



Bringing Voice-activated Learning Systems to Autistic Children with Innovative Mobile Apps.

Nea Hascomb founder states, "Appropo Software was started to develop game apps that I could not find for my son. He loves his iPad, as do most children, but children with autism in particular. I was astounded that with his lack of interest for most activities, how motivated he was with it. There is something about the reliable and consistent feedback from a computer that is so appealing to him. I thought that if there was a speech activated app that would require him to use his voice, he might be motivated to speak for fun independently."



AT-A-Glance

- Early Stage Start-up
- Headquartered in San Francisco, CA
- Founded by Nea Hanscomb in 2013

About Appropo Software LLC

- Our Mission: We are a company dedicated to the unmet needs of our children. They are extremely motivated by technology for both its educational and recreational rewards.
- *"I started Appropo Software LLC in 2013 to help my 13 year old son with severe autism and speech delays. He was diagnosed with apraxia and I was led to believe he would never learn to speak. I would not accept that. For 10 years I have advocated for his education insisting on intensive therapy for him to learn to speak. He enjoyed playing his iPad above all other activities, so I attempted to find suitable voice activated games for him. When I could not, I decided to make my own." – Nea Hanscomb*
- Children on the autism spectrum vary greatly in degree of impairment and cognitive skills. Nonetheless, most of them have a high degree of intelligence and those labeled "nonverbal" face great challenges to relay that to their world. The most important focus of therapy should be on improving communication skills.
- Developing educational game apps that use speech recognition software with the intent to give incentive to individuals with speech delays, and others, to speak for fun and gain practice using their voices. The app would appeal to early language learners as well and could be translated in other languages.

FEW VOICE ACTIVATED EDUCATIONAL GAMES

- Today, every year, one in 50 children is being diagnosed with autism. 25% of those are labeled "non-verbal". It is estimated worldwide 33.5 Million will be born with autism and severe speech delays, Many parents were told that if their child didn't acquire speech by age 4 or 5, most likely they never would—pretty devastating! The most conventional means to address this problem is to teach them alternative means of communication which includes Picture Exchange Communication Systems(PECS), Sign Language and/or Augmentative Communication Devices(AAC).
- PECS involves handing a picture to a caregiver to get something. Sign language is self explanatory. AAC devices are heavy small portable computers with proprietary software that generates speech when you hit a series of icon buttons. These techniques have their strengths and weaknesses. They all seem to be cumbersome, extremely time consuming to produce or not practical. They have been shown to help some kids learn to speak, however they do not elicit speech from the users in order teach them to speak. The most effective method to teach a child to speak would be to pair verbal speech with these systems. Unfortunately due to budget and time constraints of educators, this is difficult to do.
- The heartbreaking message given to parents is that if their children did not speak by age 5, they never would, In 2013 researchers from the Kennedy Krieger Institute's Center for Autism and Related Disorders and John Hopkins University School of Medicine conducted a study involving 535 children, ages 8 to 17, with autism and severe speech delays and found that nearly half became fluent speakers. Given the right type of verbal training, amazing!
- There are 33.5 Million born every year worldwide with autism and severe speech delays, this is huge market potential for technological innovation for this population that is woefully underserved.



Case Study: Telegraph Hill & Appropo Software LLC

"I contracted with THPII for their proven success in Development, Engineering, Operations, and Program Management. They possessed a plentiful and highly experienced team of mature professionals all under one roof", states Nea Hascomb, Founder of Appropo. "They were genuinely interested in the success of my project and were able to counsel me along the way. Their level of commitment extended beyond normal work hours including attendance at a Meet-Up that I organized. Their Founder, David Ward, was supportive of my mission in a philanthropic way, making success a high priority."



"Appropo Software was started to develop game apps that I could not find for my son. He loves his iPad, as do most children, but children with autism in particular. I was astounded that with his lack of interest for most activities, how motivated he was with it. There is something about the reliable and consistent feedback from a computer that is so appealing to him. I thought that if there was a speech activated app that would require him to use his voice, he might be motivated to speak for fun independently." Nea Hanscomb, Founder , Appropo Software, LLC

Why Work With Telegraph Hill?

- Accelerate your business software development and growth with our co-located agile development teams
- Extend your SaaS technical management capabilities
- Hire hard-to-find technical professionals
- Improve your development, quality, and deployment processes
- Keep your business customers and investors highly satisfied

About Telegraph Hill Program Initiatives, Inc.

Founded in 2011, Telegraph Hill Program Initiatives is a technology services firm. We provide San Francisco-Bay Area companies with elite, local business software teams, helping them with time-critical projects, achieve scale, and to grow faster. Specializations include SaaS Architectures; SaaS Operations; Agile Development; DevOps Engineering; API Strategy and Implementation; Test Automation; Big Data, BI, and Machine Intelligence solutions. To [learn more, please visit www.thpii.com](http://www.thpii.com).

INNOVATION IN MOBILE APP TECHNOLOGY

The *Sayin' It* app is an excellent example of the integration of:

- creative domain experts (experience with autism),
- artists (graphics, music, colors),
- experts in mobile iOS Objective C, graphics, and consumer interaction software,
- experts in using voice recognition technology for non-fluent speakers, and
- project management of overseas & local developers and advisors, IOS test and release management

"All these elements were brought together through THPI leadership to create a deceptively simple mobile application with the potential to help a great many children," stated David Ward, Founder & CEO of Telegraph Hill Program Initiatives.



"While our software development work makes money for our clients by disrupting existing business models, we also want to build software that makes the world a better place. Focusing too much on profits can limit the good that innovative software can do. When someone like Nea approaches us with an idea for improving lives, we'll always do what we can to help. Building the initial versions of "Sayin It" has been a rewarding experience for everyone involved at Telegraph Hill."

– David Ward, CEO

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