Public policy increasingly plays a role in influencing the work that we do as HCI researchers, interaction designers, and practitioners. "Public policy" is a broad term that includes both government policy and policy within non-governmental organizations, such as standards bodies. The Interacting with Public Policy forum focuses on topics at the intersection of human-computer interaction and public policy.

Jonathan Lazar, Editor

HCI Public Policy Activities in 2012: A 10-Country Discussion

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Public policy has always had an impact on the work we do as HCI educators, practitioners, and researchers. Many different bodies, including multinational governments (such as the E.U.), national governments, local governments, and international non-governmental organizations (such as the World Wide Web Consortium and the United Nations) influence public policy in the area of HCI. And though many of the same issues concerning HCI policy challenge governments worldwide, the actual policies tend to be implemented in individual countries, as opposed to groups of nations. There are Portuguese government policies and Italian government policies, yet the solutions, or the expertise that leads to solutions, are often based in the global HCI community.

We need to have these discussions at an international level. For example, the enforcement of Web accessibility laws is problematic in many countries throughout the world. Both Sweden and Portugal, however, have seen improvement in this area, and so the question is: What methods or approaches used in Sweden and Portugal might be instructive elsewhere? Indeed, seeing what has occurred in other countries can potentially give the HCI community pause for thought, to ensure that unfortunate episodes (such as how HCI research has been ranked low in

Brazil) do not repeat themselves in other countries. Simply put: We need to work together internationally, not only on HCI research, but also on HCI public policy.

As part of the its public policy efforts, SIGCHI has been building the SIGCHI International Public Policy Committee to coordinate policy efforts and advise the executive council of SIGCHI on public policy needs. Currently, there are members on the committee from 10 different countries (and it's always looking for new members). Reading about the HCI policy issues in these 10 countries will give you a sense of where the current issues lie. Interface accessibility tends to get the most attention within HCI public policy. However, other important areas include user data privacy, funding for HCI research, rules for performing research, and how government rankings affect HCI researchers. We all need to pay more attention to public policy and then take the next steps: communicate with others involved in HCI policy and then get involved in the policymaking processes in our local and national governments. And, when possible, we must get involved in the international standards organizations. (The January + February 2012 issue of *interactions* has more coverage of HCI standards.) Here we review some of the current HCI policy issues, as described by

members of the SIGCHI International Public Policy Committee.

Web Accessibility
Many countries continue to struggle with implementing and enforcing Web accessibility for people with disabilities. While excellent international standards exist (e.g., the Web Content Accessibility Guidelines from the Web Accessibility Initiative) and most countries have either harmonized their Web accessibility laws with WCAG 2.0 or heavily relied on its standards, there are still major challenges to achieving successful Web accessibility, including *compliance mechanisms* and *updating to the new WCAG 2.0 standards*.

The lack of compliance mechanisms for Web accessibility continues to be a problem worldwide. For instance, in Italy, the rules for evaluating or monitoring for compliance are not sufficiently updated to address emerging technologies, even though some regional governments, such as Emilia-Romagna, Tuscany, have started to support some interesting initiatives to increase and monitor the level of accessibility. In the U.S., Section 508 regulations require, among other things, accessibility for all federal government websites. But two actions that were publically promised in 2011 to improve compliance with Section 508 regulations have (as of press

time) not occurred: the release of the Justice Department report on monitoring existing Section 508 compliance (release was scheduled for Spring 2011) and the White House plan for improving Section 508 compliance (which was supposed to be released in December 2011). The Swedish government, which has had some success in monitoring and compliance for Web accessibility (see *interactions* May + June 2010), has given Handisam, an agency working on inclusion, a future structure for compliance monitoring. Portugal was one of the early leaders in Web-accessibility legislation—directives were issued as early as 1997—yet five years ago independent studies found that less than 70 percent of government websites were currently accessible. Major barriers to successful implementation in Portugal included vague goals, no suggestions on implementation and maintenance, no enforcement activities, and no penalties for non-compliance.

However, a new directive from the prime minister addressed these problems, providing effective leadership. More specifically, public administration and government websites were required to comply either to accessibility level A (information) or AA (transactional services) within six months. A dedicated task force was established to ensure coordination, training, and help to both existing Web services and new websites, which were required to comply immediately. As a result, an independent study found that 95 percent of government-run websites were in compliance with the prime minister's directive three years later. Attempting to address the same problem of limited guidance on implementing Web accessibility, the Interaction Specialist Group (part of BCS, the Chartered Institute for IT) in the U.K. is encouraging the adop-

tion of British Standard 8878:2010, "Web Accessibility. Code of Practice," which fills the operational gap left by guidelines such as WCAG 2.0. BS8878 includes 16 process steps, providing specific guidance on creating and maintaining accessible websites. These steps also form the basis for skills definitions in competency frameworks such as SFIA (Skills Framework for the Information Age), which the U.K. government is using to enhance higher-level public-sector IT skills. In Brazil, the Accessibility Law (number 5296, passed in December 2004) states that after December 2006, all public administration websites should guarantee access to all information for blind citizens. However, there is still low compliance with the law, primarily due to low enforcement. Nevertheless, the importance of the topic led the Brazilian Computer Society in 2006 to state as one of the five great challenges to computer science research in the next 10 years the challenge of "universal and participatory access of Brazilian citizens to knowledge and services."

Updating the law to acknowledge the new WCAG 2.0 standard also continues to be a problem. In Italy, the working group supporting the definition of the technical guidelines has prepared an updated technical annex for the legislation, which has not yet been included in the law despite the fact that it was completed nearly two years ago. In the U.S., the Section 508 regulation, which requires that all federally acquired or developed technology (including websites) be accessible, is currently under revision—the "508 refresh." The first new draft of 508 was released in March 2010, and the second draft was released by the U.S. Access Board in December 2011. The big advance of this draft was to eschew specific U.S. rules

for websites and simply reference and harmonize with WCAG 2.0. In Sweden, the upcoming "Guidance on Web Development," which will guide public e-services, uses WCAG 2.0 level AA as the recommendation to be followed. This guidance on Web development is part of the Swedish Government's new efforts launched in November 2011, known as the Digital Agenda (see http://www.regeringen.se/content/1/c6/18/18/01/509f1b0c.pdf). The new ICT policy objective states "Sweden will be the best in the world at exploiting the opportunities afforded by digitization," and digital inclusion is an important component of that.

In Spain, in 2002, the government enacted Law 34/2002 on Services of the Information Society and Electronic Commerce, an objective of which was the accessibility of public administration websites. The regulations issued in 2004 utilized WCAG 1.0, and efforts are under way to update the regulations to utilize WCAG 2.0. In addition, Spain is actively participating in E.U. Mandate 376, the European Accessibility Requirements for Public Procurement of Products and Services in the ICT domain. Mandate 376 is now facing minor delays due to a recent attempt to synchronize Mandate 376 with Section 508 in the U.S., and it may be released in late 2012 or early 2013. Hopefully, Mandate 376 will impact the entire public sector in E.U. countries.

Though limited to single countries, accessibility policies are typically influenced by international standards, not only from the World Wide Web Consortium (such as the WCAG), but also from International Organization for Standardization (ISO), which has now adopted the definition of accessibility as it was defined by TC 159 on ergonomics. This means the concept of accessibil-

ity becomes closely related to usability and hence could be evaluated and assessed with methods similar to those used for assessing usability, but addressing the widest possible user categories. In the development of ISO 20282 Part 3 (Ease of operation of everyday products—Part 3: Test method for consumer products), methods for measuring usability and accessibility have been defined. This publicly available specification is currently being redeveloped as a proper standard. At the same time, ISO is working on the ISO definition on usability (ISO 9241-11) to determine whether there is a need to redefine the definition of usability to take more user experience aspects into consideration. Also, the development of Guide 71 (ISO/IEC Guide 71:2001—Guidelines for standards developers to address the needs of older persons and persons with disabilities) applies the TC 159 definition of accessibility; the final redefinition of this is in progress.

Privacy
In France there are more than 10,000 e-government Web portals (including both regional and local administration) for accessing information on healthcare, taxation, registration, housing, agriculture, education, and social services. However, there are still several legal, political, and technological challenges that prevent the effective integration of such applications; as a consequence, citizens cannot benefit from a unified view of personal information they can share with administrations. The creation of any database containing personal information is subject to the approval of the National Committee of Informatics and Freedom (CNIL; www.cnil.fr), which is in charge of overseeing the protection of French citizens' rights concerning the use of their personal information. As a con-

sequence, many government departments collect personal information from citizens through different forms, online and offline; thus, even basic personal information such as residential addresses can be requested several times and in different formats. There are some initiatives that try to address this issue; for example, the Web portal mon.service-public.fr proposes a personal space for citizens where personal data can be stored and exchanged with government e-services. Despite this effort, the exchange of personal data with e-services is limited to a few applications and is a limited subset of what users would like to register.

Research Involving Human Subjects
Governed by the 1991 Federal Policy for the Protection of Human Research Subjects, most research in the U.S. involving human subjects—in fields from medicine to HCI—must receive Institutional Review Board (IRB) approval to proceed. Such review increases the administrative overhead for doing HCI research and inhibits agile design and research practices. Furthermore, the language of "human subjects," along with excessively formal requirements for informed consent, conflict with some researchers' views of clients and users as partners in design. The Office for Human Research Protections (OHRP) recently solicited comments on an advance notice of proposed rulemaking (ANPRM) entitled "Human Subjects Research Protections: Enhancing Protections for Research Subjects and Reducing Burden, Delay, and Ambiguity for Investigators." In an open letter to the OHRP, a group of academics and practitioners in the field of HCI agreed that IRBs are "not adequately calibrating the review process to the risk of research," noting that several HCI research activities and methods

that typically involve human subjects, including needs assessment, requirements analysis, design, prototyping, and usability studies, should be excused from the requirements. The OHRP is considering such public comments on the proposed changes to the Common Rule, while the rule-making process continues.

Funding for HCI Research
Patterns for HCI funding are also changing, and limited funding for HCI research continues to be a challenge. For example, university departments in the Netherlands have been divided up according to age-old historical precedents, with the main universities having been founded in the 1300s. HCI, a more recently established field, is thus part of the psychology department in one university and part of the language, computer science, or industrial design department in others. This leads to odd situations—for instance, at Delft University, where HCI is carried out in both the industrial design and computer science departments. With no autonomy within the university, financing for HCI research sometimes breaks down, because reviewers feel that HCI-type research is better embedded within another discipline. The Ministry of Economic Affairs temporarily remedied this problem by instilling dedicated subsidies for approximately 10 years. That worked out well for HCI, with dedicated calls across disciplines and industry relations required in the proposals. Now that those 10 years have passed, however, the research institutes have been thrown back to their own resources. The intended self-sustainability has not yet come to pass. Groups such as CHI-NL need to show the Dutch government they represent HCI in an organized way to regain the official lobbying role within the government, as happened

during the dedicated subsidy tracks.

Similar patterns of funding challenges are apparent across the European Union. Neither the German government nor the E.U. Commission has a specific program explicitly devoted to HCI. The E.U. funds different computer science research communities explicitly within its 7th Framework Program, among them software engineering, IT security, and even technology-enhanced learning. The funding of these communities comes via specific calls and is administrated via work units within the Information Society and Media Directorate General (directorate general is the E.U. equivalent of a national ministry). Funding for HCI is much more sparse, and comes through (marginal) participation in programs and projects explicitly directed toward other research communities. For example, the software-engineering work unit funded some activities in the field of end-user development (EUD), but funding choices are made through committees typically composed of mainstream software engineers, leading to limited attention to HCI concerns. Not only is funding limited, but also in some cases the type of research being funded has changed. For instance, in the U.S. all National Science Foundation grant applications must demonstrate both intellectual merit and broader social impact. These include activities such as advancing science while promoting learning, broadening participation of underrepresented groups, and enhancing infrastructure for research and education. As a result of the new America COMPETES Act, signed into law by President Obama in January 2011, there is a process under way to strengthen requirements for broader impact. Although the results of HCI research are often socially relevant, U.S. HCI research-

ers will be challenged to better communicate that relevance and to enhance the broader effects of the research process.

How HCI Research Is Ranked

In 2011 Simone Barbosa and Clarisse de Souza wrote an article in this same *interactions* policy forum entitled "Are HCI Researchers an Endangered Species in Brazil?" It described negative effects on the Brazilian HCI community generated in 2009 by the government agency responsible for evaluating Brazilian graduate programs, CAPES (http://www.capes.gov.br/). That year CAPES generated a ranking for computer science publications, which included journals and conference proceedings (Qualis); a formula was created to qualify publication forums based on each forum's impact. But this formula did not consider the distinctions among HCI's many research areas, so it was one of the areas most negatively affected. Since these specific characteristics were not considered in the ranking, HCI researchers in Brazil found that when their work was evaluated according to these formulas, it was considered less important and of lower quality and value than other areas of research.

The good news is that SBC (the Brazilian Computer Society) has paid attention to the negative aspects that computer scientists in Brazil have highlighted about this ranking. Thus, at the end of 2011, SBC asked the Special Interest Groups' (SIGs) executive committees to participate in an effort to review the ranking created by CAPES. As a first step, SBC requested that each SIG create a list indicating the relevant conferences for its specific field. This list was sent to SBC in December. The next steps involve developing a tool that will generate a relevant impact index, validating it with SBC SIGs,

and then taking the results to CAPES to discuss possibilities of reviewing and improving the current ranking.

Summary

These HCI issues affect the core activities of many HCI researchers or practitioners: interface design, user testing and research, and funding. The challenges exist in every country, yet the solutions, and the knowledge to lead to solutions, are international. As an HCI community, we must be proactive, not reactive. We want to be involved from the beginning so that policymakers trust us and so that our research and practitioner expertise can influence public policy. The worst situation is to be reactive—to see policies created and then decry them as ineffective, not having been involved with their creation. Proactive involvement has much more of an impact.

As a start, HCI researchers should become familiar with the process of how public policies are created in their national and regional governments. For researchers interested in data, science, and statistics, this is often not something that comes naturally. The HCI community has a long history with the process of user-centered design, in which we say that user data needs to influence design. Great. So let's take those same concepts and apply them to public policy. We need to use our research, our data, and our design expertise to help drive public policy—those things should drive policy, not politics or public opinion. To be effective, we need to be proactive, we need to get involved, and we need to work together internationally.

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