

The ConnectAbility Challenge: Design Challenge for Digital Tech

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- The AT&T-NYU Connect Ability Challenge was a three-month, global software development competition leveraging mobile and wireless technologies to improve the lives of people living with disabilities.
- This 2016 initiative, matched developer talent and client users with disabilities and \$100,000 in prizes were given to the best projects.

Pre-Planning: Start Early

- Ongoing relationship with US telecommunications company, AT&T
 - Ongoing collaboration
 - Previous challenges Metropolitan Transit Authority AppQuest (2013); Connected Intersections (2015)
- Planning meetings
 - Early inclusion of technology users with disabilities (our exemplars)
- Collaboration with Rehabilitation Engineering and Assistive Technology Society of North America (RESNA)

NYU Ability Project

- **Interdisciplinary, interschool** project with focus at **intersection** of disability and function and assistive technology
- **Active engagement** through
 - cross-school courses,
 - client-centered design and research,
 - collaboration with faculty and researchers across the University, and
 - collaboration with community partner organizations and individuals with disabilities.
- Emphasis on **human-centered design** approach to research and learning about assistive technologies
- Guiding Principle: Technology serves people best when they participate in its design. Whenever possible, we include people with disabilities in the design process.
- Guiding Principle: Multidisciplinary approach is better than trying to solve problems alone.



ConnectAbility Exemplars: The Heart of the Competition

- Xian Horn
- Jason DaSilva
- Paul Kottler
- Gus Chalkias



The Process

- Honored the 25th Anniversary of the passing of the Americans with Disabilities Act
- Encouraged exploration of leveraging technology to create better access for all people
- Encouraged open source code

- Hack-a-thon Kick Off event- 36-hour event
- 3-month challenge
- Judging

Hackathon Kickoff

- 36 hours
- Able to find team members
- Exemplars available
- Short lectures on related topics



Hack-a-thon Prize Winners



The Challenge

- **Submission Categories:**

- [Solutions for People with Sensory Disabilities](#)
- [Mobility Solutions](#)
- [Social / Emotional Solutions](#)
- [Solution for People with Communicative and Cognitive Disabilities](#)
- [Solutions Impacting Policy and Society](#)

- **Solutions must include a software component such as:**

- a native smartphone or tablet solution (iOS, Android, Blackberry, Windows Mobile)
- a web solution (mobile or desktop)
- a desktop solution (Windows PC, Mac Desktop)
- software running on other hardware (including, but not exclusive to, wearable technology, open source hardware, etc.)

The Process: Community Events



- Panel Discussion at NYC Apple Store
- From Left:
- Mike, Bawa, Moderator
- Victor Calise, Commissioner of NYC Mayor's Office for People with Disabilities
- Anita Perr, NYU Occupational Therapist and co-founder of Ability Lab
- Gus Chalkias, Technology Instructor at Baruch College Center for Visually Impaired Persons, and Exemplar for Connect Ability Challenge
- Xian Horn, Lecturer on Disability and Self Esteem, and Exemplar for Connect Ability Challenge

Prizes: \$100,000 USD total

Hackathon	\$10,000	
Challenge	\$90,000	
Grand prize	\$25,000	<i>Best in show</i>
Best solution for motor function	\$10,000	<i>Best in functional category</i>
Best solution for sensory function	\$10,000	<i>Best in functional category</i>
Best solution of cognitive function	\$10,000	<i>Best in functional category</i>
Best solution of emotional function	\$10,000	<i>Best in functional category</i>
Runner up prizes for functional categories (\$5,000/ea x4)	\$20,000	<i>Runners up from four functional categories</i>
Best nonclinical application	\$5,000	<i>Best policy and advocacy-oriented solution</i>

JUDGES

Zach Suchin
Co-Founder / CEO, Brand Knew

Aaron W. Bangor, Ph.D., CHFP
AT&T Lead Accessible Technology Architect

Marissa Shorenstein
President of AT&T New York

Anita Perr
Clinical Associate Professor, Department of Occupational Therapy, NYU

Jason DaSilva
Producer/Director of AXS Lab, @AXSMap

Paul Kotler
Student, Blogger, Lecturer, and Advocate, @pdkotler

Gus Chalkias
Assistive Technology Specialist in Blindness, @gussiec

Xian Horn
Teacher, Speaker, Blogger and Beauty Advocate, @XianForBeauty83

Jerry Weisman
Principal, Rehabilitation Technology Services / President, Assistive Technology Solutions, Inc.

Paul Schwartz
Assistive Technology Services Manager, Stout Vocational Rehabilitation Institute (SVRI), University of Wisconsin-Stout

Victor Calise
Commissioner of the Mayor's Office for People with Disabilities



Judging Criteria

- **Quality of the Idea/Vision**
Includes creativity and originality of the idea.
- **Implementation of the Idea**
Includes how well the idea was executed by the developer, the sophistication of the technology, and the ease of use for the target user.
- **Potential Impact**
Includes the potential impact the solution has on assisting people with disabilities overcome barriers that restrict and strain everyday life.
- **Demonstration of Feedback by the End User**
Includes the extent to which user feedback was obtained, in particular with individuals who have a disability which the solution is designed to address.

Submissions

- 63 entries completed
- Representing 15 countries

Winners



WINNER *ing lost in group conversations?*
&ava
 Your JAV personal assistant
 A mobile application that transcribes speech into text. *AVA, let's you see in*
 Pieter Doevendans **USA**



WINNER
KinesicMouse
 Nextgen hands-free computer access with 50+ input signals
 Markus Proell **Austria**



WINNER
LOLA
 LOLA--Laugh Out Loud Aid: Laugh while learning goals every day
 Cristina Ulerio & 1 other **USA**



WINNER
MySupport - The Match.com of
 MySupport is the Match.com of Homecare Support
 Yin Lin & 3 others **USA**



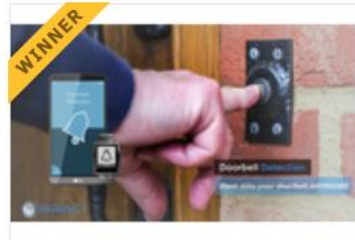
WINNER
InstaAid
 iPad app that serves as an accessible Nurse Call System in a home for
 Elizabeth Hadley & 1 other **USA**



WINNER
DrumPants TAPS: Wearable A
 Wearable triggers give a voice to people who have limited mobility or
 Tyler Freeman & 2 others **USA**



WINNER
EnLight
 Beacon-based navigation for the visually impaired
 Ashwin Kumar & 1 other **USA**



WINNER
Smart Ear for deaf people
 Help deaf people to be alerted to all emergency sounds
 Anwar Almojarkesh **UK**



WINNER
Accessible Peak Meter
 World's first #accessible audio peak-level meter using #sonification #DAW
 Nick Bryan-Kinns & 3 others **UK**

<https://connectability.devpost.com/submissions>

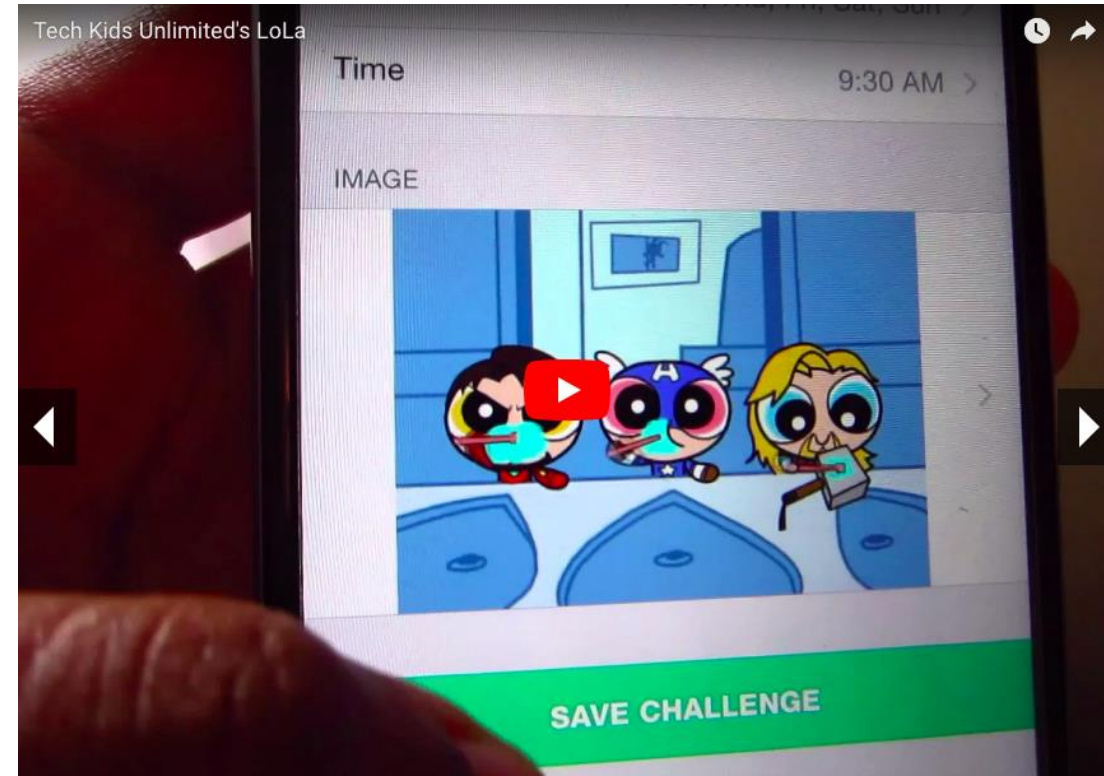
Winner: Best Solution for People with Sensory Disabilities: Ava

- [Pieter Doevendans](#)
- Mobile app that transcribes speech into text
- Group had own "exemplar"
- <https://devpost.com/software/ava-true-autonomy-to-the-deaf-and-hard-of-hearing>



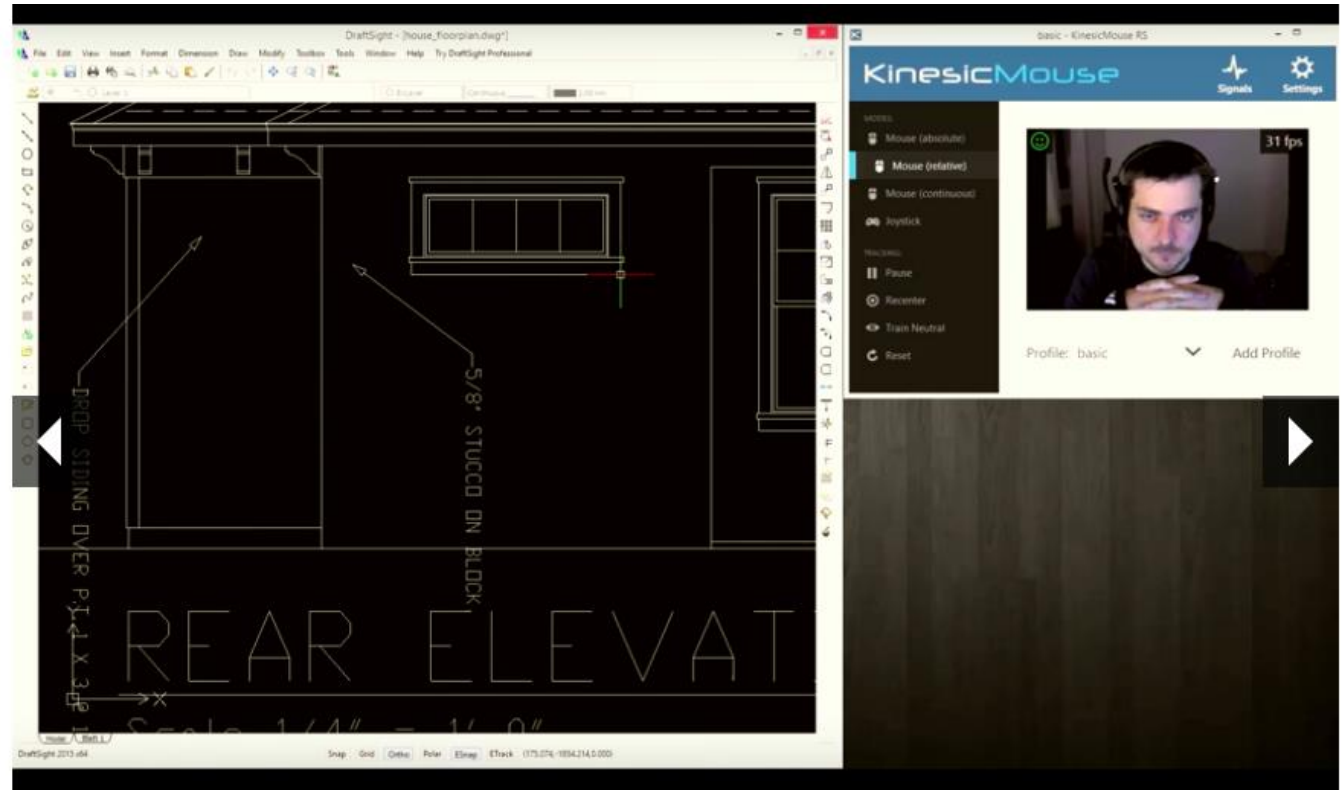
Winner: Best Social/Emotional Solution AND Popular Choice Award: (Laugh Out Loud Aid) LOLA

- [Cristina Ulerio](#)
- [Beth Rosenberg](#)
- Sends funny reminders about social and daily living skills
- Created by TechKids Unlimited
- <https://devpost.com/software/lola-sdqa0>



Winner: Best Mobility Solution AND Grand Prize: Kinesic Mouse

- [Markus Proell](#)
- Hands free PC control through facial gestures and head movements
- (for Jason)
- <https://devpost.com/software/kinesicmouse>



Lessons Learned

- Start early
- Stay excited
- Focus on tech user in every step



Thank you

Promotional Partners



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fresh tilled soil

