

TECHBRIDGEWORLD NEWSLETTER



www.TechBridgeWorld.org

Winter '11

Students Prepare for iSTEP 2011

We are excited to announce the eight Carnegie Mellon students who have been selected to participate in the third year of our iSTEP (innovative Student Technology ExPerience) summer internship program. Thank you to all of the students who applied for iSTEP 2011!



Jonathan Beebe
Junior, Computer Science and Mathematics
Carnegie Mellon - Pittsburgh
Technical Lead for OLPC/Computer Tool project based in Montevideo



Afnan Fahim
Sophomore, Computer Science
Carnegie Mellon - Doha
Technical Lead for Mobile Phone Tool project based in Montevideo



Elise Gonzales
Junior, Computer Science
Carnegie Mellon - Pittsburgh
Technical Lead for Content Authoring Tool project based in Montevideo



Asma Hamid
Junior, Information Systems
Carnegie Mellon - Doha
Technical Floater based in Doha



Roberto Ponce Lopez
Master's Student, Public Policy and Management
Carnegie Mellon - Pittsburgh
Needs Assessment and Evaluation Lead based in Montevideo



Meghan Nahass
Junior, Policy and Management
Carnegie Mellon - Pittsburgh
Dissemination and Marketing Strategy Lead based in Pittsburgh



Hanae Timouali
Master's Student, Information Systems Management
Carnegie Mellon - Pittsburgh
Technical Floater based in Pittsburgh



Vanessa Vázquez
Master's Student, Public Policy and Management
Carnegie Mellon - Pittsburgh
Partnership, Coordination and Marketing Implementation Lead based in Montevideo

The 2011 interns recently completed the iSTEP mini course. The students learned about iSTEP 2011 projects, our partner (Administración Nacional de Educación Pública in Montevideo, Uruguay) and technology field research in developing communities. The outcomes of the mini course will be utilized in Montevideo, as well as in Pittsburgh and Doha, this summer through the iSTEP internship.

The interns are continuing their preparation for this summer's work through independent studies and additional preparation sessions with TechBridgeWorld faculty and staff.

For more details on iSTEP, visit: <http://www.techbridgeworld.org/istep>.

100@100 Meets \$10,000 Goal!

On January 31st, we met 100% of our 100@100 fundraising goal. Thank you to the many donors who participated in TechBridgeWorld's first grassroots fundraising campaign! We were able to raise \$10,000 to support our iSTEP 2011 internship program. We would also like to thank our students and alumni who helped us meet a 100@100 challenge which earned us an additional \$1,000 from a matching donor.

If you were not able to participate in this year's 100@100 campaign and would like to give to TechBridgeWorld, we welcome donations throughout the year. Learn more about how to donate on our website (<http://www.techbridgeworld.org/donate>) or contact us at info@techbridgeworld.org.

For more information on the 100@100 fundraising campaign, visit: <http://www.techbridgeworld.org/100at100>.



Braille Writing Tutor Update



TechBridgeWorld Graduate Student **M. Beatrice Dias** and Project Assistant **Ermine Teves** recently traveled to Bangalore, India to work with the Mathru School for the Blind on evaluating the effectiveness of our Braille Writing Tutor. A secondary goal of the trip was to install new tutors, set up a long term data collection plan, and learn about other needs and challenges. For more details on their experience, visit the TechBridgeWorld blog: <http://techbridgeworld.wordpress.com>.

In Doha, Qatar, the Braille Writing Tutor is currently being featured at the Qatar Assistive Technology Center (Mada).

Through our Assistive Technology program, TechBridgeWorld is developing a stand alone version of our Braille Writing Tutor. Motivated by feedback from our user groups around the world, the Stand Alone Braille Writing Tutor (SABT) is an essential upgrade to the current tutor. Conserving all of the current tutor's features, the SABT is designed to work without an external computer and can operate long working hours with a built-in rechargeable battery pack. Moreover, the SABT includes three user interfaces (primary, intermediate and advanced) so that teachers can select the appropriate interface to match the skill level of the student.

For more information and updates on our Assistive Technology program, visit: <http://www.techbridgeworld.org/assistivetech>.

Undergraduate Research Update

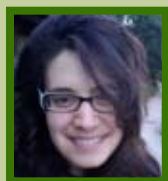
Samreen Anjum, advised by **Brett Browning** and **M. Bernardine Dias** is working on a senior thesis in Computer Science titled "Place Recognition for Indoor Blind Navigation." This work aims to develop a computer vision-based place recognition algorithm that can be used together with simple path planning on a portable system to enable independent navigation for the blind and visually impaired in GPS-denied environments. Her work so far has focused on collecting data for training and testing, analyzing different indoor blind navigation techniques and place recognition algorithms, and evaluating different place recognition algorithms. Currently, she is examining the results of these initial tests, enhancing the performance of her chosen algorithm for place recognition, and incorporating path planning to enable direction guidance.



Varun Arora is working on Education e-Village (E-Village) as a student research intern. The main focus of his work is porting the E-Village web application to Drupal, a popular open source content management system. He is working with TechBridgeWorld Research Engineer

M. Freddie Dias to customize the Drupal application for the needs of the project, which include creating custom databases to store course materials and developing user interfaces for editing, moderating, and viewing and the user generated content. The interfaces will allow users to easily upload new course materials and also browse through and comment on any course materials already featured on the website.

Jonathan Harbuck, advised by **M. Bernardine Dias**, is working on a senior thesis in Computer Science entitled "A Customizable Mobile Phone Game for Enhancing English Literacy." His research aims to design a customizable mobile phone game concept and a corresponding game customization framework, which can be used to adapt the game to individual preferences, in order to improve the effectiveness of the game and increase the user's motivation to practice English literacy skills. So far, Jonathan has done background research on customization, control, and motivation in games and has designed the customization framework. He is currently in the process of implementing the framework, including an adaptation of TechBridgeWorld's existing mobile phone soccer game.



Wennie Tabib is doing an independent study advised by **M. Bernardine Dias**. Her research involves testing and enhancing TechBridgeWorld's CAFE Phone, CAFE Teach, and CAFE Play tools, all of which are designed to enhance English literacy. Specifically, she is customizing a mobile phone game with new themes and multiple levels of increasing difficulty. The enhanced game will be tested with teachers and students at the Western Pennsylvania School for the Deaf.

Congratulations Ayorkor!



Congratulations to Graduate Student Representative **Ayorkor Korsah** on her successful Ph.D. defense last month. (pictured, right with husband Joe Korsah, middle and M. Bernardine Dias, left) Ayorkor is graduating in May and starting in July, she will be an Assistant Professor in the computer science department

at Ashesi University in Accra, Ghana, teaching a variety of core computer science courses as well as electives in robotics and artificial intelligence. Ayorkor will continue to stay involved with TechBridgeWorld with future endeavors. Good luck Ayorkor, we will miss you!

Alumni Corner



Rotimi Abimbola has a deep passion for learning about emerging and mission-critical technologies that assist people, improve processes, and support infrastructure in the developing world. While at Carnegie Mellon, Rotimi pursued a B.S. in Political Science and a B.A. in International Relations. Her studies centered on policy and regulatory based approaches to poverty alleviation in the developing world. She strongly believes that good governance and adequate allocation of resources can play a major role in empowering underserved communities.

In summer 2009, Rotimi participated in TechBridgeWorld's inaugural iSTEP internship. She worked alongside other Carnegie Mellon students to meet the needs of the partner communities in Dar es Salaam, Tanzania. "iSTEP provided me with the life-changing opportunity to interact with technology in a way I never imagined possible. It opened my eyes to the need for culturally-sensitive and low-cost technologies to address day-to-day challenges and I have a new appreciation for the impact technology can have in the developing world. iSTEP took me out of my comfort zone; my capacity was stretched, and I acquired a wealth of knowledge which continues to influence my work to this day."

In December 2010, Rotimi attended the ICTD 2010 conference with other TechBridgeWorld members and alumni in London, United Kingdom to co-present a poster on the iSTEP 2009 social worker project. The conference gave Rotimi a chance to interact with practitioners and top academics in ICTD. "I left the conference feeling empowered to begin incorporating ICTD services within the cluster of service offerings that my current team provides at Booz Allen Hamilton."

Rotimi's experiences with TechBridgeWorld, iSTEP and ICTD sparked her desire to play a role in supporting the creation and implementation of emerging and scalable technologies that positively impact the developing world.

Thank you for your continued interest in TechBridgeWorld projects!

If you would like to learn more about any of our activities or be added to one of our e-mail lists, please contact us.

www.TechBridgeWorld.org

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