products.

All the tips above and more can be found at www.bcairquality.ca. Check it out and get more involved! ●



Yes, I Accept Your Invitation To Join BCITS

The BC Association for Individualized Technology and Supports for People with Disabilities (BCITS)
Home of Provincial Respiratory Outreach Program (PROP) & Technology for Independent Living (TIL)

Name: _____

Address: _____

City/Prov: _____ Postal Code: _____

Telephone: _____ Email: _____

Please Check One

☐ **Membership for registered BCITS clients**

Please mail completed form to BCITS
(the cost of postage constitutes your membership fee)

☐ **Non-client membership fee**

Please mail completed form along with
\$20.00 annual membership fee payable
to BCITS.

Please mail this form along with any applicable membership fees to BCITS - The Home Of PROP and TIL, #103-366 E. Kent Ave S., Vancouver, BC V5X 4N6

Voyage à Montréal

BY MIRANDA WHITELEY This year the Canadian Society of Respiratory Therapists (SCRT) Conference was held in beautiful Montreal, Quebec. Esther Khor and I arrived after midnight hungry, exhausted and a little weary of our cab driver! But we were eager to attend the first official meeting of the Respiratory Therapy Exchange Network.

This Network was created two years ago and it is comprised of Respiratory Therapists across the country, working specifically with long-term mechanical ventilation in a community setting. This was our first opportunity to meet our counterparts in person and to pick their brains over *un verre de vin rouge* and *poutine*.

The first thing we realized is that PROP is unique! No one else we met had the same type of program that we have here in BC. Other programs operate through out-patient respiratory clinics and some out of hospitals. Quebec is the only other province that serves the entire prov-

ince with equipment and services. Some programs only follow clients using bilevels, while others only follow clients using invasive ventilation. Some provinces supply an impressive fleet of equipment, but don't offer respiratory follow-up services or consistent education. Almost no one else has direct access to biomedical engineers to help with equipment and environmental controls.

And no other program was developed by the clients who use the services intimately. We were made keenly aware of what an amazing job you, our clients, did in developing the program and services provided by PROP and TIL. We are seen by the rest of the country as having one of the best programs available and we came away from the conference with many ideas on how to improve this already wonderful program even further. *Au Revoir!* ●

