Editorial

Crossing the Disciplines

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Recent discussions, either at already-concluded ICTD conferences and workshops, or in the planning discussions for future conferences, have reminded us of the sometimes strong and often unhelpful disciplinary walls that can be constructed across *ITID*'s cross-disciplinary areas. Here's that story.

ITID has been pleased to serve as the journal partner to the International Conference on Information and Communication Technologies and Development (ICTD) since its inception. We have published selected ("best of") papers from the first two meetings (Toyama, Reddy, Saxenian, 2007; Parthasarthy & Ramamritham, 2009) and are intending to do the same for the recently held meeting in Doha, Qatar. The next ICTD conference is to be hosted by Royal Holloway, outside London, in December 2010 and *ITID* again expects to be the principle journal outlet.

Given this relationship—and in full disclosure, we both sit on the ICTD conference Advisory Board—we are following with keen interest a proposal to co-locate with next year's ICTD meeting a more technical (really a more computer science–focused) conference.

A bit more background: In August of this year, Tapan Parikh, one of our associate editors, co-organized a Workshop on Computer Science and Global Development in Berkeley, California. That workshop was supported by the Computing Community Consortium (CCC), a group created with NSF funds by the Computing Research Association and tasked with providing strategic vision to, and mobilization of, the computing research community. We'd summarize the questions of this workshop thusly: Is ICTD work "real" computer science? How can we raise the profile of this work within traditional CS departments? How can we get more respect for our work? Do we need a more formal structure and organization to accomplish any of this?

To the last question, we responded with a "yes" and a structure was mooted, namely an ACM Special Interest Group (SIG) to cover the ICTD intellectual space.[1] Work is currently underway to secure ACM sanction for this SIG. Granted, we are always hesitant to grow new organizations or activities in our space, given what we see as an existing oversaturation that would seem to call for consolidation rather than proliferation. That notwithstanding, an ACM SIG in ICTD seems like a perfectly fine idea. However, along with the ACM SIG has come a call for a technical-only (really a computer science–only) conference in ICTD; and the proposal is to co-locate this during ICTD2010 in London.

All three of these activities (ICTD2009, the CCC workshop, and the proposed ACM SIG's co-located conference at ICTD2010) serve to remind us how fractured our intellectual community can be be-

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1. Learn more about an ACM SIG at http://www.acm.org/sigs

tween the social sciences and engineering disciplines and, in our opinion, how perilous this split has become.

Here is what we heard:

- In Doha, the computer scientists felt that the conference overly privileged social science work. For their part, the social scientists complained that the technical work lacked sophistication, was weak in evaluation, and was not grounded in the needs and realities of the users.

- In the Berkeley workshop, which was made up almost entirely of computer scientists, some people dismissed work that did not include technical innovations as lacking substance. For instance, in this formulation, work that rigorously observes and clarifies categories and purposes of ICT use in the Global South is not appropriate for ICTD conferences.

- Social scientists, meanwhile, expressed skepticism that fundamental technical innovations are required and demonstrated a lack of interest in some core technical issues.

- And as the discussion around a co-located ACM SIG event during ICTD2010 continues, the potential to enhance unhealthy disciplinary walls has been closely examined. For example, will the ACM SIG event siphon off all of the techies to their own workshop, thus creating two entirely disconnected, epistemic communities?

Thus, we have observed engineering versus social science straw men, both of which, we submit, are laboring under dangerous misapprehensions. For computer scientists to think that work entirely focused on the social sciences is neither helpful nor needed for their ICTD research is dangerously wrong. For social scientists to maintain that fundamental technical innovation is relatively unnecessary is based on the erroneous assumption that the Internet, personal computer, or mobile phone design doesn't need fundamental (and heterogeneous) changes to truly empower all people. For either group to think that they do not need to sit at the same conferences together, read each other's papers, understand the methods and underlying principles of each other's work, and even collaborate on co-authored papers is equally worrisome.

Doing truly inter-disciplinary work is difficult. We have to excel in our more narrowly constructed fields while being able to talk to and with other fields. Then we have to go back to our home departments—which for most of us will be along traditional disciplinary lines—and explain how our ICTD work is not "soft" (e.g., if I work as a computer scientist) or politically or methodologically suspect (e.g., if I am a social scientist). But we didn't sign up for this work because we thought it would be easy!

Back to our two straw men. If a computer scientist does not value, or if that person's department does not understand, that human observation and analysis is fundamental to all of our work, that's truly bad. If our social scientists do not value fundamental engineering innovation, or if they are not willing to understand at a non-superficial level these technologies, that too is bad. And if either of these communities silos itself off from the other, that is the death knell to our inter-disciplinary project.

All of these challenges are answerable. The ACM SIG itself, and its London event can be architected to enhance and not extinguish cross-disciplinary work. Traditional departments can grow and expand in ways that recognize they cannot do it alone. And individuals can commit to studying and collaborating across the disciplines.

Linked by their common push to cross disciplines and to define and refine the standards of ICT research, the articles in this issue of ITID offer many nuanced views into instances where practicality has frustrated accepted theory. Jo Rhodes addresses a failed telecenter project in South Africa using Actor-

Network Theory to identify the problem sources. Richard Heeks delves into the categorization and study of "Gold-Farming" in the developing world, questioning many assumptions about worker skill levels, capital, and product worth. Chaitali Sinha examines the ICT gender gap across two Bhutanese communities (one rural area and one city center), finding that a community's ICT literacy can drastically change its perception of the ways that ICT can be useful, knowledge that then goes a long way toward determining the gender norms that surround ICT. Regina de Angoitia and Fernando Ramirez find that the poorest population mobile telephony usage is a highly strategized behavior, suggesting that the design of future telephony business and technological models ought to take such strategies into account. Michael Futch and Craig McIntosh seek to identify the root causes of a lukewarm reception to a Village Phone product in many Rwandan villages, highlighting many surprising local preferences and behavior that may be useful to future researchers. Finally, truly demonstrating the computer science/social science link, Jenna Burrell and Kentaro Toyama anchor the issue with an extensive review of recent ICTD literature to gather consensus best-practice models, and highlight the most remarkable contributions to those methodological questions that remain unresolved in this field.

References

Parthasarthy, B., & Ramamritham, K. (Eds.). (2009). Special Issue: Selected Papers from ICTD2007. Information *Technologies and International Development,* 5(1).

Toyama, K., Reddy, R., & Saxenian, A. (Eds.). (2007). Special Issue: Best ICTD2006 Conference Papers. *Infomation Technologies and International Development,* 4(1).