

# NEWSWORTHY

*The Newsletter of the Thomas Jefferson Partnership Fund, a non-profit foundation dedicated to raising voluntary contributions to support Thomas Jefferson High School for Science & Technology.*



Photo by Max Reinsel, TJ '12

## President Obama Signs Patent Bill, Speaks at TJ

**President Tells TJ Students: *“I could not be more impressed by what you’re doing.”***

On September 16th, 2011, President Obama signed the America Invents Act. Rather than sign it at an innovative company or an established research university, the President chose to sign this bill, designed to speed up and streamline the patent process, in the gym of our very own Thomas Jefferson High School for Science & Technology. The President may have chosen to bring the 300 legislators and others who worked on the bill to TJ because, as senior Rebecca Hyndman stated in her introduction, “many [TJ students] have or will have connections to the United States Patent and Trademark Office.” Or it might have been because President Thomas Jefferson was not only an inventor but the father of the patent system as we know it. Or it could have been simply because, as the President himself stated, “[TJ] is one of the best high schools in the country.” Whatever the reason, it was a momentous occasion that our students won’t soon forget. Watch the official White House video in its entirety on the Partnership Fund website, [tjpartnershipfund.org](http://tjpartnershipfund.org).

SENIOR REBECCA HYNDMAN DESCRIBES PATENT, INTRODUCES PRESIDENT



Photo by Max Reinsel, TJ '12

Like a true hometown warm-up act, Rebecca Hyndman had the audience laughing and clapping as she told the story of how she persevered to obtain her first patent. “As a patent holder myself, I find [the America Invents Act] extremely important,” she said, in her matter-of-fact way. Cheers followed.

The idea for underfloor storage containers came to her one evening. After her application was initially rejected, she met with the patent examiner and convinced him to change his mind. On



Photo by Max Reinsel, TJ '12

June 1, 2010, Rebecca was awarded a patent. She is currently further developing her idea in TJ’s Prototyping Lab with the goal of commercializing her space-saving invention.

Although she stood alone at the podium, Rebecca pointed out that she was only one of many students with patentable ideas. “My passion for innovation is not unique at TJ,” she said.

SENIOR KARISHMA POPLI’S SOCIAL RESPONSIBILITY PROJECTS RECOGNIZED BY WHITE HOUSE

Also on stage with the President was senior Karishma Popli, whose innovative social responsibility projects caught the attention of White House officials when they reviewed student projects prior to the President’s visit. Karishma firmly believes “it is the social responsibility of educated people to help educate those less fortunate and confined by rural impediments so that they can achieve a better quality of life.”

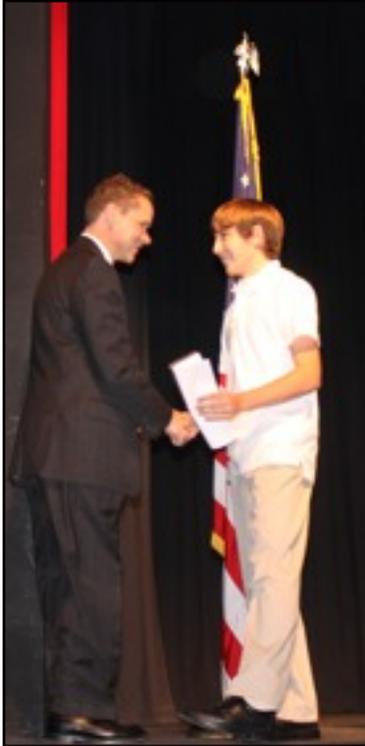
Karishma was awarded Partnership Fund-sponsored “One Question” grants in both her sophomore and junior years for her creative proposal to provide solar lamps to students in rural, underdeveloped village schools in India and Africa and to educate over 2,000 students about the importance of harnessing the power of the sun in order to study effectively at night in areas where there is no access to electricity. Students using the solar lamps are no longer exposed to the dangerous emissions - or the risk of burns and fires - from kerosene oil



Photo by Max Reinsel, TJ '12

lamps, and their test scores have improved because they are finally able to study after daylight hours. Karishma’s work as a young, global changemaker is only beginning; with continued support, she plans to inspire others to make a difference by educating and helping rural village students achieve a better quality of life through the use of sustainable technology.

PARTNERSHIP FUND INDUSTRY LEADER SERIES BRINGS BIG NAMES TO TJ



At the invitation of the Partnership Fund, Northrop Grumman CEO, President, and Chairman of the Board, Wes Bush, visited TJ on October 3rd and spoke to an auditorium full of TJ students during 8th period (Northrop Grumman officially opened its new Falls Church headquarters on September 23rd and is now located just six miles away from TJ). Mr. Bush described current company projects, from the James Webb Space Telescope and Global Hawk fully autonomous aircraft to NG's cybersecurity work.



Throughout his remarks, Mr. Bush emphasized the demand for just the skills that TJ students are developing. He pointed out the variety of professionals needed to collaborate on a particular project: material engineers, aerospace engineers, chemical engineers, optical and electronics engineers, chemists, and computer scientists, among others, all working in teams with each other, with other industry teams, and with the United States government as well as other governments. What makes this work so interesting, Mr. Bush argued, is that "you get to collaborate with other gifted people" while cutting across disciplinary and national boundaries.

In March, the Partnership Fund arranged for two other industry leaders to visit TJ and speak with students: Vint Cerf, Google Chief Evangelist and "Father of the Internet," and Wes Chun, Google Developer Advocate and author of Prentice Hall's bestseller, *Core Python Programming*.



PARTNERSHIP FUND INTRODUCES TJ'S LABS TO PARENTS

For the fourth year in a row, the Partnership Fund arranged for large groups of TJ parents to tour our thirteen unique labs. Led by Jefferson Society tour guides Caroline Woods, TJ '12, Annie Burch, TJ '13, and Thrisha Potluri, TJ '13, over 100 parents visited the labs, where senior research students and Lab Directors introduced the lab's work, described current projects, and explained how specialized equipment is used.

Corporate tours are available by appointment. For information, please contact Corporate Advisory Board Co-Chair Julie Reiss at [julie.reiss@comcast.net](mailto:julie.reiss@comcast.net).



**TJ PARTNERSHIP FUND “DESIGN THE FUTURE” WORKSHOP:  
DEFINING AND REFINING THE TJ 2.0 TECHNOLOGY BLUEPRINT**

*Industry advice and public-private partnerships were critical to the establishment of TJ back in 1985, and they are every bit as important as TJ plans for its first major renovation, which will include completely new research lab facilities.*

On July 26th, the Partnership Fund gathered IT professionals from academia and industry at Microsoft’s Reston offices to support the administration as they plan for TJ’s upcoming renovation. The IT workshop, “TJ 2.0: Design the Future,” provided a platform for experts to share ideas with TJ’s principal, science & technology administrators, and technology staff. Five breakout groups addressed the following areas: networking and security; data access; management and storage; adaptability; and outreach. A second workshop is currently planned to take place at Cisco’s Herndon offices on December 12th.



Widely known as a “Father of the Internet” and currently Chief Internet Evangelist for Google, Vint Cerf shared his vast experience with the Networking and Security breakout group.



Aneesh Chopra, the United States Chief Technology Officer and former Virginia Secretary of Technology, made room in his busy schedule to address the workshop crowd.



TJ Principal Evan Glazer and Partnership Fund Chair Mark Skolnik present Microsoft Education CTO Cameron Evans with a certificate of appreciation for Microsoft’s generous hosting of the event.



Joel Hansma, IT Systems Engineer & Manager, Northrop Grumman Information Systems, and facilitator of the Data Access, Management & Storage breakout group, explains his results to the larger group.

**TJ ALUM USES EXPERTISE TO GIVE BACK**



In 1995, Evan Burfield was a TJ senior about to graduate and row for Dartmouth when he decided to put off college and launch his own company. A year later he founded netDecide, which soon became the leading provider of enterprise wealth management solutions to top-tier financial services firms. After selling that company in 2003, Evan co-founded Synteractive, where he serves as Chairman (and where fellow ’95 alum, Rusty Talbot, serves as a Director). Synteractive technology consultants help businesses, the public sector, and non-profits with all their IT needs, including cloud computing, data management and collaboration, web design, and social media.

Now, Evan Burfield is using his expertise to help both the Partnership Fund and TJ students. Evan took a lead role as facilitator of the Network & Security breakout group at the PF’s “Design the Future” Workshop and intends to remain involved as TJ continues its renovation planning. Evan also joined the PF’s Corporate, Government & Foundation Advisory Board (CAB), which has as its primary goal the long-term development of TJ’s private partnerships. With Will Fuentes, a fellow ’95 alum, Evan is working to establish a TJ Entrepreneurship Club to focus on technology, innovation, business building, capital formation and how to pitch business concepts to venture capital firms. “I wouldn’t be who I am today

without the experiences and lifelong friendships that I gained from TJ. Technology is about to profoundly impact every aspect of how we educate our children. I want to do everything I can to ensure that TJ is a leader in these innovative new ways to deliver STEM education within Virginia and across America,” Evan said.



Evan chats with Vint Cerf at the PF’s July Workshop.

Oh, and by the way, Evan did finally get around to going to college. In 2005, he graduated with an award-winning thesis and a First Class degree in Philosophy, Politics & Economics (PPE) from St. Catherine’s College, Oxford.

## TJ LAUNCHES “STEMBASSADOR” OUTREACH PROGRAM

### *Aims to Put a Tj Face in Every Elementary School*

Over 100 parents have already signed up to be among the first wave of TJ STEMbassadors, parents and students prepared to represent TJ in our region. Parents establish contacts at regional schools in order to promote student involvement in existing STEM activities at the local school and to encourage participation in TJ’s outreach programs. Student STEMbassadors may judge science fairs or robotics competitions, help with math team or Lego League, and tutor or mentor students.

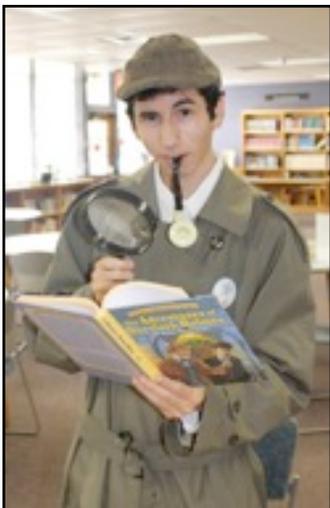


The first parent STEMbassador meeting took place on October 14th in the TJ auditorium. Despite the fabulous response, there are still many schools without an assigned parent liaison. If you are interested in helping to spread the word about TJ, STEM, and the joy of learning to the youngsters of Fairfax, Loudoun, Prince William, and Arlington Counties and the City of Falls Church, please contact Amy Shaw at [wyoamy@gmail.com](mailto:wyoamy@gmail.com).

#### **STEMbassador Program Complements Existing TJ Outreach Programs:**

- 8th period: Techstravaganza, Science Expo on the Mall, tutoring & mentoring, team-hosted events, student diversity initiative, Black Student Union outreach.
- Faculty Diversity & Engagement Team: 150 scholarships to TJ’s Middle School Summer Tech Institute, with follow-up to encourage TJ applications.
- PTSA Diversity Committee: TJ family info night with speakers, breakout sessions, free TJ test prep sessions.
- Admissions: Outreach Specialist position created to help identify and encourage potential TJ students from underrepresented groups.

## TJ STUDENTS SHARE THE MAGIC OF READING AT “DESTINATION: TEXTPLORATION!”



Sophomore Andrew Corzo explains that getting kids excited about literature is elementary.

“Book Buddies,” a club of TJ students who read weekly to children at Weyanoke Elementary school, and their faculty sponsor, Milde Waterfall, are the creative minds behind a new Partnership Fund-supported TJ outreach event, “Destination:TEXTploration!” “As the name suggests, we want the children to ‘textplore’ or open their eyes to the vast world of literature, culture, and the arts through exploration of different texts, games, and reading mediums,” Mrs. Waterfall said.

The club, led by Seniors Sarith Attanagoda and Chinmayee Bala, invited area kids ages three to eleven to come, free of charge, to TJ on Saturday, October 22nd to participate in multi-cultural literature, theater, and dance activities. As many as 800 children and parents attended the inaugural event. Student thespians presented a short play, children’s author and TJ alumni parent, Sandy Pugh, read from her book, and other fun activities were sprinkled throughout the four-hour open house. Kids and parents browsed through piles of free books, taking home an estimated 2000 of them. TJ students, each carrying a book and dressed as a favorite character from the book, talked informally to the youngsters. All in all, about 150 TJ student volunteers participated. “The event moved us closer to being a STEAM school,” Mrs. Waterfall said, playing on the popular STEM acronym. “That’s Science, Technology, Engineering, ART, and Mathematics!”

**TJ'S CURRENT NEEDS INCLUDE:**

- \$200,000 for computer hardware, including workstations for several research labs and laptop carts for both labs and humanities classrooms.
- \$20,000 for training, so several lab directors can take optimal advantage of recently acquired advanced instrumentation.
- \$6,200 for a Hydrogen Alpha Solar Telescope, so Astronomy Lab students can make their own solar observations and analyses and compare their findings with other sources.
- \$6,500 for a refrigerated microcentrifuge that can keep samples chilled at 4 degrees Celsius during extended centrifugation, so that Biotech lab students can isolate DNA, RNA, and proteins with minimal breakdown and maximum recovery.
- \$13,400 for a 100-seat Solidworks Site License (with home use privileges), so that students in the CAD, Energy Systems, Robotics, and Prototyping Labs can learn the CAD program used by most engineering schools, including UVA, Va Tech, MIT, and Stanford.
- \$7,500 for a MiniRov, a remotely operated depth vehicle with video camera, lighting, temperature sensors, a grabber for specimen collection, and sonar for navigation and object location to open up new areas of meaningful research for Oceanography Lab students.
- \$4,100 to replace an older balance, so that Chemistry Lab students may rely on the accuracy of their measurements.

*View the complete Needs List at [tjpartnershipfund.org](http://tjpartnershipfund.org).*



Show your TJ pride. Everyone who donates \$100 during the Partnership Fund's Year-End Appeal will receive this oval "TJ" bumper magnet (vehicle not included).



Bring a little Jeffersonian wisdom to your home or office, dorm room, laboratory or cockpit with this striking new mug (orb design on reverse - bust not included), yours for a \$250 gift to the Year-End Appeal.



For a \$500 gift, you will receive this coveted TJ orb replica, affectionately known in TJ households as the "Orbament" (nope, tree is not included either.)

**HELP MAKE TJSTAR A SUCCESS**



Symposium to Advance Research

TJ's annual tjSTAR research symposium will take place this year on May 30, 2012. This day-long, school-wide event includes presentations, discussions, demonstrations, and interactive learning opportunities, and is intended to facilitate the sharing of student research projects and the exploration of future research options, including research-based careers. For more information and the latest updates, please visit the School's tjSTAR website at [bit.ly/tjstar](http://bit.ly/tjstar).

The Partnership Fund supports tjSTAR each year with a \$15,000 grant, but it takes a lot more than money to make an event like this a success. If you know personally any speakers, panelists or guests who would be a great fit for tjSTAR, please contact the tjSTAR organizers at [tjstarcommittee@gmail.com](mailto:tjstarcommittee@gmail.com) or 703-750-8339. Thanks for your support!

TJ could not fulfill its mission without the voluntary contributions of parents, grandparents, friends, alumni, and our corporate partners. To learn how you can support TJ through the Thomas Jefferson Partnership Fund, please visit our website at [www.tjpartnershipfund.org](http://www.tjpartnershipfund.org), email us at [eesmith@tjhsst.edu](mailto:eesmith@tjhsst.edu), or call us at

703-750-8317.

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