



East Texas Lighthouse for the Blind
500 N. Bois D' Arc
Tyler, TX 75702

Empowering blind Americans through rehabilitation, education, training and employment

UPCOMING EVENTS

- Feb. 21- Tea & Talk Support Group at Rehabilitative Services - 2:00-3:00 p.m.
- Feb. 26 - Vision Loss Seminar at the Tyler Public Library - 10:00-3:00 p.m.
- March 5 - MacD Support Group at Rosewood Estates - 10:30-11:30 a.m.
- March 14-17 - Washington D. C. Public Policy Forum
- March 22 - Disability Support Group at ETCIL - 12-1 p.m.
- March 31 - Seniors Celebrating Life Expo at Harvey Hall - 9:00-2:00 p.m.

www.tylerlighthouse.org

February 2011



The Lighthouse

Official publication of the East Texas Lighthouse for the Blind

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Chris Ledding (left) and Lee Tillson represent the Tyler Lighthouse on the Capitol in Washington, D.C.

Tyler Lighthouse attends annual NIB/NAEPB Public Policy Forum

Tyler Lighthouse representatives attended the 2011 National Industries for the Blind and the National Association for the Employment of People Who Are Blind Public Policy Forum held in March at Westin Arlington Gateway, Arlington, Virginia.

The forum provides agency members an opportunity to meet with legislators and their staff to discuss the importance of the Javits-Wagner-O'Day (JWOD) Act and the AbilityOne Program.

The JWOD Act requires the federal government to purchase products or services from AbilityOne participating non-profit agencies. The AbilityOne Program works with non-profit organizations to help employ people who are blind or have other disabilities. The revenue generated from sales to the government help non-profits provide programs and services to their clients.

Lee Tillson, Director of Operations for Horizon Industries and Chris Ledding, Controller represented the Lighthouse and its interests at the forum.

"We spoke to the legislators and their staff that represent our service areas about the importance of the JWOD Act and the AbilityOne Program. This legislation is vital to the blind community. Without it, the 70 people we currently employ would have a much more difficult time finding work," Lee Tillson said.

In 2010, through the AbilityOne Program, Horizon Industry employees converted over 2,000 tons of paper products which were then sold to government agencies. Employees also converted 35,661 miles or 188,290,080 million feet of parachute cord.

"The AbilityOne Program not only helps the blind become financially self-sufficient but these employees become taxpayers who become less dependent on government assistance," Chris Ledding said.

EMPOWERING BLIND AMERICANS

February marks the second publication of "The Lighthouse" and quite frankly after the December issue we weren't quite sure there would be enough newsworthy events to fill up the issue. Not to fear, as our employees and associates were involved in everything from working with the Marine Toys for Tots Foundation to accepting out of state awards in Arkansas to power lifting in Las Vegas.

The most important ingredient of any company is not its products, or its building, or even its customer service. The most important part of any successful company is its employees who through their daily efforts give it a life, a culture, and the ability to become something unique. The most important thing we do as a company every December is the selection of our employees of the year. Each year we honor three individuals, two blind and one sighted, as representatives of our top tier of employees and their commitment to excellence. The criterion is tough and the requirements to be considered include good attendance, a satisfactory performance review and no corrective actions in the calendar year. Once the list is complete, the nominees met with one of two committees. The first committee selects the Blind Direct Labor and the Sighted employees of the year. This committee consists of two past employees of the year winners, a production supervisor, an employee of Rehabilitative Services, an employee from Lighthouse Graphics and an employee from Human Resources as the Chair. The Blind Indirect employee of the year is selected by a committee made up of senior managers.

During the employee interview the nominee is asked a series of questions designed to help the committee make their selection. The committee members individually rate the responses on a scale of 1-5 and Human Resources tallies the results to determine the winner. Since none of the committee members know how any of the other members voted the process is completely objective.

This year there was a lot of competition and a lot of deserving employees. The award, the number of nominees and the winners are as follows:

- Peter J. Salmon Award – Blind Direct Labor – 21 nominees – winner Marilyn Petty
- Milton J. Samuelson Award – Blind Indirect Labor – 12 nominees – winner Olivia Abrams
- Sighted Employee of the Year – 12 nominees – winner Jack Malone.

Congratulations to all the nominees and the winners!

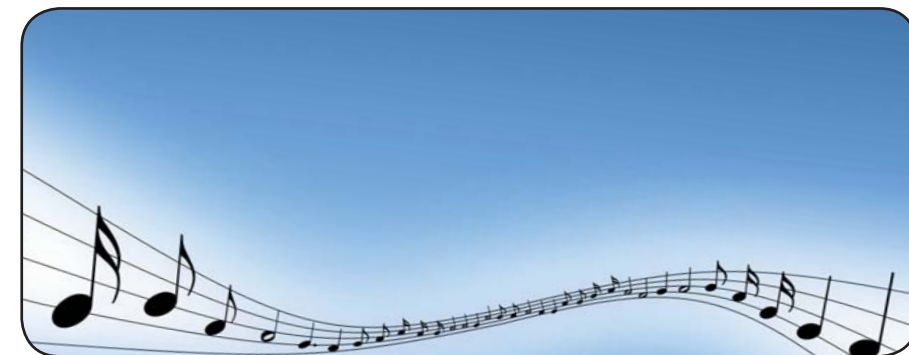
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with lower levels of acuity, making it more accessible than the three phones which did not have built-in magnification tools. For these three other phones, even small losses of acuity, 20/21 (+/-2.5) to 20/40 (+/-0), rendered our authors incapable of using the home screens, thus making all functions unique to smartphones inaccessible. Acuity demands for simply dialing a phone number were low, but are of little value since traditional cell phones can perform this function at a fraction of the cost. Of the phones without enhanced magnifier tools, the EVO 4G and Epic 4G were easier to use with reduced vision than the BlackBerry. These two phones have larger-than-average displays, and larger-than-average button/optotype sizes, which likely accounts for these findings. In addition, the Epic 4G was the only phone to use an LED illumination system that enhances brightness and contrast, making it even easier to use. On the other hand, the BlackBerry Torch was consistently the most difficult smartphone for the researchers to operate. In this case, small display sizes, and the lowest resolution of the smartphones tested, were contributing factors. Furthermore, button and optotype sizes on the BlackBerry Torch were typically average or below average for all measurements, with the exception of the touch-screen keypad button size (table).

It is important for vision specialists to be aware of all devices that could potentially assist their visually impaired patients. This can range from traditional low vision devices to new technology such as smartphones, which may have the opportunity to greatly improve independent living. Although eye-care providers may not routinely be asked to recommend smartphones for their patients, it would be prudent to educate sales representatives and patients regarding those best suited to low vision needs. Conversely, it would be equally important to inform sales representatives of which smartphones are poorly suited for the visually impaired. The smartphone is a versatile tool that can replace many devices such as PDAs, cameras, beep-ers, diaries, GPS navigation, mp3 players, as well as many others. The ideal smartphone for the visually impaired patient has a large LED display with high resolution, a large font with good contrast, global magnification options, an interactive screen reader, reverse contrast,

adjustable font size, and a high-quality tactile keypad. In addition, a feature by which the user can verbally dictate text messages and emails would also be advantageous. It is worthy to note that this research is based on individuals with best corrected visual acuities of 20/20, no visual field restrictions, and normal contrast sensitivity. Using trial lenses, vision impairment was simulated so that researchers could subjectively evaluate the smartphones. An important limitation of this study is that reduced visual acuity was the only variable assessed. Future studies should be designed to include visual fieldloss and reduced contrast sensitivity.

Cell Phone Comparison Chart

	iPhone 4 c 2X mag	Droid 2	Droid X	BlackBerry Torch	HTC EVO 4G	Samsung Epic 4G
Text Messaging (Text Font Size)	20/88 4.5mm, 3.1M, 20/155	20/26 (+/-2.5) 2mm, 0.58M, 20/29	20/28 (+/-2.9) 2mm, 0.58M, 20/29	20/30 (+/-0) 2mm, 0.58M, 20/29	20/33 (+/-5) 20/60 1.2M 2.2mm	20/26 (+/-2.5) 2mm, 0.58M, 20/29
Web Browsing (Address Bar Font Size)	20/80 (+/-0) 4.5mm, 3.1M, 20/155	20/29 (+/-2.5) 2mm, 0.58M, 20/29	20/25 (+/-0) 2mm, 0.58M, 20/29	20/24 (+/-2.5) 2mm, 0.58M, 20/29	20/30 (+/-0) 2.2mm, 1.2M, 20/60	20/26 (+/-2.5) 2mm, 0.58M, 20/29
Home Screen	20/80	20/26 (+/-2.5)	20/26 (+/-2.5)	20/21 (+/-2.5)	20/38 (+/-5)	20/40 (+/-0)
Phone Call (Touch Screen Phone Keypad Font Size)	20/160 8mm, 5.5M, 20/275	20/48 (+/-5) 3mm, 2.1M, 20/103	20/58 (+/-5) 4mm, 2.8M, 20/140	20/29 (+/-2.5) 4mm, 2.8M, 20/140	20/65 (+/-10) 3mm, 2.1M, 20/103	20/95 (+/-10) 5.7mm, 3.9M, 20/197

Table 1: Minimum Visual Acuity For Smartphone Use. The larger Snellen Fraction signifies the minimum vision actually needed to perform the task as determined by dioptic blur experiment. Beneath is the actual optotype size (in mm) followed by the equivalent M-notation value and Snellen equivalent for 40cm viewing distance. iPhone 4 actual minimum acuity was only determined for the address bar font. Minimum acuity for the other functions on iPhone 4 was calculated using the digital magnification capability of 2.1X.

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References:

2 Houston KE, Kollbaum EJ. Minimum Visual Acuity Requirements for Cell Phone Use. American Academy of Optometry Poster Series, Tampa, FL. 2007.

A Closer Look

Smartphone Visual Acuity Requirments and Accessibility Options for the Visually Impaired

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Charles J. Stumpf and Brad G. Perras, Indiana University School of Optometry

Mobile phones are an integral part of the lives of most people in Western countries. Developments in mobile technology have resulted in smartphones, defined as programmable mobile phones. Smartphones are a primary communication tool with intricate sensing capability, built-in networking and connectivity, and maximal storage capacity. Moreover, people have come to rely on their phones for the everyday management of social relationships. With their many features and capabilities, smartphones have the ability to replace many devices such as PDAs, cameras, beepers, diaries, GPS navigation, mp3 players, as well as many others. The increasing popularity of smartphones is evident by a recent estimation that approximately one billion smartphones will be shipped in 2012. One of the major complaints of early smartphones was the small screen. Apple's iPhone was the first to address this with a completely virtual keyboard which used touchscreen technology to allow for a larger screen size without increasing the thickness of the phone. Since then, other manufacturers have hurried to match Apple's virtual keyboard technology, introducing similar versions such as Motorola's Droid X and HTC's EVO 4G. This trend is likely to continue in the smartphone market, as well as at public access terminals such as automated-teller machines.

At first glance, the new touchscreens appear to be a great tool for the visually impaired since pinch-to-zoom magnification capabilities are standard on the majority of the models. This feature is activated with the flick of the finger. However, some visually impaired users might struggle with the loss of tactile cues from the physical buttons ren-

dering the device unusable. Prior studies have confirmed this as a problem for blind users, but it is unknown at what level of vision impairment difficulty occurs. Manufacturers typically do not provide readily available data on the standard font size; this makes it difficult for low vision practitioners to make the appropriate calculations when prescribing magnification tools.²

Features considered important for the visually impaired included screen readers, voice control, magnification/zoom options, reverse contrast and adjustable font size. We attempted to determine the Critical Acuity Demand for the essential functions of the phone which included phone calls, text messaging, navigating the web browser, reading/sending email, and locating applications on the home screen. The specifications measured were: touchscreen text messaging button optotype size; web browser address bar; text message font size; phone keypad button optotype size; and tactile button optotype size, when applicable.

At this point in time, the iPhone is by far the most accessible since the mag tool is realistically usable when typing. It also has a screen reader feature called "voice-over" which is superior to others and is discussed in the following paragraph. As mentioned previously, the Droid mag tool is more powerful than the iPhone's, but is too difficult to use while typing. The small lens/window was just too hard to navigate when searching for individual buttons. The Droid's would be okay for reading a document/email/web page, but entering text would be quite difficult. The Droid magnifier did allow navigation of the home screen

In The News

TIBH and TCPPDI tour Lighthouse

Members from Texas Industries for the Blind and Handicapped and the Texas Council on Purchasing from People with Disabilities stopped by the Lighthouse during the month of March for a facility tour. Members learned how employees manufacture paper products at Horizon Industries and learned the T-shirt printing process at Lighthouse Graphics.



Members get a tour of the Horizon Industries warehouse.



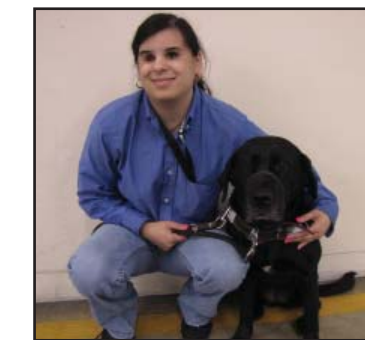
Horizon employee Tony Thompson speaks to members



Charles Coleman demonstrates how to use a machine in the Lighthouse Graphics dark room.

Horizon Industries and Lighthouse Graphics welcome new employees

The Lighthouse is proud to announce its newest members to join Horizon Industries and Lighthouse Graphics.



Ina Arteaga
Production Bander



Sharon Dabon
Production Bander



Josh Higgins
Horizon Janitor



Sharon Kemp
Compression Table Operator

AbilityOne Program "What it means to me."



Horizon Industries recently held a Quote Contest asking employees what the AbilityOne Program means to them. Three questions were asked in a written survey with each question receiving 1st, 2nd and 3rd place winners. All winners received a cash prize. Congratulations to all the winners!

Tell us how your life has been affected in a positive way by the Ability One Program?



Nell Barr
Production - Packer

"My mother used to say being handicapped I would never have a life of my own, always being dependent on others. But thanks to the Lighthouse and Ability One I am independent, pay my own way, go and do whatever I want to."



Cazzie Kirk
Production - Packer

"I am a positive person so when I learned the background of the Ability One Program and how it laid the foundation for visually impaired people like myself to get jobs my self-esteem skyrocketed."



Bobby Taylor
Crew Leader - Distribution

"Ability One has affected my life in a positive manner by providing a job even though I have a disability. It gives me a sense of self-worth."



What things has the Ability One Program allowed you to do that you once thought were impossible?



Robert Jordan
Production - Cord Winder

"Ability One has helped me send my kids to college by providing a job that was not possible before."



Sharon Dabon
Embroidery Operator

"Ability One allowed me to return to work in spite of my visual defect. It promoted personal growth and development to get me back into the workforce. The opportunity gave me a sense of partnership, participation and self confidence."



Larry Thomas
Production - Palletizer

"Ability One allowed me to do jobs I wouldn't be allowed to do in the job market today. It allowed me to be independent."

What doors have opened for you as a result of the Ability One Program?



Larry Reed
Production - Cord Winder

"Ability One has opened several doors for me, the main one being the ability to send my daughter to college."



William Bishop
Production - Bander

"Ability One as opened doors for me such as learning technology, learning different jobs and giving me the ability to be the best I can be."



Rod Johnson
Saw Operator

"Ability One has given me some of the best job benefits I would ever imagine such as 403B retirement and my children on an affordable health plan."