

2019 SIGCHI Access Report

Contributors to the report: Jennifer Mankoff, Anne Spencer Ross, Cynthia Bennett, Katta Spiel, Megan Hofmann, Jen Rode

Contact person: Jennifer Mankoff, jmankoff@cs.cmu.edu

1. Introduction

This report comprises a summary of the activities ACCESS SIGCHI has engaged in for the past two years. The purpose of this report is to fulfill a recommended two year update about the state of accessibility of SIGCHI conferences and content along with recommendations for further improving the accessibility of SIGCHI.

It has been four years since SIGCHI Access (the short name of the SIGCHI Accessibility Community) first published a report on the state of accessibility within SIGCHI¹, summarized in Mankoff, 2016², and updated in 2017³. This series of reports reflects a growing awareness in the SIGCHI community of a need to directly engage with and improve the accessibility of both conferences and online resources sponsored by SIGCHI. Our mission is to help SIGCHI “...attract new members and make current members feel welcome by making its events and resources more inclusive. This in turn will enrich SIGCHI, and help it to live up to the ideal of inclusiveness central to the concept of user-centered design.”

Specifically, this report begins with an executive summary of the biggest accomplishments of the last two years (along with the data sources used to draw those conclusions). The remainder is organized by recommendations 1-5, highlighting what has been accomplished and how our progress or lack thereof define our goals for the next two years. The recommendations (abbreviated as R) concern the following: (R1) the accessibility of conferences, (R2) content accessibility, (R3) how to process accessibility requests, (R4) increasing representation of people with disabilities⁴ within SIGCHI, and (R5) assessing success at least once every two years.

1.1 SIGCHI Accessibility Community Leaders

The SIGCHI Access committee is an open committee that anyone is welcome to join. The authors of this report are shown in bold, the entire committee approved the report. You can find us on facebook at *SIGCHI-Access* and reach us through our mailing list, (sign up here: <https://groups.google.com/forum/#!forum/sigchi-accessibility>).

¹ https://drive.google.com/file/d/1ORRGev3YJR5FP_JpN9H7L_h3ab-vni4n/view?usp=sharing

² Mankoff, J. (2016). The wicked problem of making SIGCHI accessible. *interactions*, 23(3), 6-7. DOI [10.1145/2903528](https://doi.org/10.1145/2903528)

³ <https://drive.google.com/file/d/1Zw0A-iOYagNjKzT503xXAS8xASIRAH66/view?usp=sharing>

⁴ As stated in our original report, “there is an ongoing and unresolved debate about labeling around terms such as ‘person with a disability’ and ‘disabled person’ which is orthogonal to this effort. We use the post identity label ‘with a disability’ in this report but acknowledge the complexities that come with any label.”

Chair: Jennifer Mankoff; Vice Chair: Jen Rode; SIGACCESS representative: Shari Trewin; Conference SV Training Lead: Anne Spencer Ross; Conference Best Practices Leads: Shari Trewin, Anne Spencer Ross, & Jen Rode; Legal Analyst: Jonathan Lazar; Social media person: Rua Williams; Inclusion Team representative: Siddharth Mehrotra; Members at large: Megan Hofmann, Cynthia Bennett.

1.2 Thanks to everyone who is making SIGCHI Accessible

While SIGCHI Access is documenting and advocating for accessibility, the work of making SIGCHI accessible falls on many shoulders, mostly those of volunteers. We want to thank everyone who has stepped up to volunteer for Accessibility chair positions, every conference chair who has dedicated time and money to addressing accessibility, steering committees who have steered their conferences towards positive accessibility changes, the SIGCHI EC for their multi-faceted engagement with the issue of accessibility, and ACM employees and volunteers who work to achieve accessible outcomes. While these volunteers are too numerous to list here, we provide a list of the accessibility chairs who have volunteered their time in the last two years. The work of all of these volunteers is invaluable and necessary to the changes described in this document and experienced on a daily basis by SIGCHI members!

CHI 2019: Sunyoung Kim, Rutgers University, US; Edith Law, University of Waterloo, Canada

CHI 2018: Erin Brady, Indiana University - Purdue University Indianapolis, USA; Robin Brewer, University of Michigan, USA; Erin Buehler, Facebook, USA **CHI 2017:** Sean Goggins, Missouri University; Shaun Kane, University of Colorado Boulder; Erin Brady, Indiana University - Purdue University Indianapolis

CSCW 2019: Swapna Joshi, Indiana University; **CSCW 2018:** Astrid Weber, Google; **CSCW 2017:** Erin Brady, Indiana University - Purdue University Indianapolis

EICS 2019: Eduardo Díaz (Universitat de València); Michael Nebeling (University of Michigan);

EICS 2020: Lilian Genaro Motti (University College Dublin, Ireland)

ISS 2019: Jiwoo Hong, Korea Advanced Institute of Science and Technology

Mobile HCI 2019: Yi-Hao Peng, National Taiwan University, Taiwan; **Mobile HCI 2018:** Josep Blat, Universitat Pompeu Fabra; Aleksandar Matic, Telefónica

IDC 2020: Judith Good, University of Sussex, UK; **IDC 2018:** Michail Giannakos, NTNU

UbiComp 2020: Jen Rode, University College London; **UbiComp 2019:** Catherine Holloway, University College London; **UbiComp 2018:** Pin Sym Foong; National University of Singapore;

UbiComp 2017: Astrid Weber, Google

Recsys 2019: Humberto Corona, Zalando, Ireland; Caroline Chavier WiMLDS & Agorize, France; **Recsys 2018:** Humberto Corona, Zalando, Ireland

ICMI 2019: Mengyue Wu (SJTU, China); **ICMI 2018:** Marcelo Worsley, Northwestern

UIST 2019: Megan Hofmann, CMU; **UIST 2018:** Alexandra Ion, Hasso Plattner Institute;

VRST 2019: Sara Baker (Western Sydney University); **VRST 2018:** Hiroyuki Kubo (NAIST);

VRST 2017: Annelie Karlsson, Funka Accessibility

CHIPLAY 2019: Joshua Newn – University of Melbourne, Melbourne, Australia; Rina Wehbe – University of Waterloo, Waterloo Canada; **CHIPLAY 2018:** Joshua Newn – Interaction Design Lab, The University of Melbourne, Melbourne, Australia;

AutoUI 2019: Marianne Geelhoed

TEI 2019: Althea Pergakis, Arizona State University, US; **TEI 2018:** Sylvaine Tuncer, Stockholm University (Sweden); Rob Comber, KTH Royal Institute of Technology (Sweden)

TVX 2020: Pilar Orero, Universitat Autònoma de Barcelona (UAB); Anna Matamala, Universitat Autònoma de Barcelona (UAB); **TVX 2019:** Mariana Lopez; Si Jung “SJ” Kim **TVX 2018:** Pedro Almeida, University of Aveiro, Portugal; Eunju Jeong, Hanyang University, South Korea; Jieun Han, Hanyang University, South Korea

Creativity & Cognition 2019: Stacy Branham, University of California Irvine, US; Foad Hamidi, University of Maryland Baltimore County, US

DIS 2019: Stacy Branham, University of California Irvine, US; Foad Hamidi, University of Maryland Baltimore County, US

ETRA 2020: Christoph Strauch, Ulm University, Germany; **ETRA 2019:** Justyna Zurawska, SWPS University, Poland; **ETRA 2018:** Justyna Żurawska, SWPS University of Social Sciences and Humanities, Poland; Maksymilian Bielecki, SWPS University of Social Sciences and Humanities, Poland

Group 2020: Isa Jahnke, University of Missouri, US; Hanna Söderholm, University of Borås, Sweden;

Collective Intelligence 2019: Patrick Carrington, Carnegie Mellon University

SUI 2019: Jason Woodworth, University of Louisiana at Lafayette, USA; Scott McDermott, Loyola University New Orleans

2. Table of Contents

[1. Introduction](#)

[1.1 SIGCHI Accessibility Community Leaders](#)

[1.2 Thanks to everyone who is making SIGCHI Accessible](#)

[2. Table of Contents](#)

[3. Executive Summary](#)

[4. Current Status of Accessibility within SIGCHI](#)

[4.1 Summary of Conference Accessibility](#)

[4.1.1 Qualitative Findings from 2017, 2018 and 2019 Post CHI Surveys and 2019 SIGCHI Conference Accessibility Concerns Survey](#)

[4.1.2 SIGCHI Protest](#)

[5 Recommendations](#)

[R1: Achieve Conference Accessibility](#)

[R2: Achieve Content Accessibility](#)

[R3: Handle Accessibility Requests](#)

[R4: Increase Representation](#)

3. Executive Summary

Our data analysis shows that concrete, positive steps have been taken in the last two years. Many volunteers from across SIGCHI have taken on the role of accessibility chair. As a result, conferences have reached an all-time high: **In 2019, 79% of SIGCHI conferences have accessibility chairs.** Some of the innovations these chairs have helped ensure include access to ASL interpretation, reserved seating at conference sessions and the creation of a desensitisation room. **The SIGCHI SC approved a \$25,000 budget for accessibility at CHI.**

In addition, the SIGCHI Executive Committee (EC) has begun to integrate accessibility concerns into much of its work. On the content front, **the SIGCHI EC has lead the way in adopting a new, more accessible paper format,** and innovations in increasing compliance with things like ALT text have been tested by multiple conferences/accessibility chairs. Finally, **the SIGCHI EC has committed to creating this person an adjunct chair for accessibility,**⁵ for which position they now intend to hire a professional accessibility consultant.⁶ These changes benefit many beyond the accessibility community. Accessibility work is often intersectional, and often addresses the needs not only of the disability community, but also pregnant people, people with injuries, and people who need to attend remotely for a variety of reasons, such as difficulty getting a visa. At the same time, there are important steps that still need to be taken in every category of accessibility. Here we highlight key successes and open challenges.

R1: Conference Accessibility: The CHI Conference Chairs, as well as the CHI Conference Steering Committee have made strong commitments to accessibility, showing leadership that is also beginning to appear at other SIGCHI conferences. Budgetary commitments at the level of specific conferences have begun to be more standard, and more SIGCHI conferences than ever before have accessibility chairs, FAQs, or both. Accessible seating is increasingly available, and other innovations such as quiet rooms and livestreaming are praised by attendees. In addition, SVs often do important accessibility work. To help support this, SIGCHI Access has released new guidelines and developed Student Volunteer training materials. **Goals:** We hope to increase participation to all SIGCHI conferences; Shift tasks from volunteers to professionals where appropriate; and Increase consistency of how accessibility is handled within and across conferences. We also hope to see these changes adopted more widely across ACM.

R2: Content Accessibility: CHI 2019 was the first ACM conference to adopt the new, accessible HTML 5 proceedings format⁷. The SIGCHI Executive Committee and other members

⁵ <https://sigchi.org/wp-content/uploads/2019/05/SIGCHI-EC-MINUTES-10-May-2019.pdf>, p. 2-3

⁶ <https://sigchi.org/wp-content/uploads/2019/05/SIGCHI-EC-MINUTES-10-May-2019.pdf>, p. 2-3; Private communication with EC

⁷ <https://twitter.com/JRicoWilliamson/status/1133647217821192193>

of SIGCHI have dedicated extensive resources to supporting these goals. UIST 2019 was the first ACM conference to require ALT text be submitted just like a textual version of references, which facilitated volunteers more easily fixing inaccessible PDFs and made it the first SIGCHI conference with near 100% accessible proceedings⁸. **Goals:** We would like to make ALT text submission a standard part of PCS; Improve the accessibility of other online materials (conference websites; mobile apps). We also hope to validate our innovations and encourage ACM to adopt them more widely.

R3: Handle Accessibility Requests: Accessibility requests within conferences may require real-time responses, and CHI 2019 leadership innovated by using a slack channel to help with this. Accessibility requests more broadly require support and awareness of the resources available. The CHI Steering Committee has created a mailing list and quarterly meeting series where accessibility chairs can ask questions, and fielded multiple requests to help identify accessibility chairs. Finally, we have begun a legal analysis, which highlights the need to comply with US standards and assess global standards when in international venues. **Goals:** We plan to develop better documentation for training and support; increase visibility of our services on social media and elsewhere so that attempts to increase accessibility are well met and supported. In addition, a better understanding of the legal context is still sorely needed. We believe this will benefit all of ACM.

R4: Increase Representation: Representation is increasing, in the sense that people with disabilities are successfully and regularly publishing in SIGCHI conferences. In addition, accessibility is now represented on the CHI Steering Committee. **Goals:** Although the SIGCHI Executive Committee made a commitment to create an Adjunct Chair for accessibility⁵, they have changed their plan and decided to fill that chair with a paid consultant. Thus representation on the EC and most conference steering committees still needs to be addressed.

R5: Assess Success: This report is the third bi-annual report put out by the SIGCHI Access committee, and represents a large effort in data collection, writing, and in the day to day work that is reflected here. **Goals:** We look forward to the day when this report is no longer needed!

4. Current Status of Accessibility within SIGCHI

The SIGCHI Accessibility Communities efforts focus on the digital and physical accessibility of SIGCHI resources. To support these goals, it is important to track progress over time. We have traditionally used metrics about conference accessibility to do this. In addition, it is our tradition to include more qualitative data that can help to illustrate the sorts of challenges people with disabilities face within SIGCHI. This year, that includes a summary of conference survey data as well as a report on the CHI 2019 accessibility protest and stories written by disabled authors within the community.

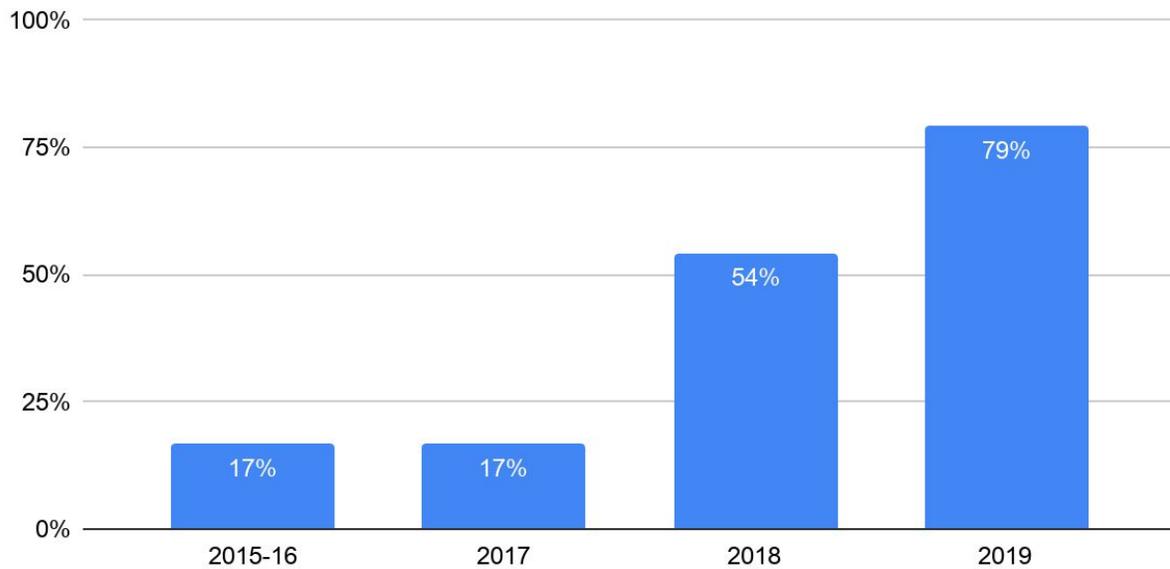
⁸ Jonathan Lazar, Elizabeth F. Churchill, Tovi Grossman, Gerrit C. van der Veer, Philippe A. Palanque, John Morris, Jennifer Mankoff: [Making the field of computing more inclusive](#). Commun. ACM 60(3): 50-59 (2017)

We draw from the following data sources: We visited each conference website to assess accessibility; we collected data on accessibility from post CHI 2017, 2018 and 2019 attendance surveys; and collected information from participants in recent events (including the CHI protest, discussed later in this section) about their concerns. We have also collected stories by people with disabilities within SIGCHI and some of the challenges they face (Appendix B).

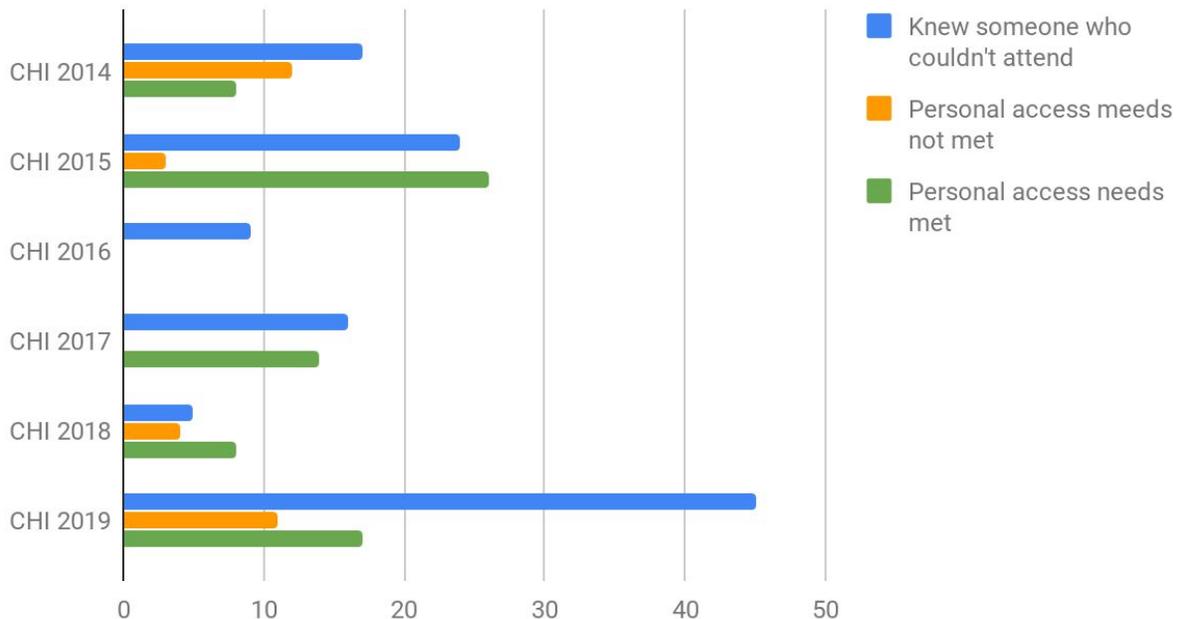
4.1 Summary of Conference Accessibility

Currently, SIGCHI has improved success on accessibility. Overall, it is just behind SIGACCESS in its attention to accessibility. Looking at the wider range of SIGCHI conferences, we see great progress in the number of conferences that are including accessibility in some form in their planning process/websites (Conference Accessibility Chart), In the chart below, we show the percentage of the 24 SIGCHI conferences listed on <https://sigchi.org/conferences/conference-history/> that have an accessibility chair in each year.

Bar Chart showing percentage of 24 SIGCHI conferences that have an accessibility chair



Accessibility Outcomes



However, attendees at CHI report increased need for accessibility work (Accessibility Outcomes Chart). In the chart, we see that personal access needs not met (orange bar) varies a lot from year to year. However, the numbers here are very small, making this hard to interpret in the context of CHI attendees, both with and without disabilities. The X axis represents the raw number of reports. We can see for example that less than 100 out of the over 1000 people who filled out the CHI 2019 post-conference survey reported accessibility issues. This small sample could be for several reasons including the fact that we are relatively new to collecting targeted feedback about accessibility and disability, and that such information tends to be underreported. However, given the smaller numbers, our analysis is primarily focused on the qualitative comments in the data.

4.1.1 Qualitative Findings from 2017, 2018 and 2019 Post CHI Surveys and 2019 SIGCHI Conference Accessibility Concerns Survey

Our qualitative analysis comes from attendee feedback provided on the CHI 2017, 2018, and 2019 surveys, a survey run by SIGCHI Access in Spring 2019, and from information collected during the protest staged at the CHI 2019 Town Hall.

We received a lot of feedback about audio and visual access to conference presentations. Attendees who are deaf, hard of hearing, and visually impaired had difficulty keeping up with presenters, session chair facilitation, and audience member questions. Among their feedback, participants noted that guidelines for presenting and facilitating accessibly have been published and that enforcing them could be an easy step toward increasing access to conference

presentations. Specific concerns included inconsistent mic use. Respondents mentioned they could not hear session chairs if they did not use the floating mic while introducing papers and moving the Q&A along. Similarly, many audience members did not use the mic while asking questions. To remedy this, respondents recommend that session chairs enforce mic usage by everyone addressing a larger group, no matter what. We note the important role session chairs and other MC's have to enforce accessibility as others, including SVs, presenters, and attendees with disabilities may feel as if they have less power and will not be taken seriously. Another barrier to accessing presentation content came when presenters did not caption videos in their presentations or describe visual content. Respondents recommended that keynotes and other large plenaries be captioned and sign language interpreted by default and that organizers work with presenters to insure accessibility before the talks to model accessible presenting for the smaller sessions where accessibility might be more difficult to enforce.

Several participants had difficulty moving through conference venues. With this came praise for the reserved seating in session rooms along with requests for increased seating throughout conference venues. As part of this, attendees of the 2019 CHI conference noted mix and mingle sessions like poster sessions, coffee breaks, and conference receptions offered little space for people to move around or even remain comfortably stationed by their work, which was the case some poster presenters who use wheelchairs and mobility aids. This feedback provided an important reminder that CHI is much more than paper sessions and talks; many benefits of attendance occur during the organic conversations that arise, and holding these events in large spaces are an essential requirement for people with disabilities to attend.

Some respondents were not sure what accommodations would be provided and wanted more information up front on the registration form. This was particularly poignant for a few respondents who noted they had injuries rather than permanent disabilities. Thus, they were generally unfamiliar with requesting accommodations and would have liked more guidance. Specifically, they wanted to know what features of the venue were accessible and what accommodations they could request. Beyond learning more information from the registration form and CHI conference information web pages, participant requests can be synthesized into four improvements. First, they suggested that venue maps include information about accessible restrooms, wide paths, and paths that do not require stairs. Second, respondents requested signage pointing out accessible paths posted throughout the venue in case someone does not have their map on hand. Third, some participants requested accessibility information about specific sessions such as whether sign language interpreting and captioning would be provided by default so they could prioritize attending events that would be more accessible for them. Finally, some respondents (both with and without access needs) requested more education about who could use accessibility features. For example, a pregnant person was unsure whether they could sit in the reserved seating. A few other respondents wanted to know the purpose of the desensitization room. Providing this education in the form of smaller print on paper signs and expanded information on websites will help attendees to understand that accessibility features are available for people who need them, regardless of whether they identify as having a disability. Temporary and ongoing experiences such as injuries, being

pregnant, or experiencing non-diagnosed conditions that impact participation are all important reasons why an individual can and should benefit from accessibility provisions.

We are excited to report some ways negative feedback became more positive over the past couple of years. First, participants were grateful for the quiet room and hope it becomes a staple of all future CHI conferences. We note that requests for a quiet room came in the 2017 and 2018 post CHI survey feedback and praise for the room came in the 2019 post CHI survey feedback. Second, some 2018 and 2019 respondents appreciated the reserved seating signs in sessions. While we can still do better at booking larger venues with easy-to-move through spaces and ample seating along the way, reserved seating is a step forward that reflects requests for within-session seating needs from the 2017 and 2018 surveys. Finally, some respondents found livestreaming very helpful. One participant needed to livestream while taking breaks in their room. Others noted that livestreaming helped people who could not attend (which can happen for accessibility-related and many other reasons). Again, respondents still wanted more livestreaming and telepresence options, but we note the positive feedback to share that the livestreaming that was available was appreciated and is a step in a more inclusive direction. These examples demonstrate the importance of collecting and acting on feedback; it is making a positive difference.

Finally, we note that life experiences are often intertwined and needs of one community can overlap (as well as contrast) with needs of people with different life experiences. Several respondents used the accessibility feedback survey to share concerns that were not explicitly related to attending CHI with a disability. For example, barriers to attending because of difficulties obtaining a visa or finding safe and comfortable places to use the bathroom were mentioned. Two recommendations that could positively impact multiple communities include more opportunities for telepresence and ample single-use bathrooms. More live streamed sessions, telepresence robots, and a culture change and processes around getting approval to attend remotely are all intersectional advances that could benefit many communities, not just the disability community.

4.1.2 SIGCHI Protest

During the 2019 CHI conference, disabled attendees encountered significant access barriers. These barriers began long before the conference convened. For example, the 2019 CHI template amplified access barriers to paper preparation and submission for screen reader users. During the conference, some disabled attendees found accessible toilets were locked and were confused about how to gain access to them. Although real-time captioning services were requested and provided, they were insufficient, first not working at all and then working only with delays that made them almost useless. As members of SIGCHI Access both encountered and became aware of access barriers, we responded by working with conference leaders and volunteers to attempt to alleviate these barriers. For example, student volunteers assisted when possible, and conference leadership worked very hard to address the captioning issues. However, SIGCHI members were unsatisfied with the results of this and wanted to raise

more awareness about conference accessibility to the greater CHI community. As such, conference attendees (including many SIGCHI Access members) protested outside the CHI 2019 Town Hall. In response, the CHI steering committee and SIGCHI Executive Committee chairs invited SIGCHI Access representatives to tell our stories and outline areas for improvement at their meeting immediately after the conference.

At this meeting ([see the EC minutes from Glasgow's 2019 Spring meeting](#)⁵), protesters asked the SIGCHI leadership for representation (on the SIGCHI executive committee), financial commitments to accessibility in conference budgets and the SC and EC budgets, expertise in the form of outside consultants and/or staff dedicated to accessibility, and enforcement of minimum standards for conferences regarding accessibility chairs and services (website accessibilities, site contracts, etc). The EC then approved an Adjunct Chair for accessibility and planned to send a proposal “to the ACM for a professional consultant who will help our organizers identify best practices for supporting members with special access needs.”

As of September 2019, the EC is working to hire a professional who will fill the role of adjunct chair and help guide and support progress on accessibility.⁶ This promise and its follow through represent a positive advance for accessibility in SIGCHI. The SIGCHI Accessibility community welcomes this level of commitment and action from the EC. However, there are some important concerns that remain regarding representation, acculturation to the needs of SIGCHI members, and how this person can be effective at community level advocacy and decision making. Despite these concerns, SIGCHI Access believes the dialogue, awareness, and action that have arisen from the CHI 2019 Town Hall protest are positive and hopeful.

4.2 Content Accessibility

Video accessibility is increasing, captions are now included in all videos uploaded through the official SIGCHI Video service. To date, this includes a total of 3446 videos, starting with CHI plenary talks in 2006 and expanding to include a range of talks and plenaries and other content from CHI, UIST SUI, ISS and IUI in 2018 and 2019, including (over the entire video archive from 2006 on) 80 plenaries, 1340 talks, 1721 paper previews, and 304 other videos.

In contrast, PDF accessibility is low. However, some recent innovations may be changing this. UIST 2019 achieved an accessibility rate of 60% in author-submitted final papers, which is much higher than previous reports. One hypothesis we hope to explore further for this success is that the innovation introduced by UIST 2019 of requiring authors to submit ALT text for all figures motivated authors to use that ALT text in their submissions. In addition to this innovation, ACM (with SIGCHI leading the charge) is moving toward an HTML 5 format for papers that will ultimately make accessibility easier and more standardized. Currently, manual labor is still required however, and CHI 2019, 2020, and UIST 2019 are all using SVs and other non-author help to achieve close to 100% accessibility in the final set of papers published through ACM.

5 Recommendations

R1: Achieve Conference Accessibility

Ensure that 100% of conferences are accessible, have an accessibility policy, and have a clear chain of command for addressing accessibility issues.

The first recommendation from the 2015 report dealt with conference accessibility. Over the last 4 years, we have made excellent progress on this front, particularly at SIGCHI's flagship conference, CHI. In the last two years, increased seating (and reserved seating for people with disabilities) have become standard. Responding to feedback from attendees, a quiet room appeared at CHI 2019 and was well received. Going into 2020, we are in a strong position with accessibility expertise engaged in everything from site visits to planning, and the additional possibility of professional guidance. At the same time, as evidenced by the SIGCHI protest, much work remains to be done. While more SIGCHI conferences than ever before have accessibility chairs, FAQs, or both, the percentage of conferences compliant is still very small.

R1.3 Accessibility Chairs [Not Met]: *Have an accessibility chair for every conference by the end of 2017.* We have not achieved our most important goal of widespread adoption of accessibility practices across conferences. However, the SIGCHI accessibility community now has representation on the CHI steering committee, and soon may have representation on the SIGCHI Executive Committee. In addition, both groups voted to ask all conferences to have a web page documenting their efforts to be accessible (or acknowledging a lack of accessibility), specifically on a **/access** subpage of their conference URL.

R1.4 Training [New]: We have created a mailing list and plan a quarterly meeting series where accessibility chairs can ask questions. During the next two years, we will work to expand this outreach. Through this program we will also learn how best to assist conference accessibility chairs, SVs, and other conference organizers.

R1.5 Develop and Document Best Practices to Increase Consistency [New]: Experiment with best practices for supporting conference accessibility at scale. The SIGCHI Access volunteer community has lead efforts to experiment with better models for conference accessibility, particularly models that can scale to large conferences and/or large numbers of conference. Some of the innovations that we produced since the last report:

- The development and testing of an SV training manual for CHI student volunteers (used in 2019 and now being refined for 2020)
- Development of a timeline for accessibility chairs (still being finalized)
- Iterative work on registration question wording and content (still ongoing, though an initial draft of questions are now part of the default registration provided to SIGCHI conferences)
- New accessibility guidelines jointly created with SIGACCESS (released)

We plan to finalize the ongoing work above in the next two years. In addition, we will produce videos that can be used for SV training at smaller conferences, and devote attention to new issues such as encouraging accessible presentations. Finally, we plan to work on and disseminate privacy guidelines for how registration information should be used.

R3.3 Include Accessibility in Conference Budgets. [New] The SIGCHI Accessibility community has worked with various SIGCHI conferences to collect better information about conference accessibility budgets and start to plan for accessibility in the budget. In addition, the EC has stated that if a conference over-runs its accessibility budget, they should reach out to the EC for budgetary help. Many conferences do not have an up front budget for accessibility at all, and they should rectify this. Specific budget amounts for conferences are very dependent on both conference size (and number of attendees) as well as the timing of requests. For CHI, the SC has decided to put aside 25,000 of the conference budget for accessibility. If conferences plan ahead and contact vendors early, costs are much lower. For smaller conferences, there is also an advantage to budgeting for certain services regardless of who attends. For example, on-screen transcriptions of all talks is a feasible option for a single-track conference that can be helpful to any attendees who are deaf or find it easier to process written information, as well as attendees for whom English is not their first language.

Goals met in 2017 report: R1.1 Create updated conference accessibility guidelines in collaboration with SIGACCESS; R1.2 Educate the community

R2: Achieve Content Accessibility

Ensure that 100% of new content such as videos and papers meets established standards for accessibility and develop a process for achieving this.

Progress on this goal has been substantial in the last two years, thanks in large part to efforts of ACM and the SIGCHI Executive Committee. Thanks to these efforts, CHI 2019 was the first ACM conference to adopt the new, accessible HTML 5 proceedings format⁹. Progress on this goal has been somewhat rocky, due to the difficulty of such a major switch, but we expect to see regular use of this new process by the time of the 2021 report. Website accessibility, particularly for conferences, continues to lag behind proceedings accessibility.

- **R2.1 Assess current status [Not Met].** We do not have a comprehensive assessment of current status. This data is currently time consuming to collect for both papers and websites. However, we have a volunteer team (the accessibility subcommittee of the inclusion committees) that plans to look at CHI and UIST accessibility as next steps, and have been working to identify courses where assessment of conference websites could be included as a course project.

⁹ <https://twitter.com/JRicoWilliamson/status/1133647217821192193>

- **R2.2 Ensure accessible papers** [New] The SIGCHI Access community will help to provide expertise about accessibility as the format is developed, and work with ACM and the EC to address the legacy problem (old papers that are not accessible). We will also continue to experiment with ways of improving the quality and compliance with manual labor required for accessibility by authors. In particular, UIST 2019 was the first ACM conference to require ALT text be submitted just like a textual version of references, which facilitated volunteers more easily fixing inaccessible PDFs and made it the first SIGCHI conference with near 100% accessible proceedings. That said, professional support would be extremely helpful in complementing author efforts. Paid SVs have filled this role to date. However the expertise and budget for this are both not clearly sustainable. To summarize, we have the following subgoals, once the new format is adopted:
 - R2.2.1 *Ensure that the new format is accessible*
 - R2.2.2 *Develop a proposal for a solution for the 'legacy' problem of older papers that are not accessible*
 - R2.2.3 *Make ALT text submission a standard part of PCS*
- **R2.3 Improve conference website accessibility.** [New] We would like to see improved accessibility of conference websites and mobile apps. Some of our sub-goals here include:
 - R2.3.1 Create a powerpoint deck consisting of various checks that can be performed on conference websites, best practices and examples of Good/Bad web pages in terms of accessibility. This will reproduce existing resources (webAIM) with a focus on things that are specific to running a conference website.
 - R2.3.2 Achieve 100% compliance with basic accessibility standards for conference websites
 - R2.3.3 Work with SIGCHI to ensure that the mobile app is accessible
- **R2.4 Video accessibility** [Met] A process for video captioning was piloted with the help of the SIGCHI CMC in 2014/2015, and has now been adopted as part of the SIGCHI Video service: "SIGCHI provides conferences with equipment to record talks... Conferences only pay for shipping the equipment, **captioning**, and one additional student volunteer per track for recording"¹⁰ (emphasis ours). An external company (rev.com) is used to write up the captions, and SIGCHI's video program chairs ensure they are uploaded with the videos. The group leading this effort are working to onboard more specialized conferences.

We note that the above list is revised our goal list substantially from our original goals four years ago. Previous goals we have removed include creating guidelines to use as a standard (partially met thanks to the adoption of the new HTML 5 standard spearheaded by the EC) and developing a process for addressing accessibility (partially met thanks to efforts to require ALT

¹⁰ <https://docs.google.com/document/d/13c-Wvx3MSAps9d6GpJhvM3VFGxa3PVAaowWJYpOePbU/edit>

text in PCS spearheaded by conference accessibility chairs). We have now updated and revised these goals to be more specific and hopefully more actionable.

To summarize, progress has been very successful for videos, is excellent (100%) at CHI and UIST but not sustainably improving in other conferences, and nothing is known about websites. The SIGCHI Accessibility community believes that the primary barrier to meeting these goals is having enough volunteer experts to focus on them, and having a commitment to hire professional support to execute them. The success of the videos in comparison to papers is evidence for this. In addition, it is likely that better participation in R1 will be needed before process goals in R2 can be met effectively.

R3: Handle Accessibility Requests

Create a process for handling accessibility requests within SIGCHI

Progress on R3 is very slow. Visibility among the SIGCHI leadership, which has recently increased, should make it easier to establish a communication structure for supporting conferences and we are optimistic that this will change before the next report two years from now. Studies of the legal context is a costly proposition that may be harder to act on, and consideration should be put into what would best lay the groundwork to make this possible. On the positive side, the SIGCHI Accessibility community has *met its long term goal* of establishing a position focused on Accessibility among the SIGCHI leadership, specifically with respect to representation on the CHI Steering committee and a dedicated, yet-to-be-filled position on the Executive Committee mentioned above. Finally, we have added a new category to this recommendation, which is budget planning for conferences. We include in Appendix B an analysis of budgetary concerns that may guide conference planners.

- **R3.1 Create a single point of contact for accessibility questions and advertise it SIGCHI wide.** [Partly met] The community has created a single point of contact for support and discussion. However, there is still not a well known, established mailing list for more formal requests, conference chair support, and so on.
- **R3.2 Study the legal context.** [Partly met] The SIGCHI Access committee has begun a dialogue with ACM about current contracts. Our initial analysis, presented below, is not yet complete, but we plan to use these contracts to help Accessibility and Conference chairs better understand what is already included, and what they may want to pay attention to adding during contract negotiations and execution.

Legal analysis: Even though participation in ACM is international, according to the ACM bylaws (<https://www.acm.org/about-acm/acm-bylaws>), ACM is a US-based organization which is incorporated in Delaware. Therefore, for the organization and any US-based events, US Federal laws such as the Americans with Disabilities Act apply (as well as any relevant state laws). Since ACM sometimes receives U.S. Federal funding (e.g. for graduate conference support),

Section 504 of the Rehabilitation Act, which prohibits discrimination against people with disabilities by recipients of Federal funding, may apply to ACM.

When ACM conferences are held in the US, the Americans with Disabilities Act would certainly apply, and so, for instance, for CHI 2020 in Hawaii, reasonable accommodations (e.g. sign language interpreters) as defined by the ADA cannot be denied. In the case of international conferences, it is important to engage regional expertise in understanding the legal requirements for accessibility of that location.

It is also important to consider the content sold by ACM in the form of the ACM Digital Library. Universities in the United States (both private and public), as well as public libraries, are covered by the ADA and the Rehabilitation Act, and so they would generally be prohibited from acquiring digital libraries that are inaccessible.

R4: Increase Representation

Increase representation of people with disabilities within SIGCHI

Our short term goal was met for R4, however the larger issue of inclusion is not resolved. Progress needs to be made in representation on governing bodies, fellowships, mentoring, and increased outreach to related stakeholders.

As mentioned elsewhere in this report, the SIGCHI Executive Committee made a commitment to creating an Adjunct Chair for Accessibility, which was intended to be a volunteer position but they now plan to fill with a professional hire in accessibility. They also appointed a Diversity and Inclusion Chair, who has included accessibility as a subcommittee area. Open questions and concerns remain regarding whether these solutions are sufficient to ensure that there is an EC member who is in touch with the needs of CHI's disability community; empowered to speak up and create change; engaged in leadership and direction setting; successful in engaging with the large community of SIGCHI conferences around accessibility; and able to lead change at the ACM level in concert with other SIGs.

- **R4.1 Run a networking event [Ongoing]** This goal was met in 2016 in the form of a SIG on accessibility at CHI. In 2017 this was formalized through the addition of accessibility as a component of the *Diversity and Inclusion* lunch at CHI¹¹. Finally, SIGACCESS and the SIGCHI Accessibility community held a joint pizza party at CHI 2017. We hope to see these types of events continue on a yearly basis.
- **R4.2 Increase representation of disability leaders in SIGCHI [New]** This is a new goal, and one that we hope will empower the community of disabled scholars who are part of SIGCHI and help them to meet their accessibility goals. We need to cultivate the next generation of leaders within SIGCHI.

¹¹ <https://chi2017.acm.org/diversity-lunch.html>

R5: Assess Success

Assess SIGCHI's success in meeting accessibility guidelines at least once every 2 years.

- **R5.1 Produce regular reports.** [Goal Met] This report represents our success on the basic goal of reporting on progress, based on post-conference surveys and other data.
- **R5.2 Study the impact of innovations.** [New] From the contents of the CHI registration form to the requirement of submitting ALT text, innovation is happening in accessibility. It would help to guide us and the community if we could study these innovations to learn what to keep and what to let go of.

Unfortunately, on other fronts our 2017 words still stand unchallenged: *“Our immediate goal of assessing and reporting on progress is met by this report. However, we have not established a sustainable approach to collecting the appropriate data on a regular basis, it is still very ad-hoc. Some metrics are ill defined or not tracked.*

Assessment of program committees, awards, and so on, has not yet begun. However, we have been working with SIGCHI to ensure that conferences are assessed in a consistent way from year to year.”

Appendix A: Conference Survey Questions

At conferences, the following questions were asked:

CHI 2014/2015 *Did you request any accessibility-related accommodations for the conference? If yes, were your requests met in a timely manner?*

CHI 2014-2016 *Do you know of any researchers, practitioners, educators or students with disabilities who wanted to attend the CHI conference, but could not because they required specific accommodations? What accommodations could we provide to help them attend?*

CSCW 2015 *Do you have any suggestions for things the CSCW 2016 planning team should particularly attend to in order to make sure the conference is accessible to people with disabilities?*

All years: Sometimes generic questions about the conference received accessibility-specific responses, which we also analyzed.

Appendix B: Budget Planning

Here is a summary of accessibility features that our investigation learned about which might impact budget. Access provisions for the conference that cost only volunteer time are not

included here. Further budget information is provided in the [Accessible Conference Guide budget section](#).

Costs that all conferences should plan for

- **Accessibility of location, venue, and offsite events:** There may be costs to assess potential venues in detail, if there is no-one local.
- **Extra Screens.** Enough projectors and screens in the main room for good slide visibility
- **Ramps:** Conferences should expect to have a ramp up to stage (or avoid having a raised stage at all) and a stool or other seating for presenters who cannot stand or are too short to use a podium. It is best to include these in the site contract negotiations, they will almost certainly be used.
- **Wireless mics for speakers and questions.** (SVs bring the mics to the audience members), including a lapel mic for speakers who do not want to worry about holding a mic or staying at the podium, should also be included in early planning.
- **Sufficient Seating.** Reserved seating in all sessions, and in social areas, should be negotiated for up front
- **Transportation.** Transport to offsite events is a nice courtesy for mobility impaired attendees. Wheelchair accessible transport (e.g. kneeling bus) to offsite events has to be specifically requested.
- **Remote Captioning (CART).** The costs for a single room throughout all sessions are well within most conference budgets if they plan ahead. For larger conferences, plenary sessions could still have CART by default. However, ethernet connection for the transcriptionist is essential and should be negotiated for early with venues. Projecting the transcription so all attendees can benefit also incurs the cost of an extra projector and screen. Having CART for some sessions will lower costs if a specific attendee requires CART as an accommodation.
- **Dedicated quiet room.** For most venues, providing an additional small room for attendees to use is a negligible additional cost.
- SVs available to assist attendees with access
- ASSETS pays an extra fee to Sheridan to handle some accessibility for the proceedings.
- Accessibility is a requirement for the conference web page. This isn't an extra cost for ASSETS, but could be for others who pay for their website.

Costs that may depend on attendees

- **Sign Language Interpreters.** Ideally, sign language interpreters for all languages deaf attendees might require should cover sessions, breaks and social events. Multiple interpreters may be needed who can trade off even if there is only a single Deaf attendee. In addition, since sign languages differ from country to country, interpreters may need to be shipped in. Conferences need to consider who covers travel, accommodation, and food. Finally, interpreters benefit from having a preparation space and access to a printer.
- **Braille copy of the program.** This is a nice addition for blind attendees as the current mobile apps provided with large conferences are not fully accessible, and PDFs of

conference brochures are typically also not accessible. However an up-to-date accessible website may be a backup option.