



ADEC TECHNOLOGY CHALLENGE 2.0

4.16.16

The A in **ADEC** stands for A Life of Their Own. For a majority of our clients, independent living would not be possible without the use of assistive technology.

You can make independent living possible for individuals with disabilities. Here's how:

Gather a team of builders from your high school, university or business (or go solo) and come up with an assistive technology solution based on the attached needs list. After submitting your ideas through the online application (www.adecinc.com/tech), the top five teams from each division (high school, university and independent) will be selected and those representative teams will be entered into the second annual **ADEC** Technology Challenge.

Teams will have three months to complete their assistive technology solution. On Saturday, April 16, teams will present their project science fair-style at the Northern Indiana Event Center to the community and a panel of local experts in engineering, social work and business.

The top team of the independent division will receive a SeeMeCNC ORION™ Delta 3D Printer (Fully Assembled). The top team of the university division will receive a Rostock MAX™ v3 3D Printer Kit (coming out at the beginning of 2016). The top team of the high school division will receive a RotoMAAK Desktop Rotational Casting Machine Full Kit. All items donated by SeeMeCNC and RotoMAAK.

Please read on for more details.



Make ONE TeMAAK MANY

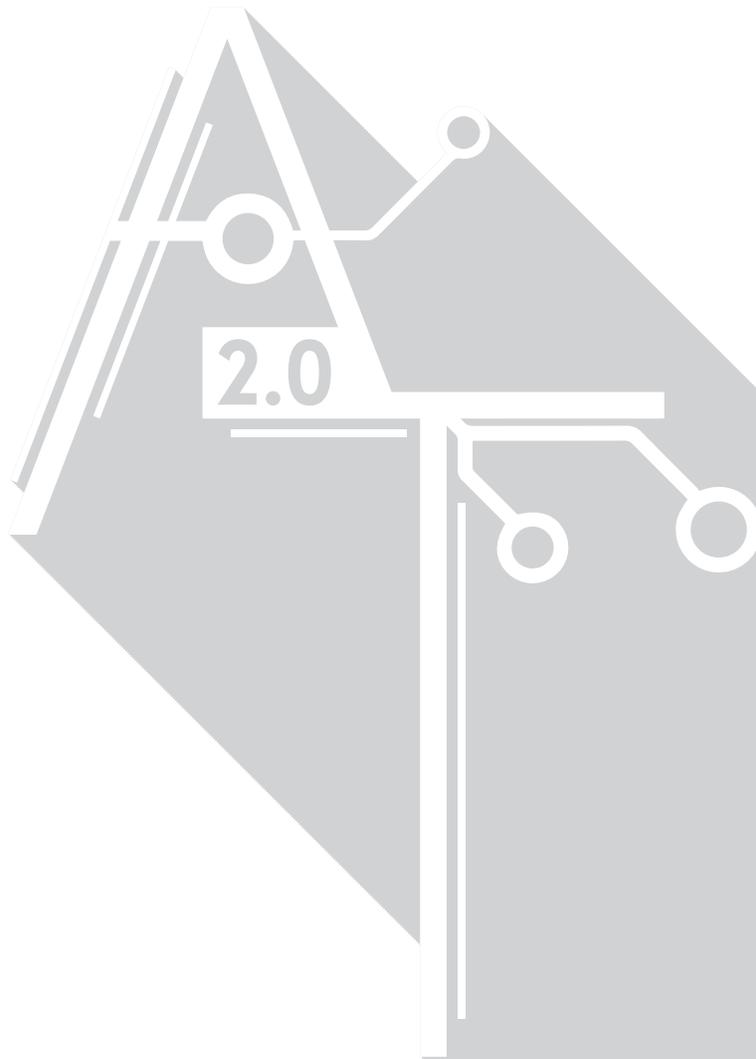
INCLUDED IN THIS PACKET

ADEC Technology Challenge 2.0

- Rules and Judging Criteria
- Assistive Technology Needs and Ideas

Submit your entry to ADEC Technology Challenge 2.0 online at:

www.adecinc.com/tech



RULES AND JUDGING CRITERIA

ADEC Technology Challenge 2.0

To be read and acknowledged by all Entrants.

Definitions

As used in this Agreement, the following terms (in the singular or plural form) have the following meaning:

- “ATC”: ADEC Technology Challenge. The event which takes place on Saturday, April 16, 2016 at the Northern Indiana Event Center for Successful Entrants.
- “Communication Schedule”: Electronic submission of schematics, coding, pictures or video at set dates for Successful Entrants in PDF format during the building process.
- “Division”: One of three competitive segments divided by education/funding level – high school, university and independent (made up of individuals, businesses or service organizations)
- “Entrant”: The individual/team who submits online application with ideas to Organizers.
- “Successful Entrant”: Entrant whose idea is selected to proceed to the Challenge.
- “Officials”: Organizers, Judges, and Mentors
- “Organizers”: Members of the ADEC Technology Challenge Committee

Eligibility

The following are eligible to participate in The Challenge:

- All Entrants must be at least 14 years of age or a freshman in high school.
- Officials may not enter the competition.

Divisions

ADEC Technology Challenge 2.0 will be comprised of three separate divisions, based on education and funding level. Each division is to stay within the set budget. Entries will only be compared to others of the same division (i.e. – high school is only compared to high school). Five teams from each division will be selected as successful entrants to participate in the building phase leading up to the ATC.

- High school teams’ projects are to be funded by their representative school with a budget of no more than \$300 per team entered.
- University teams’ projects are to be funded by their representative school with a budget of no more than \$600 per team entered.
- Independent individuals/teams can find their own sources of funding and have no budget constraints. Successful entrants in the independent division may request that the Organizers find sponsors to help fund their project.

Content

All entries must be the original work of the Entrants.

Entries

Complete and submit the online application at www.adecinc.com/tech. Entries must be received no later than December 11, 2015.

Include up to three project ideas on the online application. For each idea submitted, please include a written description, picture and rough budget. ADEC will provide criteria and guidelines to team members on entries most likely to succeed. *Please see the attached Assistive Technology Needs and Ideas.*

By submitting an application, Entrants acknowledge and agree to be bound by Terms of the 'Competitions Disclaimer' as set out in these Guidelines. As part of submitting their application, Entrants give permission to the ATC Organizers to make their submissions available to all ATC Officials.

Successful Entrants will be notified by phone/email on Monday, January 4, 2016.

Communication Schedule

Upon notification of selection for the ATC, Successful Entrants must follow the Communication Schedule during their building process. All submissions must be in PDF format and sent to Don Wierenga at wierengad@adecinc.com:

- February 1 - Basic schematic with I/O and pictures of the build process
- March 1 - Advanced schematic and pictures of the build process
- April 1 - Itemized list of equipment with cost per item and pictures of the build process
- April 8 - Coding, final schematic, basic operation manual

Resources

To promote fair competition and relevant entries ADEC will provide to each team a tour of an ADEC facility for the purpose of educating teams on the needs and desires of people with intellectual disabilities, an ADEC employee liaison and an ADEC consumer liaison. Each team may use all, some or none of these resources at their discretion.

ADEC will provide - in this packet - a list of potential assistive technology project ideas. Project ideas will not be limited to one team; multiple teams may develop solutions along the same project path solution (i.e. - two different solutions addressing the need to stay active while in a wheel chair).

The Event - ATC

The ATC takes place from 9 a.m. – noon on Saturday, April 16, 2016 at the Northern Indiana Event Center (21565 Executive Parkway, Elkhart, IN 46514). The ATC will have a science fair-style set up, with 8'x8' areas for each of our teams to display their work to the community and ATC Officials.

Successful Entrants are encouraged to decorate their display area at the ATC with visuals of their building process. ATC Organizers will provide a table, chairs and an electrical outlet. Successful Entrants must bring their own equipment to display the process, including: poster boards, laptops, televisions, extension cables, etc.

All assistive technology developed for the ATC becomes ADEC property. The intellectual property will be considered open source to be available for future development by the Entrant, ADEC or any other entity. All assistive technologies produced will be used serve ADEC consumers.

Judging

The judging panel will be made up of experts in the fields of: working with individuals with intellectual disabilities, engineering and communications.

The ATC Officials, acting on advice from the Judges, reserve the right to disqualify any entry that, in its opinion, violates the rules or the spirit of the competition.

All prizes are awarded at the discretion of the judging panel and all judging decisions are final and not subject to appeal.

Judging Criteria

Our main objective is to develop technologies that will help those with intellectual disabilities gain greater independence in daily activities. Below is a list of each category and their weight in judging:

- Increases Independence (25%)
- Simplicity of Operation (15%)
- Reliable (15%)
- Safe (15%)
- Significant Impact (10%)
- Original (10%)
- Replicable/Feasible/Cost Effective (5%)
- Followed Communication Schedule (5%)

Prizes

The winner of the independent division will receive a SeeMeCNC ORION™ Delta 3D Printer (Fully Assembled).

The winner of the university division will receive a Rostock MAX™ v3 3D Printer Kit.

The winner of the high school division will receive a RotoMAAK Desktop Rotational Casting Machine Full Kit.

We are still reaching out to sponsors. We hope to offer a cash prize on top of the 3D printer/rotational casting machine received by the winning team of each division. We plan to have a Peoples' Choice Award at ATC 2.0 as well. More information for Successful Entrants is forthcoming.

Competition Disclaimer

By submitting an entry, the Entrants agree to the following conditions:

Originality: The Ideas embodied in entries are the original work of the Entrant(s) and their exploitation will not, to the best knowledge of the Entrant(s) (but without having made any specific enquiries) infringe the intellectual property rights of any third party.

Compliance: Entrants confirm that they have read the rules and certify that their entry complies with, and they agree to abide by, those rules.

ASSISTIVE TECHNOLOGY NEEDS AND IDEAS

ADEC Technology Challenge 2.0

Your assistive technology solution should fit into one of three categories of need: Munch, Media or Mobility. In thinking of your solution, first consider the intellectual disability. Make sure your solution is simple, understandable and easy to operate. Second, consider physical limitations, such as ease of input or interface.

Munch | These are personal care needs such as accessing drinking water or preparing food with increased independence.

Example: An individual with a cognitive/developmental disability may be able to drink a glass of water set in front of them, but they may not be able to process all the steps to get to that point on their own – getting the water, getting the cup, pouring the water into the cup and drinking. *How can they complete this task? How can this be an easier process?* Such an individual may have problems dispensing the water as well. *What's a better way to dispense water?*

Media | These are ways to increase independence in using TV's, MP3 players or accessing the internet.

Example: An individual with a cognitive/developmental disability may like a particular band or style of music, but have no idea how to search, find and listen to it on an MP3 player. *What's an easier way to search/find music?* Another example could be the remote control for a television. There are so many buttons that are small; it can be very difficult for a person with a cognitive/developmental disability to figure out how to use the remote. *What does a simpler, yet fully functional remote look like?* A final example in this category would be accessing the internet. An individual with a cognitive/developmental disability needs to be able to turn on a computer, open a web browser, and find a site/set of sites they want to go to. Then they interact with the audiovisual elements of the site, including music or videos. *Is there a simpler way to access the internet? Is there an easier way to open a particular website? Is there a way to automatically play audiovisual content when a particular page is opened?*

Mobility | These are ways to increase independence through coaching, promoting movement and communication

Example: An individual with a cognitive/developmental disability may want to work, yet needs constant and consistent job coaching. The job coach is not able to be at the place of employment all the time. *How can a job coach be present without physically being there? How can the individual become more independent at work?* Another example could be for a wheel chair bound individual. It's not good for anyone to sit in the same place for extended periods of time. They need to be active, at least moving to a new location every so often. *How long is too long for inactivity? How can this person be moved from point A to point B when they want to, but are unable on their own?* A final example for this category would be an individual that is non-verbal – they don't speak or write. They throw their chair, but have no way to express their emotion other than exhibiting a behavior. *How can they express their emotion? Is there something visual that can show others how a non-verbal individual is feeling? Is there a way to be proactive by helping the individual communicate how they feel, thus disarming the behavior before it starts?*

HINTS FOR WHAT WILL WORK BEST: BIG BUTTONS, PICTURES, COLORS, AUTOMATED VERBAL INSTRUCTION