



# The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

## Final Copy of Case Study

**YEAR:**  
*2012*

**STATUS:**  
*Laureate*

**Organization name:**  
AMD Foundation

**Organization URL:**  
[www.amd.com/changing thegame](http://www.amd.com/changing%20thegame)

**Project Name:**  
AMD Changing the Game

**What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?**

AMD recognizes that science, technology, engineering and math skills, known as STEM, are not only important in a 21st-century work environment, but required to provide a trained workforce for countries around the world to achieve economic success. Many regions of the world are at a disadvantage in educating their youth in STEM-skill areas. Their inability to properly prepare citizens for the digital age means that they may never enter it. The AMD Changing the Game (CTG) program seeks to address this issue by supporting programs globally in such nations as Brazil, Canada, China, Germany, Malaysia, the United Arab Emirates (Abu Dhabi) and the United States. CTG is an innovative program designed to inspire youth to learn skills by creating their own video games around a social issue, such as energy, environment, health and wellness, bullying, etc. CTG focuses in four areas of support for this issue: game design, game competitions, curriculum, and advocacy. Many of the youth served by CTG had their first experience in using technology and creating games as a direct result of this program. Also, youth with diverse backgrounds are being exposed to technology and technology careers and gaining a greater understanding of potential career opportunities that they previously had not considered. Metrics are based on a set of key performance indicators including number of youth reached (55,674), number of teachers trained (4,370), number of games created (7,590) and the number of AMD processor-based PC technology centers deployed (21). To date, the AMD Foundation and AMD Inc. have distributed nearly US\$6 million to nonprofit organizations and schools in the form of monetary grants and computer hardware to support game development in STEM education.

**Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.**

Technology deployed includes laptop and desktop computers, networking equipment, overhead projectors, and cameras. These technologies were deployed in schools and non-profit organizations from the U.S. to rural China. Rather than just teaching youth the basics of a PC, this innovative program empowers youth, nearly all of whom play video games, to design their own video games. Designing video games requires math, programming and an advanced use of technology, which benefits the students and encourages them to pursue additional courses in STEM subjects. The most significant challenge that was overcome was getting wiring up to code and installing Ethernet cable in China. Our implementation team was able to secure the correct contacts in country to ensure safe and correct installation.

**Please list the specific humanitarian benefits the project has yielded so far.**

Through this program, youth with diverse backgrounds are being exposed to technology and technology careers and gaining a greater understanding of potential career opportunities that they previously had not considered. Qualitative results from case studies, interviews, and surveys have been positive. Students have reported overcoming learning disabilities to become productive members of their game-design teams. Students gained skills in programming, project management, critical thinking, collaboration and team work, and social networking. Lack of diversity in technologically advanced workplaces is a challenge that CTG is addressing. In 2006, only 3% of the scientists and engineers in STEM occupations were Black, 4% were Hispanic, and 26% were women (of any race), while 55% were white men. Through CTG, youth with diverse backgrounds are being exposed to technology and technology careers and gaining a greater understanding of potential career opportunities that they previously had not considered. Many CTG programs, including our sponsorship of the Boys and Girls Clubs of America's Game Tech Program and the East Austin College Prep Academy, target minority populations.

**Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.**

Qualitative results from case studies, interviews, and surveys have been positive. Some students have reported overcoming challenges such as learning disabilities and becoming more productive students. Some program examples: Boys & Girls Clubs of America. 10 new technology centers have been created since 2008, and funding from the Foundation enabled the creation of the Game Tech game design curriculum that has impacted over 16,000 youth members. East Austin College Prep Academy. Funding provided 2 new computer labs for the school and funded an in-school game design curriculum called Globaloria. Kids learn game design and web 2.0 skills as part of their regular school day, including creating and maintaining their own blogs, using wikis and producing videos about the design of their games. Program currently serves 300 6th, 7th and 8th graders in a very disadvantaged community on the east side of Austin, Texas. Students are gaining technology skills; ESL students have seen improvements in language skills, anecdotal evidence of improved standardized test scores and decreased failure rates, increased interest in pursuing STEM-related careers in middle school girls. Quotes: "I had fun learning to code. It was hard, but that made me want to do it even more," said a 6th grader at East Austin College Prep. "Before we got the computers I wanted to be an ice cream truck driver, but now I want to be a game designer and make my own games, maybe have my own company," said a Boys & Girls Club member from Germantown, Maryland. "Once we started the game design workshop, the engagement level of the kids soared. They were more focused on tasks and working toward

completion. I also didn't encounter as many behavioral issues," said a Westview Middle School teacher in Pflugerville, Texas.