

DO-IT NEWS

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Director's Digressions

by Sheryl Burgstahler

DO-IT has been busy! In this column, I'll share highlights from four of our national and international collaborations.

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DO-IT Mentor and keynote speaker Imke Durre at the 2007 AccessSTEM CBI.

In November of 2006, I traveled to Bangalore, India to deliver the keynote address at Information Technology Uses for Children and Adults with Disabilities, the first Indo-U.S. conference for Indian universities, information technology (IT) companies, professional associations, and family centers.

In early December of 2006, web accessibility experts and Webmasters from across the nation met in Seattle at our Web Accessibility *Capacity-Building Institute (CBI)* to exchange ideas about how to make the web more accessible to people with disabilities. The proceedings are at <http://www.washington.edu/doit/cbi/webaccess/proceedings>

In January of 2007, DO-IT hosted the *AccessSTEM CBI*, a three-day gathering of thirty leaders of National Science Foundation (NSF) projects that promote the participation of women, ethnic and racial minorities, and people with disabilities in science, technology, engineering, and mathematics (STEM) with the goal of increasing

the participation of individuals with disabilities in all NSF programs. See the proceedings at <http://www.washington.edu/doit/cbi/bpstem/proceedings.html>. Participants helped draft the publication *Broadening Participation in Science and Engineering by Welcoming Participants with Disabilities* that was distributed to more than 500 NSF project directors and program officers.

In February, we hosted a meeting of our *AccessCollege* team, a diverse group from twenty-one two- and four-year campuses around the country, to work on making postsecondary institutions more welcoming and accessible to students with disabilities. Take a look at the websites that have resulted from this and other DO-IT projects funded by the Office of Postsecondary Education at the U.S. Department of Education (<http://www.washington.edu/doit/Resources/postsec.html>).

- *The Faculty Room*
- *The Student Services Conference Room*
- *The Board Room*
- *The Student Lounge*
- *The Center for Universal Design in Education*

In July, two of our *DO-IT Ambassadors* traveled to Japan to assist Dr. Mamoru Iwabuchi in the inaugural DO-IT Japan Summer Study in Tokyo! This collaboration provides a great example of what DO-IT expects of its *Scholar* graduates—or *Ambassadors*—the continued work to make our world more inclusive for people with disabilities. Read more about the first DO-IT Japan Summer Study in the article *DO-IT Ambassadors Assist in DO-IT Japan's First Summer Study!*

With all that was accomplished this year, one can only wonder what great adventures are in store for DO-IT in 2008!

Boeing Continues to Support *DO-IT Scholars*

DO-IT is delighted to be the recipient once again of a gift from the Boeing Company. Boeing's gift supports students with disabilities who are striving to excel in academics and careers. Boeing's generous donation allows us to maintain the scope and quality of our *DO-IT Scholars* program by funding the participation of several *Scholars*.

Summer Study '07: What Do the Phase I *Scholars* Do?

DO-IT Phase I *Scholars* participate in a two-week, live-in Summer Study session on the University of Washington campus in Seattle. They learn about college life; explore the Internet; interact with peers, staff, and mentors; and have fun. The *DO-IT Scholars* program started in 1993 as an experimental project for teens with disabilities nationwide. Now it is supported for Washington State teens by the State of Washington, the Boeing Company, and the Microsoft Corporation.



Robyn at Summer Study 2007.



Dylan, Stefani, and Megan at Summer Study 2007 building a water tower made of spaghetti.

Engineering 101

by Cory and Scott, Phase I *Scholars*

One might ask what the point of building a water tower out of spaghetti, tape, and foam board is. To find out why these structures were built, one need to look no further than The Wonderful World of Engineering class for the Phase I *Scholars* at DO-IT Summer Study held on the University of Washington campus. Students built teamwork skills by creating a tower that would support the most weight possible. The activity developed leadership skills as students learned how to cooperate and inspire confidence in their fellow classmates by encouraging them to voice their ideas.

The guest speaker for Engineering 101 was Frank Ashby, Director of Student and Community Relations at the U.W. College of Engineering. He explained the importance of engineering, the difference between various fields in engineering, and the ways in which engineering can be applied to today's world. DO-IT staffer Lisa Stewart said, "The purpose of the activity is to expose *Scholars* to the multiple fields of engineering and to help them start thinking about future careers, as well as to have some fun."

Scholars were enthusiastic about the activity and worked quickly to construct their water towers within the allotted time. The winning tower held an amazing forty-eight ounces of water.

Looking at the *Scholars* that attend DO-IT Summer Study, one would immediately notice that many are in wheelchairs or have another visible disability. Many also have invisible disabilities. That is because DO-IT is designed specifically to help teens with disabilities (visible and invisible) in their transition to college by building teamwork, leadership, social responsibility, self advocacy, and other skills necessary to live in the real world. DO-IT provides each Phase I *Scholar* with a computer, any needed assistive technology, and an Internet connection from home. New *Scholars* join an established e-mentoring community through which they can talk to people involved in the program such as staff, mentors, other *Scholars*, and *Scholar* graduates called *Ambassadors*. DO-IT also arranges internships to help *Scholars* discover career interests and gain valuable job experience. You can learn more about the DO-IT *Scholars* program at <http://www.washington.edu/doi/Programs/scholar.html>.

DO-IT is in its fifteenth year of operation and has engaged more than 300 *Scholars* in its Summer Study program. Many former *Scholars* have gone on to successful careers and continue to be involved with DO-IT through its extensive electronic mentoring community. In a nutshell, activities like The Wonderful World of Engineering teach DO-IT *Scholars* that a disability is not a handicap when it comes to learning and having fun.

Game Night

by Lukas and Luke, Phase I *Scholars*

Game Night during Summer Study was exciting for DO-IT *Scholars*. There were lots of arcade games to choose from in the game

room at the Husky Union Building (HUB) at the University of Washington in Seattle. They included *Marvel vs. Capcom 2: New Age of Heroes*. *Scholars* also enjoyed bowling, table tennis, and pool. It can safely be said that Game Night was definitely an evening activity any teen would enjoy.



Phase I Scholars Robyn, Shyla, Peter, and Joshua play foosball during Summer Study 2007.

Sheep Heart Surgery and Dissection

by Josh and Dylan, Phase I *Scholars*

On the second day of Summer Study, we attended a class called Get to the Heart of It where we dissected and performed surgery on sheep hearts. We demonstrated the two most common heart surgeries performed today. The first was a heart bypass surgery, in which the blood flow is re-routed using a tube to act as an artery or vein. The second surgery was a modified version of a heart valve replacement. To do this, we used a piece of chalk and placed it in the heart to act as a valve.

After the two surgeries we fully dissected the sheep heart by slicing it in half and looking at the inside. We saw where the different arteries were located, and where they lead to in a sheep's body. One thing is definite: surgery of a sheep's heart is best done as a

team effort, as it can be hard to work on a heart if you're a one-man (or woman) show. Being with a partner assures that everyone can participate, regardless of ability. The class was quite interesting, even if at first it seemed a little disturbing!



'07 Summer Study Interns Zach, Marlen, and Daren serve ice cream during Karaoke night.

I Scream and Karaoke with a Birthday on Top!

by Melissa and Shyla, Phase I *Scholars*

The first Saturday night at DO-IT Summer Study was an amazing Karaoke night and ice cream social with an eighteenth birthday celebration for *Intern* Daman all rolled up into one.

During karaoke there were lots of songs to choose from—from songs by varied artists such as The Beatles and Aerosmith to those from musicals and movies. Everyone who wanted to sing got an opportunity to do so! Even for those of us who aren't the best at carrying a tune, it was an awesome time.

During karaoke there was a big ice cream sundae bar with multiple flavors as well as all sorts of toppings, including sprinkles, fudge syrup, and whipped cream that were within reach and accessible to everyone from a seated or standing position.

The cherry on the top of the evening was celebrating Daman's eighteenth birthday. Daman's birthday made karaoke night even more fun. There was a group sing-along to "Happy Birthday" for Daman. The birthday boy was really enjoying himself too, which, of course, was the point. And that cake sure went great with the ice cream!

[See related article titled *Karaoke Night '07* where Ambassador Andrew shares the poem he wrote after attending this event.]



Phase I Scholar Corey talks with DO-IT Staffer Debra.

Microsoft—What a Trip!

by Blake, Corey, and Sam; Phase I *Scholars*

During this year's DO-IT Summer Study program, the Phase I *Scholars* went on a day trip to Microsoft. We learned that Microsoft is open to accommodations that their employees need and have resources available to assist them. For example, we met an employee who was blind. His guide dog and cane help guide him through the Microsoft campus. In addition, Microsoft provides guides for those with vision impairments so they can be involved and contribute fully to meetings. We also met two employees who were deaf and one who had Attention Deficit Hyperactivity Disorder.

The man and woman who were deaf receive most of their projects and communication from colleagues through email. At meetings, Microsoft provides interpreters for employees who are hearing impaired. The employees with disabilities at Microsoft do their jobs like everyone else; they may just have different ways of doing things.

Microsoft buildings were accessible and have plenty of elevators. They also have automatic door openers, which allow for easy access.

After lunch, we visited the Museum Room to look at old products as well as new gadgets that Microsoft has recently come out with. These included the Zune mp3 music player and software that could tell your personality by the way you write. (It was very accurate!) We also went to the Futures Room, which showed what kind of technology people may have inside their homes in five or ten years. In this room, there were small gadgets that would be helpful for taking notes in high school or college. Finally, we said our goodbyes, loaded the bus, and headed back to the U.W. campus for dinner and a relaxing night.

Far Out!

by Megan and Stefani, Phase I *Scholars*

On July 19, the Phase I *Scholars* went to the University of Washington Astronomy Center. When we arrived, our attention was averted to the large pendulum in front of the building, swinging back and forth with the earth's rotation.

Once we made our way to the planetarium observation room, Eric Hilton, our guide, started the projection displayed on the large domed ceiling. The room became pitch black and the presentation started with the stars

and sun illuminating the ceiling. Everyone watched with astonishment. The sun was setting and the stars were accelerating at a higher speed than usual, so you could see them moving. Throughout the presentation, Eric explained the constellations and the phenomenon that makes these constellations work. He told us about the constellations Ursa Major, the Big Dipper, and how to use the Big Dipper to find the North Star. Eric also told us about Orion's Belt and the red star Beetle Juice. At the end of the presentation, he explained the phenomenon that creates the Northern Lights.

After this amazing intergalactic presentation, we returned to McCarty Hall and enjoyed our evening dorm activities.



Phase I Scholar Heidi in the computer lab during Summer Study.

Seattle Art Museum: Home of Beauty and Wonders

by Ashlee and Heidi, Phase I *Scholars*

The Seattle Art Museum (SAM) recently opened its doors to many new wonders, and wonders aplenty did we *Scholars* find. From paintings, to statues from time long past, to modern marvels, SAM proudly boasts some of the finest collections in the Northwest. The museum hosts thousands of visitors daily who are eager to embark on travels in creativity which range from visions of exploding cars to Japanese pop art. There was so much to take in!

While the art was appealing, accommodations could be made to increase accessibility, including more hands-on exhibits for visitors with visual impairments.

Our Night at U-Village

by Robyn and Sara, Phase I *Scholars*

Besides all of the studying and learning, the DO-IT Summer Study program also allows us to explore our surroundings. On our second night at Summer Study, we had the opportunity to explore the University Village, a large shopping area near campus. From browsing through Barnes & Noble to listening to the live music played in the parking lot, everyone found something to do.

Almost every place at University Village was physically accessible and included elevators and ramps where needed. People working and shopping were also willing to help. They greeted us with friendly attitudes. At the end of our field trip, we treated ourselves to ice cream at Ben & Jerry's. It was a great night and everyone had a blast.

Summer Study '07: What Do the Phase II *Scholars* Do?

Phase II *Scholars* return to the University of Washington campus for their second Summer Study. They meet the Phase I *Scholars*, learn about college life and career preparation, and participate in a one-week workshop with postsecondary instructors.

Curb Cuts in Cyberspace

by Brandon, Jenny, Jesus, and Ryan; Phase II *Scholars*

In our Phase II workshop, Curb Cuts in Cyberspace, we learned about Web 2.0 and web accessibility for people with disabilities. We also learned how people can connect with each other via the Internet. We looked at myspace.com, a social networking site that is very popular but was a first for some of us. Wendy Chisholm, who used to work for the Web Accessibility Initiative at the World Wide Web Consortium and who now works for DO-IT, lead the workshop.

We learned that lots of websites are not accessible to individuals with disabilities. Accessibility barriers include websites that use text that cannot be increased in size, sites that can only be navigated with a mouse, and those incompatible with screen-reading software (typically used by people who are blind). We also learned that it is important for web authors to limit the use of Flash (a type of web design software), include headings, and associate labels and form elements.

We learned how to evaluate websites for accessibility using the AIS Web Accessibility Toolbar. Finally, we had a lot of fun making our own video about web accessibility.



'06 Scholar Tony engages in biotechnology during Summer Study.

What Do You NOAA?

by Cassie, Jesse, and Kayla, *Interns*; and Daniel, KJ, Taylor, and Zach, Phase II *Scholars*

The National Oceanic & Atmospheric Administration (NOAA) workshop, coordinated by *DO-IT Ambassador* and NOAA Intern Annemarie, addressed environmental issues and policies.

We learned about Genetically Modified Organisms (GMOs). GMOs are plants and animals that have had their genetic makeup altered. This alteration can improve a plant's resistance to chemicals. Crops that can be sprayed with more chemical substances increase chemical waste pollution in our environment. We also learned that a threat to environmental health is mass-produced, subsidized agriculture, which grows food faster, but in less environmentally friendly ways.

During the workshop, we learned about the types of salmon, their life cycles, and how human actions disrupt those life cycles. Littering and chemical waste dumping, which unfortunately occur frequently, negatively impact salmon habitats and

spawning areas, causing a sharp reduction in salmon population. Additionally, dredging and damming make salmon easy targets for predators like birds. Dredging involves pulling up large masses of mud from the water to allow larger boats to pass through the area. The mud piles up into small islands where birds that prey on salmon nest. Since the salmon that pass by this island are young, they are no match for these predators. One of the largest threats to salmon is copper poisoning, which results from the copper fallout from motorized vehicles. Copper damages salmon's senses, causing them to be more vulnerable to predators.

Besides learning more about current environmental concerns, we also had a history lesson. It was the story of the people who lived on Easter Island. The inhabitants of the island cut down all of the trees. This deforestation wiped out all of the native animals, leaving the landscape barren and desolate.

Overall, the workshop was interesting and informative. It served well to educate us about what we must do to protect the environment.

Hit the Note! Right in Tune

By Alex, Gabe, Katie, Sam, and Tony; Phase II Scholars

For our Phase II workshop, we went to Egan's Jam House in Ballard, a neighborhood in Seattle. We worked for five days on a music video. In our Hit the Note! class we learned how to use Windows Movie Maker, Google Earth, and 3-D ME, an animation program. We used these tools in the production of our video. Using Google Earth, we found places and saved them using a "push pin" feature. In 3-D ME, we rendered our portraits into 3-D models and added dialogue to our characters (or avatars). To finish our project we applied our recordings, dialogue, and 3-D rendering into one piece

and applied a Bossa Nova sound track. Our workshop was fun, interesting, and a great creative experience for all of us.

Karaoke Night '07

by Andrew, '05 Scholar

Today as we rejoice in each other's company,
Laughing and singing on this magical occasion,
Eating ice cream and enjoying the moment,
While ever improving our communal relation.

With our strength, we have great power,
The power to inspire and lead the way,
Giving ourselves to a common cause,
For others who might need us someday.

We are strong, powerful, united,
One people stemming from the individual,
Bound by a mutually shared love,
Standing tall, together, enduring, residual.

Providing trust, tolerance, and truth,
Finding ourselves through one another,
Recalling similarities of our diverse pasts,
Seeing ourselves through the eyes of each other.

These are the days we will remember,
For the rest of our lives,
A community growing together, intertwined,
As its new threads arrive.

New scholars of DO-IT,
You have found your way into our hearts,
You will stay with us forever,
Well after Summer Study departs.

You are now the newest ingredient,
Of the DO-IT recipe for success,
Adding to a colorful menu of voices,
All of which you can easily access.

We're here for you whenever you're in need,
We're here to help, here to stay,
Ready for you during life's surprises,
Ready to clear the runway.

Flying, together, past the darkness of dusk,
Finding our way through the heavy clouds
of life's unknown,
Rising ever higher through the foggy mist of
dawn,
For a tomorrow, bright and beautiful, never
again alone.

And as we do at DO-IT,
Let's have some fun,
Sharing our time,
Together as one.

Singing songs by M. J., Marvin Gaye, and
Beyonce,
Carrying on, until the night is gone,
And continue soaring, on into the morning,

For is it not Karaoke night, c'mon guys, let's
get this party started right.



'99 Scholar Stuart in Japan.

DO-IT Ambassadors Assist in DO-IT Japan's First Summer Study!

by Chris Schlechty, '02, and Stuart Olsen, '99,
DO-IT Scholars

Konnichiwa (hello) everyone! We spent ten days in Tokyo to assist with DO-IT Japan's first Summer Study program. It was Chris' first time in Japan, but Stuart was lucky enough to visit Japan three years ago and jumped at the chance to return. The city is huge! It was hot and humid, and there were people everywhere.

DO-IT Japan was similar to DO-IT Summer Study in Seattle, but, in some respects, it was quite different. Twelve *Scholars* with a variety of disabilities attended DO-IT Japan. Many of the *Scholars* had aides who were students of the professors that were coordinating the program. Parents could have acted as aides, but the *Scholars* were provided with student assistants (with the exception of one medically fragile *Scholar*), so they could be independent and learn to direct their own care, a basic goal of both DO-IT Japan and DO-IT Washington.

We shared our experiences transitioning from high school to college. We covered things we learned from DO-IT and our personal experience. Stuart talked about

the accessibility in various countries that he has visited. Many of the *Scholars* knew quite a bit of English, but we also had our presentations translated into Japanese by Dr. Mamoru Iwabuchi, the director of DO-IT Japan. The students asked similar questions to those we have heard from DO-IT Summer Study *Scholars* in Seattle. Later, Dr. Iwabuchi told us that after our talk, one of the *Scholars* became more interested in traveling abroad and learning English. This was cool because we think everybody should get the chance to visit another country and experience a different culture.

Questions *Scholars* asked us included, “Are you or have you ever been afraid to ask for accommodations? Do you fear that you will be looked down upon or see [asking for accommodations] as admitting a weakness?” In Japan, students told us they were expected to ask for as little help as possible. Asking for too much assistance can be seen as a burden to other people. Because of this, one challenge for the Japanese *Scholars* is to figure out how to most effectively ask for accommodations when they go to college—a difficult challenge to face.

We attended a lecture given by a professor who was blind and deaf. He became deaf and blind when he was eight years old, but never let his disability stop him from achieving his goals. He went to college and is now a professor. That is not an easy achievement anywhere, but, particularly in Japan, people with disabilities are not fully integrated into mainstream society. Credit should be given to DO-IT Japan and the Japanese *DO-IT Scholars* who are challenging these societal norms! We believe that over time, with programs like DO-IT, Japan will become more inclusive of people with disabilities.

We both found Japan to be fun. However, access was a bit difficult for someone with a mobility impairment, as many older build-

ings and shops were not at street level and offered only steps. The trains were fairly accessible, although it took awhile to find where the different elevators were (the station we were near has over a million people pass through each day and four main exits to different corners of the region—it was huge!). To board the train, we had to notify a worker on the station platform, and they would get a small ramp (called a “slope” in Japan) and call ahead to notify the station workers at our destination, so they would be ready to assist us when we arrived.

Tokyo is equipped for people with visual impairments. On the more commonly used sidewalks and paths, there are tactile tiles that can be followed with a cane; at intersections the tile pattern changes. Also, most of the crosswalks had an audible indication for when it is safe to cross.

Exploring a bit of the city and its outlying areas was a great part of our Japan experience. Stuart visited the Sony building where their latest products are exhibited, and you can even play with some of them. He visited one of Toyota’s showrooms, which had all the latest automobile models, from their smallest car to their largest SUVs. He also visited electronic department stores with up to six or seven floors filled with electronics ranging from mp3 players to dishwashers to watches and many other products. Stuart also took a day trip to Mt. Fuji. Seeing small Japanese villages was a great experience.

Congratulations to Dr. Iwabuchi, his colleagues, and the DO-IT Japan *Scholars* for an amazing beginning to what we hope are many more successful DO-IT Japan Summer Studies!

Stuart was a ‘99 *Scholar*; Chris was an ‘02 *Scholar*. Both are now students at the University of Washington.



DO-IT Mentor Kim Borowicz in the HUB art gallery during Summer Study 2007.

Study Abroad for Students with Disabilities: A World of Opportunity

by Kim Borowicz, DO-IT Staff

Studying abroad, which has grown in popularity to nearly 150,000 American students each year, is a great way for college students to acquire independence, learn new skills, and travel the world! While students with disabilities may experience unique barriers and challenges when studying abroad, careful planning and self-determination can make the dream a reality.

There are several different types of study abroad programs. Some study abroad programs are specifically designed for students with disabilities! Check out Mobility International USA at <http://www.miusa.org>. Many are sponsored by four-year universities and have set programs for specific majors. In these programs, classes are taught by professors from the home university on the host university's campus. The program and curriculum may already be approved for credit by a student's home university, so it is easy for students to fit the study abroad program into their schedule.

A second type of study abroad program places American students in foreign universities, where they can take classes along with

students from the host country. This is a great way for students to meet people from the country they are traveling to.

Study abroad programs can also vary in length. Most programs last for a semester, but some can even be completed during spring break or winter vacation.

Students can also build their own study abroad program through an internship. Most colleges provide students with class credit for internships, and many majors require students to be an intern. Interning in another country can be a great opportunity. Students can pick the country they want to travel to and find an organization or company there they would like to work for; Universities and study abroad organizations can also help students find the perfect internship and housing.

There are several ways to prepare for living abroad. One is to spend time living in a new city in the States. This may be especially helpful for students who attend college in their hometown. Try interning for a semester in a new city in the U.S. before going abroad.

It is a good idea for students to spend time deciding whether they want to travel to a non-English speaking country and consider whether this will present extra challenges related to their disability. It may also be helpful for some students with disabilities to have their plane ticket marked as "Meet and Assist"; this assures that the airline will provide extra assistance if they need it.

It is important to do disability-related research and plan ahead before studying abroad. Remember, it is the student's choice whether to disclose their disability to program staff, people they are traveling with, or people they meet along the way. Check ahead of time to ensure housing and

tours are accessible, alternative formats are available, and sign language interpreters are scheduled. This can make the trip run more smoothly.

Research the disability laws in the host country ahead of time. Although the Americans with Disabilities Act (ADA) does not ensure disability rights in other countries, many countries have laws, some similar, that provide even more protection. Also, look for disability organizations in the country; they can provide a wealth of information on local disability law and community resources.

DO-IT and the Land of the Midnight Sun!

By Scott Bellman, DO-IT Staff

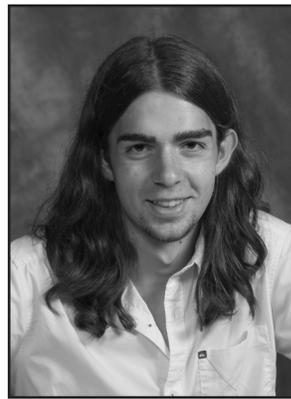
This summer the state of Alaska held its first annual statewide conference on assistive technology (AT). The conference, called the Midnight Sun Assistive Technology Conference, was attended by educators, service providers, vocational rehabilitation specialists, employers, and the public. DO-IT hosted an exhibit with materials about accessible technology and universal design for education and employment. *AccessSTEM* team member Amanda worked at this conference as part of a paid internship.

Dan Comden, manager of our U.W. Access Technology Lab, delivered a presentation called “Supporting Accessibility at the University of Washington,” where he talked about AT and the accessibility of online content delivery—such as websites. I delivered a presentation called “Opening Doors: Mentoring on the Internet” and co-facilitated a panel discussion called “College Preparation and College Success.”

Conference attendees stopped by our exhibit to thank DO-IT for internships,

minigrants, resources, and training materials in Alaska. These activities were funded as part of *AccessSTEM* by the Research in Disabilities Education Program of the National Science Foundation, cooperative agreement #HRD-0227995.

Thank you NSF for making opportunities in STEM available to students in Alaska, Idaho, Oregon, and Washington through *AccessSTEM*.



DO-IT Scholar Profile

by Cory, '07 Scholar

Hi. My name is Cory. I live in Poulsbo, WA. I was born in Providence, Rhode Island, and, because my dad is in the Navy, I have lived many different

places, including Hawaii; San Diego; Rota, Spain; and La Maddalena, Italy.

It was in Spain that my Asperger Syndrome began to make its greatest impact on my life. In San Diego, I had made friends and had been popular among other students up until third grade when I moved to Spain, where I was bullied and teased because the other students could see that I was different. This made my years of school in Spain and Italy very difficult and lonely.

Apart from my social life, my years in Europe were the best of my life because of the places I got to go and the cultures in which I lived. To this day I still consider myself a European.

By the time I came to Poulsbo, I had retracted into a “shell” to protect myself; but in my junior year I made two friends who helped me open up. They welcomed me into their

group, and I was able to learn the social skills I needed to function in society. I came out of my cocoon.

I am now respected and admired by many of my classmates. I enjoy listening to metal music and long distance running. I plan to study political science and work in politics.



DO-IT Staff Profile

by Beth
Hammermeister

Hi, I'm Beth Hammermeister. I started working as a receptionist for Computing & Communications (C&C) in the Academic Computer

Center in November 2006. DO-IT is a collaboration of C&C, the College of Engineering, and the College of Education at the University of Washington. Part of my role is to provide behind-the-scenes administrative support for DO-IT. My interest in DO-IT comes from personal experience. My father became a person with disabilities at a time when resources were more limited than they are today.

While I am a long-time U.W. employee, I am new to the U.W. campus and the world of disability studies. I spent most of my twenty-plus years at the U.W. in an unrelated field: I was the household manager for the U.W. President's Residence.

I am a lifelong learner. Some of my current interests are dancing, gardening, hiking, cross-country skiing, yoga, travel, and cooking for my family and friends.



*Photo Credit: Mary Levin, University of Washington
Dr. Richard Ladner, left, signs with computer science academy participants.*

Summer Academy for Deaf Students

by Sheryl Burgstahler, DO-IT Director

A highlight from summer 2007 was a term-long Summer Academy for Advancing Deaf and Hard of Hearing in Computing on the campus of the University of Washington.

The Academy was sponsored by the *AccessComputing* project (<http://www.washington.edu/accesscomputing/>) and was co-directed by me and Dr. Richard Ladner, a professor of Computer Science. *AccessComputing* is funded by the Directorate for Computer and Information Sciences and Engineering (CISE) (grant #BPC-0540615) of the National Science Foundation (NSF). Rob Roth coordinated the program.

Summer Academy participants attended U.W. computer science courses, participated in an animation project, and developed relationships with each other as well as computer science role models and mentors who are deaf. More information about the Academy can be found on the NSF website at http://www.nsf.gov/news/news_summ.jsp?cntn_id=110206&org=NSF&from=news.

2007 DO-IT Trailblazers

by Michael Richardson, DO-IT Manager

DO-IT Trailblazer awards highlight DO-IT community members who, through their work and accomplishments, have changed the way the world views people with disabilities and their potential to succeed in college, careers, and community life. Congratulations to this year's honorees!

Dennis Lang, an associate director of the Disability Studies program at the University of Washington, persevered in promoting the adoption of the program at the University, which now resides in the School of Law. He has also mentored dozens of students pursuing the disability studies minor.

Anthony Arnold, a *DO-IT Ambassador* and '94 *Scholar*, has made significant contributions to the field of Augmentative and Alternative Communication (AAC) through his advocacy and career. He has also served as a powerful role model for the employment of individuals with disabilities that affect both mobility and speech.

Dr. Ray Bowen, as dean of the U.W. College of Engineering, made contacts at the National Science Foundation (NSF) in 1992 that led to DO-IT's first grant funding from NSF. He mentored Dr. Sheryl Burgstahler, director of DO-IT, and facilitated collaborations between DO-IT and the College's award-winning programs for women and minorities. This created an expanded view of diversity that became a model for other departments and institutions.



Alan Muir presents Sheryl Burgstahler with the Dr. Robert Greenberg Award for Innovation from COSD.

DO-IT Director Wins Innovation Award

Director Sheryl Burgstahler recently accepted the Greenberg Award for Innovation from the Career Opportunities for Students with Disabilities (COSD) organization. The award recognizes DO-IT's diligence and success in securing employment opportunities for students with disabilities.

Tech Tips: iPhone iThoughts

by Dan Comden, DO-IT Staff

iThought using the new iPhone would be an interesting experience (and it was). The DO-IT technical staff team spent some time with Apple's much hyped iPhone, their latest addition to the crazy world of consumer electronics. Here are our thoughts on its overall design, functions, and accessibility.

Overall Design

The case is solidly built and feels comfortable to hold in one hand with its rounded corners and smooth yet durable glass front. There are few external switches—one relatively rare feature is a switch that puts the phone in silent mode. Many other phones require the user go through menus to

turn off the ringer. Other switches include increase and decrease volume and wake/sleep. The circular button on the front of the unit is used to access the phone's software. All of the programs installed on the phone are available through the phone's touch-screen. Speaking of this interface, users will constantly be cleaning it as it quickly picks up fingerprints and smudges from use, making it difficult to see the screen after a little bit of use. One annoyance is Apple's design of the headphone jack. You cannot use standard headphones with the iPhone, as the hole is too recessed. The earbuds that come with the iPhone have an integrated microphone, which is likely the cause of their design decision.

Phone Performance

In completely unscientific tests, the iPhone did not receive a signal in some areas when compared to other phones that use the same AT&T service. However, during calls voice quality was excellent.

Browser/WiFi

Part of the service with the iPhone is the ability to browse the Web anywhere you have cell service using EDGE. The built-in browser is a flavor of their Safari browser, which cannot display pages that use Flash. Other new web technologies, such as Google documents, aren't fully functional. Pages load in full-screen mode, which can be slow for large complex pages, and each page requires zooming in, which is a two-finger process.

Access to WiFi, a wireless network for Internet access, is an iPhone feature. WiFi capability seems quite good, and the browsing speed improves dramatically from EDGE. We had little problem accessing a variety of WiFi networks on and around the U.W. campus.

Applications

The iPhone offers little new in terms of phone-based applications. The calendar, email, photo-sharing, and music software work best with Apple-based desktop software. Text entry on the virtual keypad takes practice, due to the lack of tactile feedback. Users with large fingers will have a more difficult time entering text and numbers. Unlike phones with standard buttons, there's no way to slide one's fingers across the control surface to achieve positive feedback in key selection. Repositioning the cursor is achieved by holding a finger on the phone's surface until the magnification loupe appears and then sliding the finger around for large movements or rolling it for short movements.

Built-in memory is generous, with 8 GB. Most of this storage capacity will likely be consumed by music files.

The use of the Safari browser allows developers to create Web 2.0 applications for use on the iPhone. Most applications are still in development or in beta, but you should expect the options to expand dramatically in the future.

Accessibility

Potential users with visual or mobility impairments will find using the iPhone difficult or impossible. There is no alternative input option provided, making the phone entirely inaccessible to people who are blind. The system cannot be modified to use larger fonts, so it will also be of limited use to those with low vision.

Very good dexterity is required to operate the touch interface. Any tremors or spasticity will make use of the phone very challenging. Text entry on the keypad displays requires good coordination, aiming skills, and the ability to avoid resting the fingers on the screen while using the phone

keypad or keyboard features. Pinching or spreading motions with two fingers are required to zoom in and out for web pages and maps.

Word prediction does not operate in the same fashion as other phones; it functions much better as word correction. For best results, the user must ignore incorrect letter(s), continue typing, and hope the software figures out the correct spelling near the end of the word. If it does offer the correct word, it really pays off. If not, one has to back up all the way to the incorrect letter(s) and retype the word.

iTunes software, not known for accessible design, is required software for moving images or music to and from the phone.

Complaints about the inaccessible iPod can be transferred to the iPhone. It's regrettable that Apple does not include a self-voicing feature for audio prompts within the operating environment of their consumer devices to benefit potential users with low vision or blindness.

Summary

The iPhone is a high quality device that offers good basic functionality to some users at a high price. It offers an environment that is relatively easy to understand, even if the experience isn't entirely consistent or accessible.



Intern Daren with Phase I Scholar Scott in the computer lab at Summer Study 2007.

The Thread: Phase II Scholar Projects

by Sheryl Burgstahler, DO-IT Director

In this regular column I share some of the messages from DO-IT's e-mentoring community so that you can get the flavor of the many rich conversations we have online. This edition is about *DO-IT Scholar* ideas for Phase II projects, which are completed during the year after the Phase I Summer Study and presented the following summer to Phase I and II participants. *DO-IT Ambassadors*, who are *DO-IT Scholar* graduates, share the projects they completed as Phase II *Scholars*. I recently posed the following question to our Internet discussion forum.

With Summer Study 2007 just ending I know many of you are thinking about the year ahead — what are some of the ideas you Scholars have for your Phase II projects? While we are on the subject, how about if some DO-IT Ambassadors also share what you did for your Phase II projects.

DO-IT Scholar: *[I am interested in doing my Phase II project on the differences between the blind and the visually impaired.] 161 million persons live with a disabling visual impairment, of whom 37 million are blind and 124 million are persons*

with low vision. Every 5 seconds someone becomes blind, every minute somewhere a child goes blind. About 90% of them live in developing countries of Africa, Asia, Latin America and the Pacific Regions. Nearly 6 million of them are preschool and school age children, 90-95% of whom have no access to education (from Braille Without Borders).

For anybody who can't help feeling pity for themselves or mistreated in their life, just take a second and imagine living as one of these children and the adults they will end up becoming.

DO-IT Scholar: *Wow. The statistics are boggling. I learned something new today. So, to make it clear... are you saying that this is what you're currently planning on doing for your Phase II project—making a statistics database or document on global blindness and such? I'd go for it. If you can put these numbers together in a slideshow or something and deliver the presentation with enough power, you should get some pretty extreme reactions from your audience, including audiences other than DO-IT. You could show this presentation at your school in a class or something and see what they think of it. Practice your speech, too, so you can deliver it like *Rolling Sea and Falling Star in tandem* (whatever that means; it sounded cool). It's also vital that you cite your sources at the end of your presentation.*

DO-IT Scholar: *It looks like this is going to be my project. I wish I could make a documentary film or something concerning this subject. I definitely would if I had enough time. I would love to travel to some of these countries and see these precious, innocent children and make a film. I am going to have to stick with information from books and the web. Hopefully, I will get the message out there. If anybody has any tips for me I would love to hear them!*

DO-IT Ambassador: *If you are going to do this [for your Phase II project], I'd encourage you to also present the side of how technology and other tools can help the blind and people with visual impairments. What would be extremely cool is if you could*

find someone who is just learning the tools (Braille, JAWS, etc.) and then show the person as they start off and then again a couple months later. A fairly involved project, but not too time-consuming, and I'd definitely suggest looking into doing the first part (DO-IT could loan equipment/software for JAWS demo or another Scholar could help with that part). Just a few more ideas.

DO-IT Scholar: *Hi, I just read what you are going to do for your project and I think that it sounds awesome!*

DO-IT Ambassador: *An idea that I used [for my Phase II project] when I was a Scholar was writing a web page about accessible web design (e.g., designing websites for those who use screen readers, cannot hear audio, or have difficulty clicking small links). As I worked on that site about six to seven years ago and technology has advanced a lot since then, someone would do well to re-do this project in the current era. Just a thought.*

DO-IT Ambassador: *Wow, that would be a good project to do. People could learn something new.*

DO-IT Mentor: *Could someone compile a book of DO-IT writings for their project? You Scholars are such awesome writers!!*

DO-IT Ambassador: *That's what I was thinking. Someone should compile a book of DO-IT writings for their Phase II project. If anyone is interested, I am willing to help out in any way that I can.*

DO-IT Director: *I think a compilation of DO-IT participant poems and other writings would be a great project.*

DO-IT Ambassador: *I had fun doing my Phase II project which was a PowerPoint presentation about Little People.*

DO-IT Scholar: *Hello everybody! I am a 2007 Phase I Scholar and am putting my Phase II project together. I would like to get some input as to*

how to structure it and make it better for everybody. I am making a music video that I will also be sending in for a scholarship. I am thinking that somehow I can put some of my musical talent into this music video. So if anybody has any ideas please let me know. I also want to make it enjoyable for everybody, so please keep that in mind too. I look forward to your comments.

DO-IT Ambassador: *WOO! I just know it's gonna' rock.*

DO-IT Scholar: *I think you should somehow show that you can play numerous instruments. Show off your talent!*

DO-IT Scholar: *I agree—show off your talent and make it fun!*

DO-IT Scholar: *What kind of music video will it be?*

DO-IT Scholar: *I was thinking about country music. Either that or just get some sheet music for some of my instruments and play them and then meld them together. (If that makes any sense).*

DO-IT Scholar: *You know how the Phase II Scholars used Google Earth with their [Summer Study presentation] video [at closing ceremonies this year]? Maybe you could mix and match something like that with your musical mastery. Show us where you are from and then rock out with music or something like that. Whatever you do is going to be a smash.*

DO-IT Scholar: *That is an awesome idea. Danke! (German for thank you). I will try to fit that in somewhere. I still have to pick a song so if I pick one that I can put that into then I will definitely use that idea. Thanks again! ToOdLeS!!!*

DO-IT Scholar: *I was wondering if you would like to submit something to my anthology of disabled student works. If you are doing an art piece please send it as an attachment. Also send a quick bio about yourself. Thank you for your time, you rule! It will be published next year as a book*

because my dad's company is giving me a grant.

DO-IT Ambassador: *For my Phase II project, I found out more about radios. I was interested in HAM radios at the time, so I did a whole presentation about different kinds of radios, how they work, how to get licensed and things like that. Good luck!*

DO-IT Ambassador: *My Phase II project was a PowerPoint about forensic science.*

DO-IT Scholar: *Cool—I might go into the field of forensic science, maybe computer forensics.*

DO-IT Ambassador: *Ditto. Mine was a PowerPoint about the different forms of forensic science. Even simple projects can be good ones!*

DO-IT Ambassador: *I did mine about famous actors and actresses with Cerebral Palsy and other disabilities using a PowerPoint presentation. Do whatever YOU want to do for your Phase II project.*

DO-IT Ambassador: *I think the best thing to do [when deciding on a Phase II project] is to pick something you're interested in and research it further. That way it won't seem like a lot of work and you'll be more motivated to do it.*

The Browser: Calendar of Events

For a schedule of conferences of interest to our readers, go to

<http://www.washington.edu/doit/Newsletters/calendar.html>

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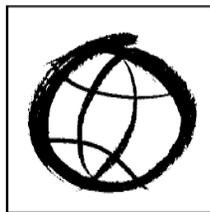
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