



Matthias Reumann

technology for the benefit of humanity

The IEEE's mission statement says, "IEEE's core purpose is to foster technological innovation and excellence for the benefit of humanity." The essence of biomedical engineering is to develop technology for the benefit of the patient and humanity. It is not surprising that this year's "IEEE Presidents' Change the World Competition" had many projects awarded that were related to biomedical engineering. The task of the competition was to tackle real-world problems using engineering, science, computing, and leadership skills to benefit the community and/or humanity (www.ieee125.org/change-the-world/). The IEEE Student Humanitarian Supreme Prize of US\$10,000 was awarded to Drew Hall and Richard Gaster, two students at Stanford University, California, for their development of NanoLab: a hand-held diagnostic laboratory that was designed to create a portable protein-detection platform. Its impact on society ranges from life-saving clinical diagnostics in the third world to rapid over-the-counter tests sold in pharmacies (www.ieee125.org/change-the-world/top-competitors/nanolab-hand-held-diagnostic-lab-ratory.html). The IEEE's Distinguished Student Humanitarian Prize of US\$5,000 was awarded to students at B.V. Bhoomaraddi College of Engineering and Technology, India. The team developed electronic aids for physically/mentally handicapped children. The aim was to use electronics to help physically/mentally handicapped children of USHAS Center for Exceptional Children, Hubli, India (www.ushas.org), by developing games/devices/toys, etc. that will create excitement/interest in the children to play them and hence undergo physical/mental exercise, which is prescribed to overcome them from their disability but

which they normally tend to neglect due to lack of enthusiasm and interest (www.ieee125.org/change-the-world/top-competitors/electronic-aids-physically-mentally-handicapped-children.html). Another two projects with biomedical engineering background were each

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awarded an Outstanding Student Humanitarian Prize (US\$1,000): "Information System on Human and Health Services (ISHHS)" by Sampathkumar Veeraraghavan, Medford, and "NIDAAN—An e-Healthcare Solution for the Under Privileged" by Sumit Pandey, Gandhinagar, India. Sampathkumar Veeraraghavan also received the "People's Choice Prize" for the same project with which he was able to help millions of people in India. He and his project are also featured in *ieee.tv*'s "Profiles in Volunteering" (www.ieee.org/portal/site/ieeetv/menuitem.6ce799f946c20d660374ca695bac26c8/index.jsp?&pName=ieee.tv.viewer&path=membport/ieee_tv&file=CNT_profiles_Veera.xml&vid=111877&play=true).

Altogether, biomedical research projects received five of the nine awards in

this year's IEEE Presidents' Change the World Competition. We would like to congratulate the winners whole heartedly and encourage them to continue their work for the benefit of humanity. The 2010 IEEE Presidents' Change the World Competition was open for project submission until 31 January 2010, and the awards will be presented in person on 26 June 2010 (www.ieeechangetheworld.org).

Together with the United Nations Foundation, the IEEE and especially Graduates of the Last Decade (GOLD) members are working on the "Humanitarian Technology Challenge (HTC)." Here, the IEEE is sponsoring a Regional Student Design Competition for solutions to one of the three humanitarian problems as part of the joint IEEE United Nations Foundation HTC. The competition starts from October 2009 to May 2010. Again, two of the three humanitarian problems presented are related to the engineering in medicine and biology field: "Data Connectivity of Rural District Health Offices" and "Individual ID Tied to Health Records." The third project concerns reliable electricity in resource-constrained environments.

Both the IEEE Presidents' Change the World Competition as well as the IEEE HTC target the student and GOLD members to work in teams to develop technology for the benefit of humanity. Many of the challenges and problems identified are closely related to biomedical engineering. I would like to encourage all our GOLD members to participate in these challenges and invite everyone to become part of the EMBS GOLD Global Community. We will hold conference calls regularly to discuss our involvement and your engagement to tackle the challenges at hand. The EMBS GOLD Global Community's aim is to help you around the world to realize your goals in your region. Please contact Matthias Reumann (mreumann@ieee.org) if you would like to get involved and for more information on how you can participate.