

Workshop Summary

CCC Workshop on Computer Science and Global Development

August 1-2, 2009

Claremont Hotel, Berkeley, CA, USA

Background

On August 1-2, 2009, approximately fifty participants gathered in Berkeley to discuss the future of Computer Science research supporting global socio-economic development. Over a rich two days of discussion, deliberation and decision-making, we arrived at some major decisions, identified contentious points for further discussion, and decided on next steps for the community. These outcomes are summarized in this document.

Decisions

In this section we summarize the major decisions taken by the community during the workshop.

1. *ACM SIGDEV* - One issue on which there was unanimous consensus was the need for a formal group representing our community. It was decided that the most appropriate forum would be as a special interest group within ACM. After some deliberation, the group chose the tentative name ACM SIGDEV, or the ACM Special Interest Group on Global Development. After a short discussion, the following mission statement was decided upon and agreed to by all members of the group.
 - SIGDEV promotes the study and practice of the design, implementation, use, and evaluation of information and communication technologies (ICTs) for global socio-economic development.
 - SIGDEV fosters collaboration and exchange between computer scientists, engineers, and other scholars and practitioners in this multidisciplinary space, spanning fields such as anthropology, sociology, economics, political science, industrial design, and others.
 - SIGDEV advances its mission by sponsoring publication venues, publishing newsletters, and conducting education and outreach activities.
2. *Technical ICTD Conference* - It was also decided that SIGDEV needs a flagship conference to consolidate technical work in the area. The current ICTD conference was not seen as sufficient, as its focus is on

integrating many disciplines, spanning social science and technology, and as a result can only accept a very small number of technical papers each year. Establishing our own conference would allow us to build a critical mass for research in the area, providing a venue for the best work that would otherwise target (or was perhaps published in) existing workshop-level venues focused on Computer Science sub-areas and their intersection with development (NSDR, WiNSDR, HCI4D, AI4D, etc.). It would also allow us to develop our own criteria for acceptance. It was decided that the first technical ICTD conference should be co-located and held immediately before or after ICTD 2010, in December 2010.

3. *Criteria for Evaluation* - After much deliberation, the following three criteria were decided to be the most relevant for this field. However, the consensus on these criteria was significantly weaker than on the above points, specifically regarding the importance of criteria #2.
 1. Relevance of problem for development
 2. Solution with technical content
 3. Evaluation of solution with case for development-focused impact

Points for Further Discussion

In this section we describe some issues not resolved during the workshop, which will require further discussion and more experience in the community.

1. *Metrics of Evaluation for Research* - During the discussion of criteria for evaluation, there was some disagreement about the importance of novel technical contributions. In general, everyone agreed that technical novelty was one important factor in judging the quality of research in this area, but not everyone agreed that this was a requirement. Some argued that significant empirical results demonstrating the effectiveness (or ineffectiveness) of applications of existing technology on important development problems could also constitute a solid research contribution. In general, further discussion and more experience is required before the community will come to any consensus on appropriate metrics of evaluation for research.
2. *Need for a Technical ICTD Conference* - There was also some disagreement on the need for a new technical ICTD conference. Some participants argued that the multi-disciplinary ICTD conference was sufficient, and that we must strive to engage more deeply with the other disciplines represented there. Others argued that to make deeper inroads within Computer Science, we must continue to publish in top venues within existing sub-areas. The current approach of co-locating x4D workshops with these venues was cited as an important first step in engaging other computer scientists and expanding our

field. However, in the end it was agreed that the community needed a place to congregate and share research across all sub-areas of CS, to establish critical mass. The CCC workshop itself was cited as an example of this, combining researchers from various areas who would not have met otherwise. One possible compromise that was suggested would be to make the technical ICTD conference a selection of top technically-oriented ICTD conference papers from across a number of selective venues. The various workshops would also be encouraged to continue, perhaps with the collaboration of SIGDEV.

3. *Engagement with other Disciplines and the Practitioner Community* - We also need to find better ways to engage with other disciplines, including publishing in venues relevant to them. Several participants mentioned that journal publications would be required for attracting the attention of public health researchers, and of researchers from outside of America. An even deeper problem is engagement with the practitioner community. For example, what is the appropriate target for technology transfer? NGOs, industry, governments, start-ups and social enterprises could all be candidates. However, in many cases technology transfer is much more difficult in this context, because the market segments being targeted do not have any technically savvy businesses or other organizations catering directly to them. Also, how can perspectives and feedback from users and implementing organizations be better included in setting research agendas and evaluating the quality of research?
4. *Establishing a Shared Research Agenda* - Finally, while we made some progress during our break-out sessions, more work is required before we can agree upon a shared research agenda amongst our community, including a sense of the open, hard problems facing our field. Much of this will also be dependent on how we choose to frame our research problems, and evaluate research focusing on technical issues in ICTD.

Next Steps

- We are currently discussing with the ACM coordinators for new SIGs about the process for writing a proposal for the creation of SIGDEV. The main criteria appears to be the existence of a large community willing to contribute to and participate in SIGDEV activities. The CCC workshop is a great first step towards demonstrating the existence and enthusiasm of this community.
- The organizers of ICTD 2010 have agreed to allow us to co-locate the first technical ICTD conference, which is now scheduled to take place on December 17-18, 2010. We have also decided to stagger the ICTD and technical ICTD submission deadlines, so that we do not compete for the same papers. Tentatively, ICTD papers will be due in April,

with decisions expected in June. Technical ICTD papers will be due in July, with decisions in September. The next step is to choose a name, obtain collaboration with ACM, and to start raising the awareness of this conference among the ICTD and CS communities. A great place to start will be the existing x4D conferences to be held this year.

- We are coordinating with researchers at Georgia Tech organizing an NSF-sponsored workshop on Computing @ Margins, to be held February 17-19, 2009. This seems like a natural place to continue many of the discussions started during the CCC workshop, including some of the issues on which the community has yet to achieve consensus.