MARCH 2017 | VOLUME 30 | ISSUE 1

THE StressPoint

FOR EXPERTS | BY EXPERTS

The Magic of Ferries

NATIONAL DOWN SYNDROME SOCIETY

WATER HAMMER:
DRIVING HOME UNDERSTANDING OF AN ELUSIVE TERM

HITTING THE NAIL ON THE HEAD

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ENGINEERING DESIGN & TESTING Corp.

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Engineering Design & Testing Corp. is an association of engineers dedicated to the study, interpretation and resolution of loss.

A Message from the President

Dear Friends,

What lies behind us and what lies before us are tiny matters compared to what lies within us.
~ Ralph Waldo Emerson

The present is ever at the crossroads between what has been and what is yet to be. With this edition of *The Stress Point*, we introduce a new cover layout as well as a different logo design. Yet both the magazine and engineering company behind it should be expected to remain true to core traits and values from many years past.

Still, there is an unmistakable intent to strive forward, onward, and upward for something even better. Two aspects of the above mentioned changes will suffice as illustrations.

First, note that under the name of the magazine we have inserted the phrase "For Experts: By Experts" to emphasize the complimentary peer-to-peer way that we see our work being done with our clients. Producing *The Stress Point* (now in its 30th year) is a way for us to contribute to our community by providing something useful for our clients. To that end, the articles you read here are intended to be informative and educational... in addition to being entertaining.

Second, by changing our logo, we intend to enhance the recognition and connection that our readers feel with our firm. For as peers working together in the realm of loss, a sense of connection is indispensable to our efforts to have a positive impact.

So, yes, we are at a crossroads. But as Emerson pointed out, it is the stuff on the inside that matters most.

Until next time,

Mark D. Russell

Mark D. Russell, Ph.D., P.E.
President and Chief Engineer

THE STRESSPOINT®

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From here to there, for a fare.

THE STRESSPOINT®

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FEATURE

IN THIS ISSUE

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FULCRUM

"Give me a fulcrum and a place on which to stand, and I will move the world."
—Archimedes, Greek Inventor and Mathematician

Hitting the Nail on the Head

Aircraft aluminum alloy is lighter than titanium and stronger than steel, and it is this material that makes the Estwing Al-Pro Hammer unique. The aluminum alloy makes up the body of the hammer. A PERMA-CAP™ head made of steel lessens the vibrations to allow maximum force. Plus, the claw has been shortened to allow extra leverage. Estwing states, "The Al-Pro delivers power in a lighter weight package, for the best performance in a hammer with our patented Shock Reduction Grip." For more information and purchasing options, visit *www.estwing.com*.

Image: Estwing ®

What on Earth? Space Putty!

The average putty from your childhood just got an upgrade. Made of iron-infused carbon, this putty is magnetic. The space putty still holds the ability to be a stress reliever and squishy fun, but it is also practical. Use this magnetic putty to keep grocery lists on the refrigerator. And for one final perk, it bounces! For more information and purchasing options, visit *www.tytan-products.myshopify.com*.

Images: Tytan Products ®

A Watch for "Watch This" Moments

Indestructible is a suitable adjective for the Victorinox Swiss Army I.N.O.X Watch. Described as being "engineered to endure a truly adventurous life," the watch can sustain a 33-foot drop, 2.5 hours in boiling water, frozen in ice, and getting run over by a 64-ton tank. However, this watch isn't just for those who seek thrill and adventure. It's polished design is stylistically appealing for every day wear. For more information and purchasing options, visit *www.swissarmy.com*.

Image: Swiss Army ®

Ten Little Digits

Image: Bosch ®

Humans don't always come with retractable fingers. The aptly named Bosch Reaxx Table Saw has Active Response Technology that detects whenever a wayward finger gets in the way of the blade. Once the blade detects skin, the saw immediately shuts down. The rapid response is designed to keep both your finger and the blade intact, and the saw can be reset in under a minute, saving time and appendages. Packed with features to enhance the cutting of the blade and ease of use, the Reaxx is available for purchase this June. For more information, visit *www.boschtools.com*.

Lessons From the Lab

By: David S. Williams, P.E., CFEI
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Understanding Water Hammer:
Driving Home Understanding of an Elusive Term

The term "water hammer" seems to suggest the use of water as a kind of hand tool. Although a water hammer is not necessarily used for driving nails, the name is appropriate.

When a liquid flows through a pipe it has energy. To be more specific, since the water is moving, it has "kinetic energy." The kinetic energy of a moving object (as in a volume of water) has to do with the mass and the velocity of the moving object. The kinetic energy of a moving object is calculated by multuplying half the mass and the velocity squared together. With respect to liquid flowing through a pipe, the important thing to remember is that the kinetic energy increases with the amount of liquid, and it increases a lot more with its velocity.

When taking a shower, you experience the energy of water as the water sprays onto you from the showerhead. If you place your hand over the showerhead, you can feel this energy being dissipated as a force on your hand. If you have ever heard the pipes rattle in the walls when you turn off the shower or when your washing machine stops filling, you have heard a "water hammer."

If the water going to the showerhead is quickly shut off, the energy of the flowing water must go somewhere. Bringing all this water quickly to a stop creates a force that is applied to the pipe, causing it to rattle in the wall. The pipe is often referred to as "banging around." Chances are your home has devices installed on the pipes as part of the plumbing system that absorb the energy transfer from the water. The effect of these devices is to reduce the forces on the pipes. In all cases, these devices increase the amount of time over which the water is slowed to a stop within the pipes.

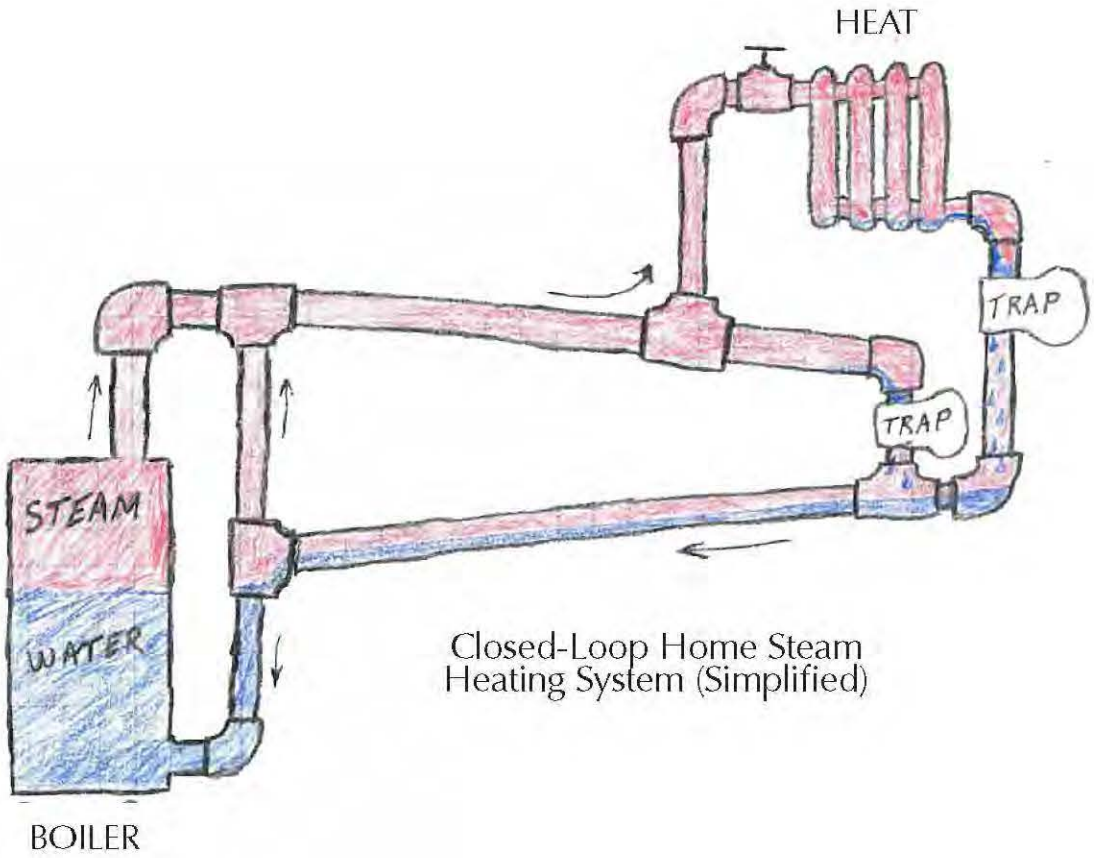
When you have energy in something and it must transfer to something else, time becomes the factor that matters most. If a hammer is swung at a large rubber ball, the energy of the hammer is transferred to the ball in about a second, the hammer stops, and then the ball transfers some of that energy back to the hammer, pushing it away. The ball doesn't break. Now let's consider that same hammer hitting a brick. The transfer of energy here happens over a tiny fraction of a second. A brick can withstand the weight of a tractor-trailer when the load is applied by rolling tires. But a child can shatter that same brick with a small hammer. What we have here is a simple but recognizable example of energy transfer at work, and the critical element is time. When a shower is turned off quickly, or the energy of the hammer is transferred to the brick in a tiny fraction of a second, the energy transferred has the ability to cause damage.

Consider now an industrial application or a home heating system that involves a boiler and circulating steam. A part of the system recirculation is piping that carries water that changes from steam into liquid water. This water is called "condensate." After the steam gives its heat away, it condenses to a liquid. Special devices called "traps" collect the condensate and pass it through pipes back to the boiler. Due to reasons beyond the scope of this article, most condensate pipes carry both liquid and steam. The other half of the piping system is filled with steam. But the steam is flowing a lot faster than the condensate. When a sudden change in flow happens, the condensate tends to slosh around in the piping, filling certain lengths of pipe and blocking the passage of steam. Unfortunately, liquids don't compress like a gas such as steam. When the steam is blocked, pressure builds behind the condensate, bunching it up and accelerating it to even higher speeds. This bunched-up, fast-flowing condensate is called a "slug."

A slug in a twenty-foot-long two-inch diameter pipe can travel fast enough to have energy approaching that of a bullet fired from a hunting rifle. When this slug strikes a point of resistance such as a valve or even an elbow in the pipeline, water hammer occurs. At the very least, you will hear it as the pipes bang around. It is easy to imagine the damage a water hammer like this can cause to large vessels, pipes, and other such equipment.

The best way to avoid water hammers in any piping system is to prevent sudden changes in flow. However, sudden changes in flow cannot always be eliminated. A piping designer should anticipate events that could result in a water hammer and design methods of increasing the time for energy transfer or reducing the effects by slowing everything down. For condensate return systems, an effective method is to increase the overall pressure in the system. Increasing the pressure causes the steam in the pipe to want to condense, which has the effect of eliminating steam in the line. Further downstream, where sudden changes in flow are less likely, the pressure can be relieved.

New technologies are being invented to slow down the process of turning the water on and off to your appliances so as to reduce water hammers. However, if your shower is one of those equipped with a push-off/pull-on valve, this valve is under your control. Should you push such a valve to shut off the water, take care and slow down—or one day you may find yourself wondering how a child with a hammer could have caused such a mess!



Closed-Loop Home Steam Heating System (Simplified)

The Magic of Ferries

By: David J. Shamrell, P.E.
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When it comes to crossing a body of water, options are limited. Bridges and tunnels are expensive to build, and their use is most advantageous in places where distances are small, the volume of people is high, and geological conditions accommodate their construction. Personal watercraft provide a partial solution, yet fall short of a need to transport large numbers of people, vehicles and even trains. Ferries, on the other hand, can transport all of these and more with relative ease.

Some ferries are designed for commuting, traveling small distances multiple times an hour. Others travel multi-day routes and offer cruise ship style amenities. To passengers, ferries offer a simple route from one shore to another. This illusion of simplicity is achieved by an impressive variety of watercraft and propulsion systems that come together to create reliable and effective means of water transportation.

Why Ferries?

To get to the other side…for the best price. In the days of the Ancient Greeks, the deceased relied on the mythological ferryman Charon to provide passage across the river Styx. Those who could not afford his price would be left to wander the shore of the living world.

In modern times and where other methods are cost-prohibitive, ferries offer transportation from place to place and to and from island and peninsula based communities. In addition to transporting goods or supplies to sustain an island population, ferries offer shorter and often less stressful ways of commuting to jobs. For instance, the Washington State Ferry System offers multiple routes into downtown Seattle during which passengers can choose between eating breakfast, reading a book, or even taking a nap. Compared to the alternative of 90 minutes in heavy traffic, there's no better way to commute.

The Washington State Ferry system services 20 ports and transports an annual 23 million passengers. The largest Washington State Ferry in service is a Jumbo Mark II class capable of holding 2499 passengers and 202 vehicles and is powered by four diesel-electric motors with a combined 16,000 horse power.

Another well known United States ferry system is the Staten Island Ferry System. Consisting of nine vessels, this system transports passengers from Staten Island to lower Manhattan moving an estimated 70,000 passengers a day. The largest ferry in this fleet can hold 4400 people and is powered by three diesel-electric motors with a combined 10,000 horse power. Of note, one of the large ferries is named the Spirit of America and had its keel built with steel from The World Trade Center Towers.

The Many Forms of Ferries

With commercial ferry services operating throughout the world, the types of watercraft used are as diverse as the conditions in which they operate. The more common types include catamaran, double ended, hydrofoil, and cruise ferries. Other types, including hovercraft, are less common but just as impressive.

Catamaran ferries utilize two separate and parallel hulls to reduce drag and improve stability. Medium-sized catamaran ferries can carry 400 passengers at speeds greater than 40 knots (46 mph), while larger catamaran ferries can carry over 800 passengers and 400 cars. These larger catamarans can travel at speeds greater than 35 knots (40 mph) and have grown in size over time. Capable of operating in a multitude of environments, this type of ferry can be found just about anywhere in the world. Some of the largest catamaran ferries make multiple trips a day between Dover, England and Boulogne, France.

Double ended ferries are unique in that they do not have a permanent bow (front) or stern (back). This feature allows them to travel in both directions with equal efficiency and move from one dock to the next without turning around. As a result, loading and unloading operations are simplified as cars do not have to be turned around once loaded. This ferry type is popular in locations where the distance between ports is small and the frequency of trips is high. All 24 of Washington State Ferry System's ferries are double ended ferries.

Hydrofoil ferries utilize underwater wings to elevate the ferry at high speeds. This reduces the ferry's drag—the force of the water pushing back on the ferry—allowing greater speeds with less power. As the size of ferries increases, the energy required to lift it out of the water increases to a point where hydrofoils are not cost effective. As a result, most hydrofoil ferries are small to medium sized passenger ferries such as Tokai Kisen's high-speed jet ferries connecting the islands south of Tokyo, Japan.

Cruise ferries are travel packages that can last multiple days. Instead of arranging a plane, train and/or car travel over the course of a trip, this ferry type offers passengers the convenience of taking along one's vehicle and a relaxing cruise as one leg of the journey. After parking the vehicle on the ship, a passenger checks into a cabin and enjoys cruise amenities. The majority of the world's cruise ferries operate in the Baltic Sea including popular routes such as Kiel, Germany to Göteborg, Sweden. Two people, with a compact car, staying in an upper-deck cabin can make this trip for a little over three hundred U.S. dollars.

Washington State Ferry

Hovercraft ferries were once referred to as the future of sea travel. This type of watercraft is surrounded at its base by a large rubber skirt. The ferry's engines power two sets of large fans. One set pushes air into the center of the skirt, elevating the metal hull of the ferry above the waves. The other set of fans propels the ferry. Multiple large hovercraft ferries were used until the year 2000 to cross the English Channel and could travel at speeds up to 60 knots (69 mph) while carrying 30 cars and 250 passengers. In addition, due to the hovercraft design, these ferries could travel on water and land, allowing them to cross long beaches and eliminating the need for ferry docks. Although their use has declined due to the noise they generate and the development of larger catamaran ferries, a select few hovercraft ferries still operate today.

Hovercraft Ferry

Propulsion and Steering, Minus the Pixie Dust

Similar to other marine vessels, a ferry's propulsion and steering depend on its intended application. In general, a precise means of positioning without the assistance of a tugboat is required. For smaller ferries, this is accomplished by a skilled pilot, while larger ferries require a more sophisticated means of control.

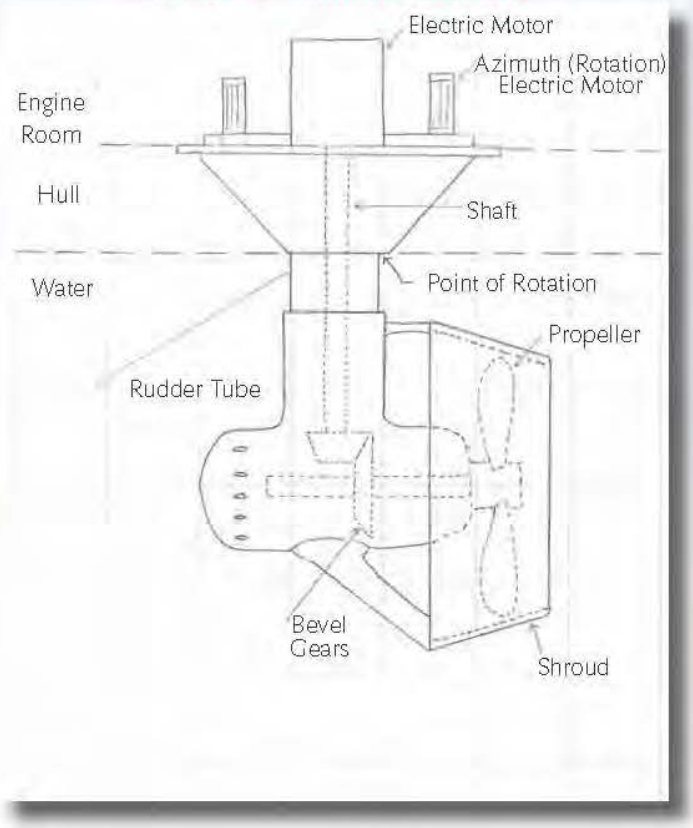
Regardless of size, the ferry's propulsion and steering starts with its fuel. The majority of ferries still utilize diesel. Depending on the size of the ferry, one or more diesel engines drive the engine's output shaft. This shaft rotation is delivered to the ferry's propulsion device in one of two distinct methods.

The more traditional method is known as direct-diesel propulsion. The engine's shaft is connected through a gearbox to a propeller shaft. The gearbox is used to reduce the output speed of the engine to an effective operating speed for a propeller.

The other method is known as diesel-electric propulsion. This type of propulsion does not include a direct connection between the engine and the propulsion device. Instead, each engine is connected to its own electrical generator. The electricity generated is supplied, through an electrical system, to one or more electric motors. Each propulsion device is connected to its own electric motor. Advantages exist for ferries with this type of propulsion system. First, this system allows for better utilization of space and balancing of engine room components. In other words, all of the heaviest drive system components no longer need to be located at the rear of the ferry, allowing for a more even loading of vehicles and cargo. Second, the electricity generated by each diesel can be used to power any or all of the ferry's propulsion devices, improving the reliability of the ferry. Third, since electric motors are more efficient throughout their entire load range, there are advantages of energy efficiency in the ferry's propulsion.

Variable Pitch Propeller

Electric Azimuth Thruster



On the receiving end of the rotation or electrical power created by direct-diesel or diesel-electric propulsion is the propulsion device. Two types of ferry propulsion devices are controllable-pitch propellers and Azimuth thrusters.

Controllable pitch propellers are similar in design to fixed propellers except for the upgraded ability to change the angle of the blades. This feature allows the propeller to adjust how much water it grabs with each revolution and, in some cases, reverse the water flow. This design improves the efficiency of the ferry's engines and can eliminate the need for reverse gearing. The angle of the blades is controlled through the use of hydraulic oil supplied from an engine room hydraulic system. Again, steering is accomplished through the use of a rudder.

An Azimuth thruster is a self-contained propulsion device, which means designers can place it in the most beneficial location on the bottom of the ferry. The term "azimuth" refers to the fact that the thruster is capable of being rotated a full 360°, eliminating the need for a rudder to steer the ferry. Each azimuth thruster is referred to as a "pod." The pod is installed such that one part is in the engine room and the other part is under water. The underwater part of the pod includes a special propeller surrounded by an elongated ring known as a shroud. This assembly is suspended below the ferry by a rudder tube. Regardless of the driving force, the rotation is translated down a shaft located inside the rudder tube. At the bottom, gears translate this shaft's rotation into the horizontal rotation of the propeller.

Passage for a Fee

Ferries have come to connect communities and countries separated by waterways. Whether for business or pleasure, the sheer magnitude of what is transported using ferries is impressive. The shore-to-shore challenges of unique operating environments, as well as the volume of people and things to move, influences the design of ferry watercraft and their propulsion systems. The perceived simplicity in their operation is almost magical. The passenger on deck enjoying the trip hardly realizes the technology involved.

National Down Syndrome Society

Special thanks to the National Down Syndrome Society for contributing to this article

Good ideas often have humble beginnings—maybe written on a napkin, or during the middle of the night, or perhaps while walking the dog. The idea for the National Down Syndrome Society started at a kitchen table.

In 1978, Betsy and Barton Goodwin, upon learning that their newborn, Carson, had Down syndrome, soon discovered that support and resources for parents of a child with Down syndrome were limited. Betsy, together with her good friend, Arden Moulton, worked to establish National Down Syndrome Society (NDSS).

For almost four decades since achieving nonprofit status, NDSS has endeavored to provide state-of-the-art, comprehensive programming to all individuals with Down syndrome and their families. Through the years, NDSS has also supported scientific research in the areas of cognition, behavior, and links between Down syndrome and Alzheimer's disease, obesity, and leukemia. When it comes to quality of life and human rights, a variety of awareness programs throughout NDSS history have encouraged inclusion, acceptance, education, and employment of people living with Down syndrome.

A legacy of achieving goals only motivates NDSS to take on new ones. Among the many programs and services available today, the standouts include:

- **National Advocacy & Policy Center**
  This center advocates in both Washington, D.C. and in state capitals across the United States on legislative issues that span the life of an individual with Down syndrome.

- **National Buddy Walk® Program**
  With coast-to-coast events, this fundraising program works double-time as the most recognized public awareness event for people with Down syndrome.

- **Community Outreach and Resources**
  Information is empowering. NDSS provides current information on Down syndrome in over 140 different languages with distribution around the world.

- **Public Awareness Initiatives**
  People with Down syndrome deserve to be treated with dignity and respect. With new campaigns like the #DSWORKS® campaign, this attitude extends to the workplace. #DSWORKS is the first-ever employment campaign for people with Down syndrome to inform everyone, including employers from Main Street to Wall Street, that people with Down syndrome are ready, willing, and able to work.

What Is Down Syndrome?

Down syndrome occurs when an individual has a full or partial extra copy of chromosome 21. This additional genetic material alters the course of development, causing the characteristics associated with Down syndrome. Down syndrome occurs in people of all races and economic level. One in every 700 babies born in the United States is born with Down syndrome, although the incidence increases with the age of the mother.

There are physical traits associated with Down syndrome—low muscle tone, small stature, an upward slant to the eye, and a single deep crease across the center of the palm. However, given that every person is unique, a person with Down syndrome may exhibit all, some, or none of these traits, or exhibit them at varying degrees. People with Down syndrome have an increased risk for certain medical conditions such as congenital heart defects, respiratory and hearing problems, Alzheimer's disease, childhood leukemia, and thyroid conditions. Thanks to research, many of these conditions are treatable and allow people with Down syndrome to lead healthy lives, improving life expectancy from 25 (in 1983) to 60 (today).

All people with Down syndrome experience some level of cognitive delays, but with early intervention, quality educational programs, and a supportive network, individual strengths and talents can be identified to enable people with Down syndrome to lead fulfilling lives.

Education and Research

NDSS provides a number of resources that coincide with the life journeys of people with Down syndrome. There are many: new parents of a baby with Down syndrome, school year, transition years, aging needs. Publications, conferences, videos, webinars, helplines, and local support networks provide information and guidance. When it comes to education, there are laws and educational plans to support the success of students with Down syndrome both in the classroom and in social situations. Also, a number of individuals with Down syndrome are going on to college or other postsecondary educational opportunities. NDSS offers educational grants so that adults with Down syndrome can continue to pursue their aspirations in higher education.

Decades of research have advanced the scientific understanding of Down syndrome and have contributed to diagnostic testing, development issues, early intervention measures, and a variety of therapies. Parents consulting NDSS resources come away well informed of traditional and alternative methods, and best next steps.

Nathan (front), Jonathan, Phyllis, and Amanda Moore

My nephew Nathan is the family "rooster," up every day at 6 a.m., happy and vocal. He was born with Down syndrome and a heart defect requiring surgery at six months. He later developed Autism Spectrum Disorder and Celiac disease. But don't tell Nathan. He doesn't care (except for the gluten products).

Nathan is vocal, but has difficulty with language. He augments his communication with some modified American Sign Language (ASL), which he learned from his parents, Jonathan and Phyllis (my sister). Among his favorite signs are: birthday, ice cream, chicken (nuggets), MaMa (grandma), and "I Love You." He attends special classes at the local school, where almost everyone knows Nathan. He may even be better known than his older sister, Amanda, who has stared in several school plays.

Nathan's Navigators is his team that has participated in the Down Syndrome Association of Central Ohio (DSACO) "Buddy Walk" for many years, now helping to raise funds for the local chapter. Nathan has benefited from programs sponsored or put on by DSACO including parenting workshops, skills workshops, and fun/fitness activities.

Nathan has many challenges, but he also has family, and the Down's communities help to get along.

- Ken Marshall, Cleveland District Office
Engineering Design & Testing Corp.

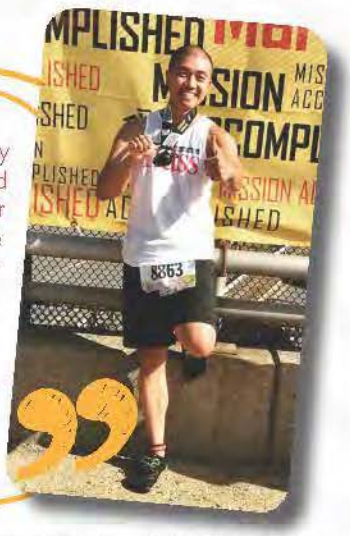
The ABLE Act

As is the case with many non-profit organizations and programs, many NDSS initiatives cross over to benefit others facing similar challenges. One example of a NDSS effort that has achieved this level of reach is the Stephen Beck Jr. *Achieving a Better Life Experience (ABLE) Act*. Signed in 2014, this law is regarded as the most significant disability law since the *Americans with Disabilities Act (ADA)*. Not surprisingly, the concept of the ABLE Act was also born around a kitchen table. Almost a decade ago, five dedicated parents from the Down syndrome community, realizing continuing inequities, chose to advocate not just for their own sons and daughters but for the hopes, dreams and aspirations of all people with disabilities.

The ABLE Act amends the Internal Revenue Service Code of 1986 to create tax-free savings accounts for individuals with disabilities. The funds in the ABLE account do not count toward the $2,000 cap on assets that is required to remain eligible for critical government supports. An ABLE account may fund a variety of essential expenses for individuals with disabilities including medical and dental care, education, community based supports, employment training, assistive technology, housing, and transportation. Plus, the federal ABLE Act authorizes the states to develop their own ABLE programs. Many states have moved to pass ABLE laws and are in various stages of developing their ABLE programs. Nationwide ABLE programs have officially launched in Alaska, Michigan, Nebraska, Ohio, Oregon, Rhode Island, Tennessee, and Virginia, while Florida and Kentucky have launched in-state ABLE programs.

Bobby Tran is part of the 2017 National Down Syndrome Society Athlete Ambassador Program! Bobby began running for people with disabilities in 2010. When his good friends Brian and Val became proud parents to a daughter with Down syndrome the following year, Bobby was eager to help Sophia and her parents. "Seeing the joy she brought while hearing the challenges that she may encounter is what drove me to want to do something, anything, to help her and those with Down syndrome live full, fair and better lives," Bobby said. He ran his second Marine Corps Marathon in Sophia's honor.

Bobby runs to raise awareness and funds for people with Down syndrome. He hopes that Sophia "will be accepted as an equal (as everyone should be) so that she may experience a complete and fruitful life full of happiness while being a valued member of society." Bobby has continued to meet his fundraising goal and raise awareness while running. Welcome to #TeamNDSS Bobby!



The Buddy Walk

Despite what the name implies, anyone can walk even if they don't have a Buddy to walk with. The event concept took shape in 1995 with just a few walks, and has grown to over 250 locations in just over 10 years. Funds raised support local and national awareness to benefit those with Down syndrome. The Buddy Walk usually coincides with National Down Syndrome Awareness month in October. There is also a skills challenge for art enthusiasts. Designers can submit artwork to a national contest for the official Buddy Walk T-shirt.

Looking Ahead

Despite a history of success, NDSS also believes that people with Down syndrome still face a complex system that limits potential, along with discriminatory practices in education, employment and in the community. Plus, outdated stereotypes perpetuate a history of low expectations.

2017 sees NDSS revisiting and updating its strategic plans for the future, beginning with an updated mission to make NDSS "the leading human rights organization for all individuals with Down syndrome." With human rights being the rights believed to belong justifiably to every person, all NDSS programs and services will be evermore focused on contributing to three key long-term goals:

1. Increase capacity and grow revenue to provide state-of-the-art, comprehensive and critical NDSS programs to the Down syndrome community by investing more resources into programs.
2. Ensure NDSS, as an organization, has long-term sustainability for decades to come.
3. Expand the NDSS footprint across the entire Down syndrome community to encourage more individuals, supporters and advocates to "speak up, speak out" and help make the world a better place for people with Down syndrome.

How can you help? Here's a few good ideas!

- Become more aware! Visit the National Down Syndrome Society's website at www.ndss.org.
- Go to work! Find ways to create opportunities for people with Down syndrome to work in a competitive and meaningful workplace setting.
- "Buddy" up and walk in one of over 250 Buddy Walks across the United States.

Blake Pyron is a member of the NDSS DS-AMBASSADOR® Program, a proud business owner, and a great example of NDSS' #DSWORKS® Campaign! His story starts in 1996, when his mom and dad, Billy and Mary Ann Pyron, brought him into the world and soon thereafter were told he had Down syndrome. They were told often of all the things he "wouldn't be able to do" or "couldn't do," but still they raised him with love and lots of perseverance. Blake proved the world wrong, opening Blake's Snow Shack on Mother's Day weekend 2016! Since then he has been interviewed by numerous TV stations and even had Blake's Snow Shack logo on a NASCAR that ran at Pocono. His small town business has been featured on international news, appeared in the Huffington Post, A&E, Latinoamerica, Unworthy, Reddit, and even on the Today Show Australia. Additionally, Texas Governor Greg Abbott, Texas Senator Ted Cruz and the US Senate have recognized his business. In 2016, Blake and his family established the NDSS #DSWORKS® Blake Pyron Entrepreneurship Scholarship. The scholarship will be awarded at the 2017 Buddy Walk® on Washington for a self-advocate to pursue their dreams and aspirations of starting their own business. The family knows, "by sharing our Blake's story, NDSS is creating new opportunities such as #DSWORKS®!" Blake continues to show that anything is possible— even snow in Sanger, Texas!

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LONG STORY SHORT

New Year, New Look

If Spring Cleaning Is In Your Future...

The saying goes, "in with the new and out with the old," and the question is often to keep or to toss. If you are considering recycling/donating/throwing out your collection of magazines, you'll be happy to know you are covered. Back issues of *The Stress Point*® magazine are available in PDF format on Engineering Design & Testing Corp.'s website.

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(913) 859-9580

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Concord, CA 94524
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