



The Affymetrix Health Award

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Introduction

This year we considered 60 applications for the Affymetrix Health Award, hailing from 20 countries. The applicants worked on a diverse range of technologies addressing many globally significant health issues, and the diversity and quality of the pool created welcome challenges for the selection panel. We were excited by technological novelty and creativity, but we also took very seriously the Tech Awards mantra: “*Technology Benefiting Humanity.*” Many projects *sound* like great ideas, but never make it out of the laboratory for practical implementation in the real world. We looked for projects that were successfully translated from concept to operational reality, with documented tangible benefits to human health upon implementation. Most of the projects honored in the Health category this year would feel right at home in Silicon Valley. Two of the Laureates, SATELLIFE and the Fritz Institute, are leading the way in using some of Silicon Valley’s favorite Information and Communications Technologies (ICTs) to connect relief workers and healthcare providers around the world. Another of this year’s honorees, the LSTAT trauma care platform, integrates streamlined medical technology and state of the art ICT into a uniquely portable patient care platform. LSTAT and the fourth project honored this year, the Infrared Fever Screening System, a sophisticated thermal imaging system, are undeniably *cool*—and what more could a Silicon Valley technophile want? By comparison, the final project honored this year, the UV Waterworks water treatment system, might be considered “low-tech,” but this deceptively simple, elegantly engineered device probably has saved thousands of lives already, and may save millions more in the future by reducing waterborne disease in the developing world.

Fritz Institute, San Francisco, California, U.S.

A daily glance at the news is enough to remind us that the world is continuously beset by humanitarian disasters. Humanity is powerless to prevent devastating acts of nature, from earthquakes to hurricanes, floods, and drought. Sadly, we also cannot seem to find ways to stop the man-made humanitarian crises of wars and civil strife. Technology can, however, reduce human suffering in times of upheaval. Organizations such as the International Federation of Red Cross and Red Crescent Societies (IFRC) are early responders to humanitarian crises in the third world. Rapid and effective direction of relief supplies and personnel to crisis sites is a daunting task.

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The Fritz Institute, a non-profit organization based in San Francisco, has developed logistics management software tailored for relief organizations, allowing them to operate more effectively and respond more quickly to crisis situations where time is of the essence. The Fritz Institute was founded by Lynn Fritz, the founder and former CEO of Fritz Companies, which specialized in international shipping and logistics management until it was acquired by United Parcel Service in 2001. Fritz realized that sophisticated logistics management practices could be extremely useful for international relief agencies, just as they are for shipping companies and far-flung international corporations. The Fritz Institute was founded with the mission to “enhance the operations capabilities of humanitarian relief organizations, by mobilizing resources and expertise from the corporate and academic communities.”

Humanitarian Logistics Software (HLS) was created by the Fritz Institute after reviewing the logistics needs of the largest humanitarian organizations in the world, including the IFRC. HLS is a globally-accessible, Web-based system that operates from a “General Framework Module” incorporating organizational structure, geographic information, a comprehensive relief supply database, currency exchange rates, delivery and payment terms, and other data. Coupled to the general framework module are Mobilization, Procurement, Logistics and Tracking, and Reporting modules. Working together, these modules streamline operations of the relief organization, allowing it to quickly direct resources—food, water, shelter, medicine, generators, whatever may be needed—to critical sites. Added benefits of HLS include waste minimization, enhanced transparency to donors and partners, faster post-crisis recovery, and improved training for future events.

The Red Cross, the primary implementer of HLS to date, estimates that HLS can expedite delivery of supplies to crisis sites by up to 33%. Shorter response times can literally make the difference between life and death. Although detailed data are not yet available, the IFRC emergency relief operations team felt that HLS significantly improved their performance in response to a major

earthquake in Morocco in April, 2004. The Fritz Institute is currently working to implement HLS with other relief agencies, including the European Community Humanitarian Office, in hopes of further reducing human suffering through more effective disaster responses.

For more information see, <http://www.fritzinstitute.org>.

