Editorial: TOCHI Turns Twenty

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This issue marks the 20th anniversary of *ACM Transactions on Computer-Human Interaction (TOCHI)*. I'd like to take this opportunity to celebrate and briefly review the state of the TOCHI journal.

The growth of the human-computer interaction (HCI) field over the past 20 years has been exciting and worth celebrating. Fueled by the demand of the information technology industry, the field has been experiencing rapid growth. Products and services ranging from knowledge discovery on the World Wide Web and digital social networks to smart mobile devices have fundamentally transformed work and everyday life in the past two decades, all pivoting on key user experience innovations. Leading companies today employ a large number of interaction designers, user experience researchers, and HCI research scientists as crucial members of their overall engineering workforce. Product managers, software engineers, and company executives also devote a significant portion of attention to user experience design and development.

HCI as an academic discipline has also rapidly grown in the number of graduates, academic programs, research centers, and publications. For example, the annual CHI conference received more than 2,000 submissions this past year.

TOCHI is one of the core discipline-based journals of the ACM and consistently ranks among top ACM journals in terms of the number of downloads and citations. Primarily driven by the growth of the field, but also in response to many measures and efforts taken by the TOCHI editorial board in recent years, TOCHI has seen rapid growth in the number of submitted and published papers. Since the beginning of my first term as TOCHI's editor-in-chief (EiC) in the fall of 2009, TOCHI's annual submissions and published papers have both approximately doubled to 174 and 32, respectively, in 2013. In each of these years, we have applied and gained approval from the ACM for an increase of about 100 pages in TOCHI's page budget, currently set at 950 pages per volume/year. Starting in 2013, TOCHI also increased its publication frequency from quarterly to bimonthly. With six instead of four issues per year, TOCHI can publish more papers at a faster pace. It also enables us to publish special issues more easily without blocking regular submissions for too long.

A journal's quality and speed largely depend on its editorial board. TOCHI has always had a strong editorial board, and it has gradually expanded with the growth in submission volume in the past few years. New associate editors are appointed based on various considerations. Typically, they are (1) well-known leaders in one or more fields of HCI; (2) knowledgeable, insightful, and fair-minded critics who do not let their own interests, agendas, or taste in topics bias their journal editing; (3) editors committed to timely reviews on a regular basis following a timeline; and (4) new editors who can either improve the weak areas of the journal's editorial capacity relative to the current submission stream or represent an expected growth area of TOCHI paper submissions. Serving as a TOCHI associate editor is a serious and nonstop commitment, and I thank these editors for their dedication, expertise, and intellectual leadership. I particularly want to thank Jeff Nichols, who has served as TOCHI's information director since the beginning of my EiC tenure and has taken on many of the operational responsibilities of TOCHI.

Conference publications currently dominate in computing fields, at least in volume. Compared to other fields, this is unusual, as has been extensively discussed and debated in the *Communications of the ACM* magazine in the past few years. TOCHI does not compete with conferences, however. Almost all TOCHI board members have served as paper, technical program, or general chairs of major conferences, and we are proud of the success of our conferences. We also collaborate with conferences. For at least the past 5 years, authors of accepted TOCHI papers have been given the opportunity to present their paper at the CHI conference. This year, we have begun expanding this program to UIST and CSCW conferences, so an accepted TOCHI paper would have the choice to be presented at one of these three conferences that best fit the paper's content. The first presentation of a TOCHI paper at CSCW will happen at the 2014 edition of that conference in February.

As a leading journal, TOCHI has many differences and distinct strengths compared to top conference proceedings. A key strength of TOCHI lies in the journal review process. Unlike conferences that "batch process" paper submissions through a committee meeting, journal review is individually handled by an action editor, who is an editorial board member typically with experience on the paper's subject matter. The action editor in turn invites expert reviewers based on the paper's content. The goal of the review tends to focus on the paper's substance, contribution, and methodology as appropriate for the contribution. ACM SIGCHI-sponsored conferences have a remarkable review process, given the volume of papers that must be handled in a timely manner. Even so, a checklist-style process focusing on superficial novelty or trivial flaws tends to creep into conference paper decisions more often than for journal paper decisions. Journal reviews also tend to be more iterative. Although not a requirement, during my tenure, every submission has been revised at least once, and often twice or more, before being accepted for publication. TOCHI also welcomes definitive papers integrating results from many years of a significant research project, some of which could have been previously published at conferences.

I am often asked about various metrics of TOCHI, particularly the acceptance rate. Since journal submissions are not batch processed and each submission may have multiple decisions spread over 2 or more years, the acceptance ratio in a given year is ambiguous. TOCHI in general does not endorse or comment on third-party bibliometrics such as the journal impact factor by the Institute for Science, because their reliability and interpretation are often controversial. However, here are some numbers that may be informative to those who are interested in studying such matters. Since I began my EiC tenure in September 2009, there have been more than 500 original submissions. Among approximately 726 editorial actions to date, 111 were acceptances, 388 were rejections, and the rest were major or minor revisions.

The individual and iterative journal review process also raises a very difficult challenge in establishing and maintaining an expected, and hopefully fast, review schedule. In our seemingly deadline-addicted community culture, the lack of hard deadlines in the journal publication process tends to cause procrastination on the part of reviewers, editors, and authors. The current TOCHI editorial board has worked very hard to overcome this challenge by setting up and following a timeline for each review cycle. Roughly, the expected time allocation from submission to decision for TOCHI is as follows: 3 days for the information director to screen a paper for formatting and other issues; 14 days for the EiC to assign an action editor or to make an early reject decision; 22 days for the action editor to recruit and assign external reviewers; 28 days for external reviewers to read the submission and write up their reviews; and 14 days for the action editor to write a meta review and make a decision. Occasionally, the action editor may consult or bring in the EiC or another board member to discuss the decision on a submission. Altogether, a full review cycle from submission to decision is

Fig. 1. Days from submission to decision for manuscripts submitted in 2009 and manuscripts submitted in 2013. Overall, TOCHI's turnaround time improved from an average of 140 days in 2009 to 47 days in 2013.

normally around 3 months. In order to conserve review resources and everyone's time, including that of the author, we often make early reject decisions without full reviews when it is clear that the paper is not ready for a TOCHI publication. There are also cases in which particularly strong and well-presented research papers are accepted after the first revision is submitted, often in a time period even shorter than a conference review cycle. More HCI researchers today consider TOCHI as the preferred venue for publishing their most significant research results, and it is my hope that this trend will continue.

TOCHI's mean turnaround time has been 140, 74, 65, 62, and 47 days in 2009, 2010, 2011, 2012, and 2013, respectively. Of course, the average turnaround time does not mean that there have been no "long tail" cases (see Figure 1 for 2009 and 2013 data comparatively). It is a continual struggle by the TOCHI board to improve on the long tail cases. We also appeal to researchers in the HCI community, particularly the experienced ones, to accept or at least respond promptly to TOCHI review invitations, and to be both judicious and timely in their reviews. The next time an associate editor asks you to review, please say yes, and please do it reasonably promptly. Our journal depends on all of you.

As an ACM publication, TOCHI's infrastructure and general policies are also progressing with those of the ACM. For example, in 2013, the ACM implemented a new copyright policy, giving authors more open access choices. In addition, supplemental materials such as appendix, code, video figures, and data are now encouraged in ACM's Digital Library. Starting in 2014, accepted TOCHI papers will individually appear in the library before the targeted "issue in progress" is completed, effectively further improving publication speed.

TOCHI is a comprehensive journal covering all areas of HCI research. Its scope corresponds to the new Human-Centered Computing (HCC) class of subjects in the 2012 edition of the ACM Computing Classification System (<http://www.acm.org/about/class/>). Consisting of subclasses of *HCI*, *Interaction Design*, *Collaborative and Social Computing*, *Ubiquitous and Mobile Computing*, *Visualization*, and *Accessibility*, HCC is listed as one of computing field's top classes of subjects in the new classification system, along with theory, software, hardware, information systems, and other subjects. As compared

to the 1998 edition, the much stronger representation of HCI and its subfields in the 2012 edition of the ACM CCS is another indication of HCI's growth. Many present and past editorial members of TOCHI contributed to the new ACM CCS.

Because the topics of submissions to TOCHI are diverse, we often have to make difficult editorial decisions on submissions that belong to one of the HCC subclasses but have a better match with another ACM journal. When a more specialized ACM journal exists for a submission, we require the submission to have broader implications or a more significant breakthrough that demands a broader readership in HCI for TOCHI's consideration.

I thank the TOCHI editors, reviewers, and authors for their contribution to TOCHI's standing and growth. Looking forward, the potential influence of HCI has never been higher. The public demands user experiences that are simple yet enriching. Effective user interfaces should be both powerful and easy to learn. The commercial world must pay attention to user interface and experience to be successful. As researchers, we must contribute to breakthrough user interface inventions while also building and deepening HCI's intellectual foundations. The pace of change is accelerating. Fundamental changes have been enabled by advances in component technologies such as memory, processing power, sensors, actuators, and displays that are packaged and embedded in various forms. Even more importantly computing and information are interconnected at an ever increasing scale. These changes and the ability to statistically process and integrate information from various sources already provide opportunities to realize, for example, intelligent user-centered predictive and proactive functions that were previously thought intractable. These opportunities also bring about substantive interaction design problems that must be solved quickly and effectively. We look forward to the next 20 years, where ACM TOCHI, along with ACM SIGCHI and other HCI organizations, journals, and conferences, will not only forecast but shape future user experiences.

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