

Agency Stories: Challenge & Prize Competitions

Challenge.gov
@ChallengeGov, facebook.com/ChallengeGov

In September 2011, Challenge.gov celebrates one year of hosting crowdsourcing innovation competitions for federal agencies. To date, there are 129 challenge competitions from among 36 agencies, with over \$38 million in prizes.

Link to Highlight video <http://www.howto.gov/social-media/using-social-media/challenge-gov-first-anniversary>:

Following are summaries from among the best challenges in federal government. Click a link to go directly to the challenge of your choice:

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Healthy Living Innovation Awards

The US Department of Health and Human Services launched the Healthy Living Innovation Awards challenge in January 2011 as a part of the Secretary's Healthy Weight Initiative to combat obesity. The Awards sought to identify and celebrate innovative health promotion initiatives that have demonstrated a significant impact on the health status of a community and then disseminate those successful practices for replication in other community settings. Nominated organizations had to have an innovative project in at least one of three health promotion areas: healthy weight, physical activity, and nutrition. Awards were granted based on the criteria of creativity and innovation, leadership, sustainability, replicability, and results/outcomes. The 2011 Award winners were:

Faith-Based and/or Community Initiatives: Taking the YMCA's Diabetes Prevention Program to Scale—YMCA of the USA (Chicago, Ill.)

Health Care Delivery: Healthy Howard Health Coaching—Healthy Howard Inc (Columbia, Md.)

Healthy Workplace (Large employer): Shape up and Go!—Cleveland Clinic (Cleveland, Ohio)

Healthy Workplace (Small Employer): Healthy Living Partnership Project—S2AY Rural Health (Corning, N.Y.)

Non-Profit: Healthy NC Hospitals Initiative: Healthy Food Environment Project—North Carolina Prevention Partners (Chapel Hill, N.C.)

Public Sector: Exercise Your Right to Feel Better Minnesota—St. Paul-Ramsey County Public Health (St. Paul, Minn.)

Schools (K-12): Mornings in Motion—Oak Ridge Schools (Oak Ridge, Tenn.)

Let's Move Cities and Towns: Shape Up Somerville—City of Somerville Massachusetts (Somerville, Mass.)

Winning nominations were chosen from among a competitive pool of 245 submissions by an HHS expert panel of judges, and were then put before the public for voting. During public voting the site averaged 150,000 unique visits per week. Secretary Sebelius made the final determination of winners based on public votes and recommendations from the expert panel. The Healthy Living Innovation Award winners will receive awards from the Secretary of Health and Human Services at a public recognition ceremony, and will have the opportunity to present their innovations at the Society for Public Health Education's 62nd *Annual Meeting* in October 2011.

For more information, please contact Gregory.downing@hhs.gov

myHealthyPeople App Challenge

The US Department of Health and Human Services, Office of Disease Prevention and Health Promotion launched the myHealthyPeople App Challenge in December 2010 alongside the Healthy People 2020 national health objectives. These 10 year objectives are used by businesses, health officials, clinicians, students and anyone interested in health to measure the impact of programs in their communities. The myHealthyPeople App Challenge sought to bring the more than 1200 measurable objectives and data to the hands (mobile app) or desk tops (computers) of public health stakeholders and health advocates everywhere. Winners presented their App to Senior HHS Officials at the Health 2.0 conference in San Diego. More than a dozen teams submitted apps. The winners, [Healthy Communities Institute](#), developed a fully customizable web based dashboard aimed to help local health officers and elected officials select, track, and benchmark the most important health topics in their communities. A directory of local services was linked to the dashboard along with a list of promising practices.

For more information, please contact Gregory.downing@hhs.gov

The National Cancer Institute's (NCI) Developer Challenge - Enabling Community Use of Data for Cancer Prevention and Control

The National Cancer Institute's (NCI) Developer Challenge, Enabling Community Use of Data for Cancer Prevention and Control, engages the research and developer communities to develop innovative applications with evidence-based data for cancer prevention and control. The Challenge mechanism stimulates open innovation to address the NCI mission to reduce the risk, incidence, and deaths from cancer. By engaging a broader number of stakeholders who are inspired to work on the challenge of cancer control, NCI is supporting a new ecosystem of scientists, developers, and entrepreneurs who can continue to innovate for cancer control and public health. Among the notable winners in 2010 was the Ozioma News Service, created by the Health Communication Research Laboratory (HCRL) at Washington University in St. Louis. Ozioma is a unique application for media relations professionals that extend the potential reach and effectiveness of cancer communication efforts by providing tailored, locally relevant cancer information.

For more information, please contact Gregory.downing@hhs.gov

Apps for Communities (FCC)

The Apps for Communities Challenge is a joint initiative of the Federal Communications Commission ("FCC") and John S. and James L. Knight Foundation to foster digital inclusion and promote broadband adoption. The Knight Foundation is offering \$100,000 in prizes for the best apps; recently the deadline was extended to October 3. .

The Apps for Communities Challenge is intended to bring together providers of public data,

developers, and traditionally underserved populations through a national contest to make local public information more personalized, usable, and accessible for all Americans; promote broadband adoption, particularly among Americans who are less likely to be regular Internet users (including low-income, rural, seniors, people with disabilities and the low digital/English literacy communities); and create better links between Americans and services provided by local, state, Tribal, and federal governments.

Contestants are challenged to turn public information into content, apps and services that expand people's choices on critical issues. Apps could, for example, give people valuable information about their communities in an easily digestible graphic on their mobile devices; help others use tools such as Skype to communicate; allow consumers to choose a health care provider; or deliver contract and seasonal job post alerts in English and Spanish via text message. Please follow [@communityapps on Twitter](#), or [Apps for Communities Facebook](#)

For more information, please contact Gayle Teicher at Gayle.Teicher@fcc.gov

Lifted by the Cloud: Visions of Cloud-Enhanced Accessibility (FCC)

Using challenge.gov as a platform for innovation, the Federal Communications Commission (FCC) launched a visionary challenge on cloud computing and people with disabilities, entitled "Lifted by the Cloud: Visions of Cloud-Enhanced Accessibility." We sought multimedia presentations that showed how the communications and computing power of the modern Internet could surmount disability-related barriers in new, exciting ways. A dozen submissions included videos, slide shows, and software applications that conveyed the potential in this area. Winners of the challenge will be recognized in a ceremony this fall.

For more information, please contact Gayle Teicher at Gayle.Teicher@fcc.gov

Open Internet Challenge (FCC)

The Federal Communications Commission launched a prize competition for innovative research and useful apps that further the understanding of Internet connectivity and network science. Dozens of researchers and software developers answered the FCC's call to action. Winners included MobiPerf, a mobile app designed to collect anonymous network measurement information directly from end-users; DiffProbe and ShaperProbe, research that enables Internet users to detect whether an ISP is delaying customer flows or shaping traffic; and Netalyzr, a network measurement and debugging service that evaluates the functionality provided by ISPs. These tools will provide the public, researchers and policy makers with data and useful information about Internet openness, empowering consumers to understand and protect the free flow of information on the Internet. For more information, please contact Gayle Teicher at Gayle.Teicher@fcc.gov

Apps for the Environment Challenge

<http://www.epa.gov/appsfortheenvironment/>

The Environmental Protection Agency (EPA) launched a challenge to create apps that use

EPA's environmental and human health data. The goal of this challenge is for developers to create apps that will enable communities and individuals to make improved environmental and health decisions. EPA is encouraging developers to use data from other agencies and departments in combination with EPA data for these apps. EPA is also using this challenge to help develop a sustainable community of developers and data experts that could continue improving EPA services and public contributions to the mission. By late August, the developer listserv grew to nearly 2000 members, with nearly 100 green apps ideas submitted by the public and 8 environmental data webinars conducted and available for viewing via the Apps for the Environment website. Apps winners will be invited to Washington, DC for a recognition ceremony and innovation forum on November 8th. EPA is making plans to work with the developer community to meet shared mission goals long after the competition concludes on September 16th.

For more information, please contact Jeff Tumarkin at Tumarkin.Jeff@epamail.epa.gov.

Vehicle Stopper Challenge (Air Force Research Lab - AFRL)

AFRL launched a \$25K prize for a viable, sustainable and affordable means of stopping an uncooperative fleeing vehicle (small car or truck) without causing permanent damage to the vehicle or harming any of the occupants. Over 1000 problem solvers responded to this challenge, providing 118 submissions from 30 countries. A novel solution was provided from Dante Barbis, a retired engineer from Lima, Peru. This solution does not require the device to be prepositioned, is portable, inexpensive, and is simple to operate. This novel idea has inspired junior researchers within AFRL to build and demonstrate a working prototype within the next few months. Their director and chief scientist, upon hearing about the idea and the team's enthusiasm, have empowered them with resources. They also plan, if successful, to demonstrate the prototype to the AF Security Forces.

For more information, please contact Adrienne Ephrem at (937) 528-8732.

Humanitarian Air Drop Challenge (Air Force Research Lab - AFRL)

AFRL offered a \$20K prize for an alternative method to drop large amounts of humanitarian food and water packages from an aircraft into populated areas such that there is no danger of falling objects (i.e. non-food items) causing harm to those on the ground. The Air Force's current TRIADs system is limited to use over unpopulated areas. This project had 1137 problem solvers from 75 countries and resulted in 168 ideas submitted from 35 countries. Two workable solutions were provided by Siepko Eduard, an international engineering consultant from The Netherlands, and Agung Nuswantoro, a self employed engineer from Indonesia. Both solutions provided ways to efficiently eject only the relief packages, with no additional hardware being released which might present a danger to persons on the ground. Each of the solutions had operational constraints that led to a dual award, so that AFRL could take advantage of the best attributes of both ideas. An AFRL team will use these results to build a prototype system for testing. If successful, this approach would open up new possibilities to deliver humanitarian aid to places that we can't today.

For more information, please contact Dr. Keith Bowman at (937) 904-4644.

History Happens Here! Augmented Reality Photo Contest

In December 2010, the National Archives launched its first challenge on challenge.gov. This augmented reality photo contest invited citizens to see history in their reality by mashing a historic photo from the National Archives' collection with the current landscape, putting the differences in perspective. Over 100 entries were submitted to the photo-sharing site Flickr, and the contest had almost 200 likes on challenge.gov. Entries represented 13 different states, and one photo had nearly 30 "likes" on Flickr. The result of the contest was a crowd-sourced postcard book that inspires people to interpret historical photographs in a fresh way. The original concept for the idea involved a mobile application that automatically created the augmented reality, and as a result of the contest, potential developers have been in contact with the National Archives. The impact and success of the contest is best described by a comment that was emailed to the National Archives:

"If part of the motivation behind the contest is to get Americans to look at the content in the US National Archives, then it certainly worked with me. I've already spent an hour combing through fascinating images and information concerning the Pacific Northwest and Alaska. Kudos to the contest organizers!"

To view the winning mash-ups, visit <http://www.flickr.com/groups/naracontestfinalists/>. For more information, please contact Mary.Krakowiak@nara.gov

Improved Barrier Layers... Keeping Food Fresh in Space (\$11,000 prize)

The need for improved food packaging was run as a challenge on a crowdsourcing platform supported by InnoCentive and as a technical need with a consortium based platform provider yet2.com. The challenge/technical need problem was looking for a food storage technology that met mass, volume, and consumable exploration requirements. The improved food packaging need sought a commercially available, flexible, non-foil food-grade packaging that offers high oxygen and moisture barriers. The packaging must withstand high temperature processing, high pressure processing, or microwave processing. It should be light in weight, and able to protect food for up to 5 years.

The improved food packaging challenge closed with 174 total project rooms representing 33 different countries. A total of 16 proposals were reviewed and a partial award went to 1 proposal submitted by a Russian scientist. The solution submitted involved the utilization of graphite foil as a barrier in food packaging to extend the shelf life of food products. With further testing this material may provide the barrier properties needed to extend shelf life for exploration missions. The improved food packaging technical need received a total of 173 website views. A total of 29 leads of interest were identified representing 11 different countries; 5 contacts remain under consideration for future collaboration. Based on the solutions received from the challenge and technical need, the challenge owner is currently collaborating with the DoD Combat Feeding Program to evaluate material acquired through the InnoCentive challenge and the yet2.com

technical need. Although the results are still under formal testing, this challenge/technical need is considered successful because it identified new materials from an industry unrelated to food packaging for consideration and new (not previously identified through traditional mechanisms) vendors for possible future collaborative partnerships.

For more information, please contact Larry Cooper at larry.p.cooper@nasa.gov

Mechanism for a Compact Aerobic Resistive Exercise Device

The compact resistive exercise device crowdsourcing challenge was interested in a novel engineering mechanism for a compact, effective aerobic and resistive exercise device. Specifically, the challenge sought an engineering mechanism that could deliver the proper resistance and work load in microgravity while meeting restrictive mass and volume requirements. The compact resistive exercise challenge closed with 564 project rooms representing 52 countries. A total of 60 individual proposals were received and 1 proposal from a mechanical engineer in Massachusetts was chosen for full award. The solution was for a compact pneumatic suction exercise device similar to an exercise device that is currently on the International Space Station (ISS), the Advanced Resistive Exercise Device (ARED). Although implementation of the solution was placed on hold due to redirection of NASA Program priorities, the challenge was considered a success because the proposed device is much more compact, lighter weight, and novel in terms of how the exercise device and its components were packaged.

For more information, please contact Larry Cooper at larry.p.cooper@nasa.gov

Coordination of Sensor Swarms for Extraterrestrial Research

The sensor swarming challenge focused on determining optimal methods for coordinating the activity and locomotion of a sensor swarm while exploring a planetary body. The sensor swarming crowdsourcing challenge closed with a total of 423 project rooms representing 49 individual countries. A total of 22 individual proposals were reviewed and 3 proposals from solvers in Italy (2) and California (1) were awarded partial awards. The challenge was considered successful because the solutions received were novel ideas for how sensor nodes could make decisions autonomously and in coordination with other swarms. The ideas also helped re-characterize the original problem statement for future research and collaboration efforts within NASA.

For more information, please contact Larry Cooper at larry.p.cooper@nasa.gov

Medical Consumables Tracking

The medical consumables tracking challenge sought a method/process to track “attributable” medication and medical consumables usage from a common medical kit. Specifically, the

challenge sought the capability to track items to a specific user with minimal participation by the individual, and which items needed to be replaced due to use or expiration. The medical consumables tracking challenge closed with a total 365 project rooms representing 57 different countries. A total of 36 proposals were reviewed and 3 proposals from solvers in Virginia, Ohio, and Switzerland were chosen for partial awards. The challenge was considered successful because the solutions acquired confirmed the project team's approach on Medical Consumables Tracking was appropriate.

For more information, please contact Larry Cooper at larry.p.cooper@nasa.gov

Augmenting the Exercise Experience

The augmented exercise experience crowdsourcing challenge sought a system that would enhance the exercise experience and capture data on psychological and physiological parameters while the crewmembers participated in prescribed exercise regimens. The augmented exercise experience challenge closed with a total of 229 project rooms representing 43 individual countries. A total of 13 proposals were reviewed and 1 proposal from a solver in Canada was chosen for a partial award. The challenge was considered successful because the solution presented a novel integration of virtual reality system components that could be utilized by the space program for enhanced behavioral health and performance (BHP).

For more information, please contact Larry Cooper at larry.p.cooper@nasa.gov

Simple Microgravity Laundry System (\$7,500 prize)

The simple microgravity laundry system crowdsourcing challenge requested solvers to conceive of new methods of cleaning clothes that could be performed either on the International Space Station or aboard a vehicle that travels beyond low-earth orbit. The simple microgravity laundry system challenge closed with a total of 598 project rooms representing 50 individual countries. A total of 70 proposals were reviewed and 1 proposal from a solver in Massachusetts was chosen for a partial award. Although the solution has not been directly implemented to-date, the challenge was considered successful because the solution considered the use of a flexible bag concept configured with valves in a way that the project team had not considered before. The project team intends to investigate the concept later this year or next.

For more information, please contact Larry Cooper at larry.p.cooper@nasa.gov

Space Flight Medical Kit Optimization

The space-flight medical kit optimization crowdsourcing challenge was a collaboration between NASA and Harvard Business School and was implemented through a research project comparing the outcomes of collaborative and competitive teams. NASA provided the problem statement of an optimization algorithm that supported medical kit design. There were 2800

solutions submitted by 480 individuals on the TopCoder platform; 1 solution was awarded for an optimized approach to the development of an implementable algorithm. The team that owned the challenge used the coding documentation and the concepts expressed within it, but not the code itself due to software language incompatibilities, to generate the an algorithm to optimize medical kit mass and volume for the Integrated Medical Model. This challenge was considered a success because the team running the challenge felt this process was more efficient than internal development and obtained a novel code and useful approach to developing an implementable algorithm.

For more information, please contact Larry Cooper at larry.p.cooper@nasa.gov

Sustainable Urban Housing: Collaborating for Liveable and Inclusive Cities

This joint effort of the U.S. Department of Housing and Urban Development, the U.S. Department of State, the American Planning Association, and Brazil's Ministry of Cities, with the support of the Rockefeller Foundation, used the Ashoka's Changemakers platform, under the umbrella of the Energy and Climate Partnership of the Americas (ECPA) to identify innovative solutions for providing sustainable, energy efficient housing in a way that unleashes economic opportunities for the urban poor, and builds smarter, cleaner cities in the United States and around the world. Inspired by the innovative Sustainable Communities Partnership of HUD, EPA and DOT, this collaboration was a unique effort to harness the networks, ideas and innovations from around the world to shed further light on potential solutions. Nearly 300 innovators from around the world entered to develop solutions that build affordable, safe, sustainable, and inclusive urban housing that respects local cultures, materials, and practices, with 187 coming from Latin America (fully 50 from Brazil alone) and 50 from the United States.

Three winners emerged from a public voting stage of the competition, which are, [Developing Real Estate for Squatters and Tenants of the City of Buenos Aires, Argentina](#); [Zero Waste, Sustainable Architecture, Renewable Energy: Unlimited Source of Renewable Materials for Sustainable Housing, Brazil](#); and [Green Development Zone, USA - People United for Sustainable Housing \(PUSH\), Buffalo, NY](#). The three winners reflected the varied solutions needed to address the problem, from renewable materials, to rethinking tenant rights, and a neighborhood-wide solution to a distressed city. HUD and the partnership celebrated the winners and finalists and conducted a learning summit at the National Building Museum and HUD Headquarters July 18-20, 2011. See photos, archived presentations and materials here: www.huduser.org/ipi and see partner blog and videos of finalists and partners here: <http://www.nextbillion.net/blog/2011/07/26/a-closer-look-at-ashokas-urban-housing-challenge>. Due to the success of the competition, this initiative will move into successive phases in which innovative ideas will be piloted in ECPA countries and tested further to realize their impacts for great scale and replicability to combat domestic and global sustainable and inclusive housing challenges. Stay connected on this effort and others through the Office for International and Philanthropic Innovation (IPI) website and join our email lists: www.huduser.org/ipi.

For more information, please contact Justin Scheid at justin.e.scheid@hud.gov.

Connected Vehicle Technology Challenge

The U.S. Department of Transportation (USDOT) challenged the solver community to develop concepts that leverage Dedicated Short-Range Communications (DSRC), a technology similar to WiFi that is especially secure and fast, that address challenges to surface transportation safety and mobility. Several USDOT agencies are working with the National Highway Traffic Safety Administration on research that supports an agency decision in 2013 on whether or not to require DSRC equipment to be manufactured into passenger vehicles. USDOT received 76 submissions, including ideas from long-time Intelligent Transportation Systems (ITS) researchers, as well as students, consultants and inventor hobbyists. The winning ideas included a pollution trading system for vehicles, innovative ideas to improve vehicle position estimates, and a new approach to route guidance that considers accident histories. Six winning submissions will be presented at a special session at the Intelligent Transportation Systems World Congress in October, 2011.

For more information, please contact James.Pol@dot.gov

Kids.gov “How Do I Become President?” Challenge

Kids.gov hosted a poster and design contest to explain to kids the complicated process of becoming President of the United States. There were a total of 29 entries, divided into adult and kid entries, with two separate winners. The adult winner, from New Jersey, designed the road to the White House in a fun, easy to understand format for kids. [http://www.kids.gov/president/adult_winner.jpg] This winning design was printed over 10,000 times and distributed to schools and libraries across the country. The posters were a hit at the National PTA Conference and ISTE (International Society of Technology in Education) Conference. In time for the 2012 election, Kids.gov hopes to print more posters and provide it free for ordering online.

For more information, please contact Arlene Hernandez at Arlene.Hernandez@gsa.gov

Apps for Healthy Kids Competition (USDA Center for Nutrition Policy and Promotion (CNPP)).

The Apps for Healthy Kids competition was a part of First Lady Michelle Obama's Let's Move! national campaign to end childhood obesity within a generation. It invited software developers, game designers, students, and other innovators to develop fun and engaging software tools and games that drive children, especially "tweens" (ages 9 to 12), directly or through their parents, to eat better and be more physically active. The tools and games were developed using a USDA nutrition dataset made available to the public through the Open Government initiative. An "all-star" panel of judges including Steve Wozniak (Apple Computer), Mark Pincus (Zynga Game Network), Eric Johnston (LucasArts), and Michael Levine (The Joan Ganz Cooney Center at Sesame Workshop) selected the winning submissions. There were 94 qualified submissions, 21,000 votes cast to select the popular choice award, and 44,135 supporters for the competition. Submissions were received from 29 States and DC, and winners spanned the country from 8 different States. This competition was a huge success for USDA, providing great exposure to CNPP's nutrition interactive tools and information and stimulated private sector investment many times greater than the value of the cash prize. Due to the success of the competition, CNPP plans to launch a second challenge this fall.

For more information, please contact Dr. Robert Post at 703-305-7600

Other Stats:

The challenge stimulated the creation of over \$5 million worth of software and games in exchange for \$60,000 in prizes, some of which was contributed by GE.

Over 100 print articles, 200 web articles, 50,000 tweets and 50,000 Facebook postings were published, generating nutritional awareness on a scale difficult to achieve via normal press releases and outreach.

Recipes for Healthy Kids

Nearly 350 recipes were created by teams of school nutrition professionals, outside chefs, students, and parents.

Team creations have been served in the students' own cafeterias and rated by their peers. Fifteen semi-finalist teams will receive on-site evaluation and online voting by the public, and three finalists will compete in a live cook-off

Unprecedented partnerships and information-sharing occurred between those outside the school and those inside the school food service, which would cost millions of dollars to create through hiring consultants and paying for events.

A cookbook of the winning recipes will be created and distributed to schools throughout America, driving nutritional awareness and improvement.

Bright Tomorrow Lighting (L) Prize

On Wednesday, August 3, 2011, the Department of Energy announced that Philips Lighting North America won the 60-watt replacement bulb category of the Bright Tomorrow Lighting Prize (L Prize) Competition. The Department of Energy challenged the lighting industry to develop high performance, energy-saving replacements for conventional light bulbs that will save American consumers and business money.

The L Prize competition is the first government-sponsored technology competition designed to spur lighting manufacturers to develop high-quality, high-efficiency solid-state lighting products to replace the common light bulb. L Prize product submissions must meet strict technical specifications to ensure compliance with the general requirements outlined in the Energy Independence and Security Act of 2007 (EISA) legislation, with additional details specified for quality, performance, and mass manufacturing. Lighting products meeting the competition requirements will consume only about 17 percent of the energy used by most common incandescent lamps today. This product can help Agencies and Departments meet their obligations under Executive Order 13423 – Strengthening Federal Environmental, Energy, and Transportation Management and Executive Order 13514 – Federal Leadership in High Performance and Sustainable Buildings.

The Philips LED bulb successfully completed 18 months of intensive field, lab, and product testing to meet the rigorous requirements of the L Prize competition – ensuring that performance, quality, lifetime, cost, and availability meet expectations for widespread adoption and mass manufacturing. If every 60-watt incandescent bulb in the U.S. was replaced with the 10-watt L Prize winner, the nation would save about 35 terawatt-hours of electricity or \$3.9 billion in one year and avoid 20 million metric tons of carbon emissions.

Philips is constructing their manufacturing line in Milwaukee, Wisconsin and will be delivering lamps within the next few months.

SMART Challenge

The ONC-funded SMART (Substitutable Medical Apps, Reusable Technologies) Project launched a challenge to create a SMART App for Health. SMART's objective is to enable health IT to accept substitutable apps, much like the iPhone does, thereby opening up a marketplace for health IT innovators. The challenge ran for 2 months, and we received 15 complete submissions. The winning app, Meducation was produced by a small start-up called Polyglot. The Meducation app provides certified translations of medication instructions. Challenge.gov allowed us to cost-effectively demonstrate an early win in attracting new

developers to the health IT space and helped us to get the word out about the SMART Project.

For more information, please contact Rachel Badovinac Ramoni at rachel_ramoni@hms.harvard.edu

Speaker Bios

Larry. P. Cooper was appointed Program Executive for the NASA Centennial Challenges program in January 2011. As Program Executive, he is responsible for strategic leadership of the program, serving as the senior NASA official responsible for the overall management of the program within Office of Chief Technologist (OCT) and for providing oversight of the Level II Program Office at NASA Marshall Space Flight Center.

The current program portfolio includes six active competitions:

- The Strong Tether Challenge (\$2M) focuses material science technologies to create long, very strong cables (known as tethers) with exceptionally high strength-to-weight ratio.
- Green Flight Centennial Challenge (\$1.65M) is advancing technologies in aircraft fuel efficiency and reduced emissions with cleaner renewable fuels and electric aircraft.
- Power Beaming Challenge (\$1.1M) is to demonstrate wirelessly transmission of power to a surface rover.
- Sample Return Robot Challenge (\$1.5M) requires demonstration of an autonomous robotic system to locate and collect a set of specific sample types from a large planetary analog area and return of the samples to the starting zone.
- Nano-Satellite Launch Challenge (\$2M) requires competitors to deliver a payload with a mass of at least 1 kilogram and dimensions of at least 10x10x11 centimeters to Earth orbit and complete at least one orbit past the launch site and deliver the payloads successfully at least two times within one week.
- Night Rover Challenge (\$1.5M) will demonstrate a portable energy collection and storage system suitable for rovers that can operate through several cycles of lunar daylight and darkness.

Prior to joining NASA, he was on an IPA assignment to the NASA Science Mission Directorate where he was involved in formulation and execution of the Education and Public Outreach program.

Jason Hoekstra is a Technology Solutions Advisor for the U.S. Department of Education. Jason plans and implements social media and web-based solutions for citizen engagement and information dissemination. While at the Department, he has led the construction and roll out for websites such as TEACH.gov, Data.ED.gov, and Innovation.ED.gov.

Jason is also a frequent contributor to open data, open source, and open government efforts

within the Department. He has more than 15 years of professional IT experience in software development and network engineering.

James Pol, *Connected Vehicle Technology Challenge (USDOT)*

USDOT challenged the solver community to develop concepts that leverage Dedicated Short-Range Communications (DSRC), a technology similar to WiFi that is especially secure and fast, that address challenges to surface transportation safety and mobility. Several USDOT agencies are working with the National Highway Traffic Safety Administration on research that supports an agency decision in 2013 on whether or not to require DSRC equipment to be manufactured into passenger vehicles. USDOT received 76 submissions, including ideas from long-time Intelligent Transportation Systems (ITS) researchers, as well as students, consultants and inventor hobbyists. The winning ideas included a pollution trading system for vehicles, innovative ideas to improve vehicle position estimates, and a new approach to route guidance that considers accident histories. Six winning submissions will be presented at a special session at the Intelligent Transportation Systems World Congress in October, 2011.

James E. Rannels is the the senior advisor to the L Prize Competition, and worked with scientists, engineers, marketers and managers to facilitate the implementation of the Bright Tomorrow Lighting Prize (L Prize Competition) authorized in Section 655 of the Energy Independence and Security Act of 2007 (EISA). This has resulted in a 25,000 hour, solid-state, 60-watt replacement lamp that is 80% more efficient than an incandescent bulb.

Mr. Rannels has served in or managed several well-known and successful DOE programs :

- ENERGY STAR
- Building Technologies Program (2002—2010), and
- Solar Technologies Program (1990-2002).

James M. Speros, Special Assistant to the Chief Technology Officer, Department of Veterans Affairs

Mr. Speros provides strategic management and operational coordination to the VA CTO, and has been involved in VHA's award-winning Blue Button initiative, its Virtual Lifetime Electronic Record program, data.gov and other projects. He coordinates VA's competitions under the America COMPETES Act.

Prior to joining the VA CTO, Mr. Speros served as Executive Officer to the VHA Associate Under Secretary for Health for Quality and Safety, as a national program manager in VHA's Business Integrity program, and on the Director's staffs in two of VHA's operating regions.

Mr. Speros previously served as Assistant Director of the Ohio Department of Insurance and as a Trustee of a multi-hospital system in Ohio. He has held senior management positions in physician-owned and non-profit managed care health benefit plans. His experience includes

leadership of health insurance operations, Medicare Part C Plans and legal and regulatory compliance functions in insurance holding company systems.

Mr. Speros received his bachelor's degree at Boston University and graduated from the Cleveland-Marshall College of Law. He is a member of the Ohio and Federal Bar and is a licensed pilot. He and his wife, a physician, live in Washington, D.C.

Jeff Tumarkin, Communications Director, U.S. EPA Office of Environmental Information/ Office of Information Analysis and Access

Jeff has worked at the US EPA for over 30 years. During his tenure he has managed both environmental and information management programs and initiatives. In his current role, he is responsible for all internal and external communications and also manages special projects. Most recently Jeff has been the project coordinator for the Apps for the Environment Challenge. When not working Jeff will most likely be found pursuing one of his many interests, which include cycling, kayaking, fishing, photography, or learning more about the power of using social media at work and home.

Ron Vance is a technical expert in sustainable materials management and specializes in issues related to colleges and universities, athletics, K-12 schools, and federal government. Mr. Vance led the development and implementation of EPA's Game Day Challenge, an initiative aimed at recruiting colleges and universities to pursue materials management efforts at college football games. Last year, the Challenge's second year, more than 75 participating schools targeted more than 2.8 million fans and diverted more than 500,000 pounds of materials. Mr. Vance holds a M.S. in Environmental Science and Management and a B.S. in Biology.

Lovisa Williams provided consultation services on the "What Democracy Is" video contest program, and a number of challenges that have been run at embassies and consulates. In addition to providing general consulting services to embassies and consulates on the use of social media and other emerging technologies, Lovisa conducts full policy and legal reviews of all contests before they are launched. She works closely with the Privacy Office, Records Management, Security and Legal office to ensure compliance.

Lovisa is the Deputy Director for the Department of State's International Information Programs (IIP) Bureau's Office of Innovative Engagement (OIE). She is the Social Media Strategist for the Department of State. She is the co-author for the Department of State's first social media use policy. She is also the founder and the manager of the Department's Community Managers Group. She developed the first Community Managers Boot Camp and continues to educate employees on Community Management issues.

Lovisa has over fourteen years of experience working for the Federal Government on technology and social media projects. She specializes in how disruptive technologies require organizational transformation. Lovisa lives at the intersection of people, government, and technology. She is

an innovator who actively explores new ways to solve problems leveraging technology.

Lovisa is an active participant in the community advocating for Government's use of social media. She is a regular speaker in the Government 2.0 community. She is a member of the Federal Web Managers Sub Council on Social Media as the representative for the Department of State and serves on the Federal Government Social Media Training Working Group. Lovisa, and her work at the Department of State, are included in Charlene Li's book [Open Leadership](#) as a business case. She has served for the past two years as one of the organizers for the Government 2.0 Camp in Los Angeles, CA. And she is currently serving on the Board of Advisors for Silberberg Innovations. Lovisa works on a number of community projects such as being the co-founder of the Mobile Citizen Summit and the founder of the Global Citizenship Project. Lovisa is also a contributing blogger for The Community Manager. For more about Lovisa's work, you may follow her at [@lovisatalk](#) on Twitter and check out her blog at <http://lovisawilliams.wordpress.com>