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SketCHI 5.0: Diversity & Accessibility at the core of Sketching in HCI

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ABSTRACT

Sketching is a universal tool, one that has been with us from the earliest days of humanity. This freehand technique is visible both in analog and computational form using 'pencils' and 'pens', although the creation of a sketch requires human consideration and action. It is the act of sketching that we will examine in the context of cross-cultural, diverse, and accessible sketching in HCI, where it is embodied in ideation, design spaces, storytelling, impact, and much more – a sketch can be a section of code, rapid prototyping, algorithmic recognition, digital representation and more. SketCHI 5.0 will bring CHI attendees from around the world together to discuss and co-create thoughts, resources, and exemplars around the topic of Diversity and Accessibility at the core of Sketching in HCI practice.

CCS CONCEPTS

• **Human-centered computing** → **Human computer interaction (HCI)**.

KEYWORDS

Sketching, Diversity, Accessibility, Sketching, Drawing, Visual Thinking

1 INTRODUCTION

Sketching is a universal skill and more importantly a tool with a long history [1]. We sketch to express our embodied selves, depict

our world, and to communicate with others, using basic tools such as crayon, pen, or complex digital tools such as digitizer and touch screen. As we grow, we improve this skill into artworks that are fictional and representational, diary entries providing a snapshot of our lives and feelings, to express concepts, experiences, ideas, and thoughts [2]. It is the act of sketching that we will examine in the context of inclusivity and accessibility in Human-Computer Interaction, especially in the context of how we can open up the practice to become more tangible and supportive of diversity of use [5].

Sketching is practiced in many sub-fields and domains of computer science, including HCI, and in cross-disciplinary settings such as the humanities, psychology, engineering, and design – and further, to elicit ideas and information, communicate with teams and stakeholders, to document outcomes, enhance impact via public engagement, and establish internal dialogues in design processes. In HCI, it is often seen in ideation, design spaces, storytelling, and impact and much more – such as a section of code, rapid prototyping, algorithmic recognition, a digital representation, and so forth [10, 13]. The SketCHI series [6, 8, 11, 12] has previously attracted a wide range of attendees from across the world, who identified themselves as students, academics, and practitioners, from a range of HCI sub-disciplines and backgrounds. The intention is to distribute the co-created guidelines to the wider ACM and SIGCHI community to enable researchers, practitioners, and institutions to add to their day-to-day practice, learning outcomes, and up-skilling (e.g. see Figure 1). This community rarely shares their sketching practice, although most are open to the idea of process driven research outputs and art-based or visual narratives – but sketching is a powerful medium to invite dialogue and iteration, and holds an important place in our field.

2 HYBRID SKETCHI 5.0 SPECIAL INTEREST GROUP

2.1 Structure and Accessibility

SketCHI 5.0 SIG will bring together the presentation of the in-person and online SketCHI SIGs in a hybrid format to allow for greater reach, attendance, and engagement with the SIG. The 90-minute hybrid SIG aims to bring together, build a community and
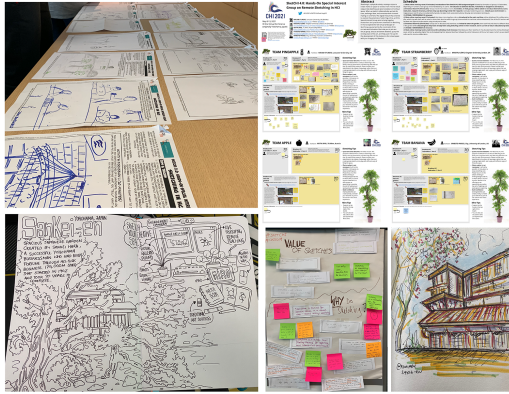
Figure 1: Exemplars from SketCHI series: Sketch gallery from CHI 2019 (top-left); Summary of community discussions from CHI; Live sketching at Online sketching in HCI 4.0 SIG by Makayla Lewis, 2021. (bottom right); online Miro board of CHI 2021 sketch gallery and discussions (top right); CHI 2019 outputs leading to Sketching in HCI manifesto published at AltCHI 2022 (top left) (bottom-middle); and Live sketching at Online sketching in HCI 4.0 SIG by Miriam Sturdee, 202 (bottom right).

look to improve the accessibility and diversity of sketches in HCI. It will offer two hybrid workstreams: remote and online (Figure 2). Each stream will be tasked with exploring and sketching the CHI 2023 venue, in-person or via Google Arts and Culture Street View, whilst engaging in three guided discussions. **In-person SketCHI 5.0** will follow the successful format of previous SketCHI SIGs (1.0–3.0) and involve 5 minutes walking around the conference venue, 15 minutes standing on-location sketching, and 55 minutes seated in the SIG room. A 10-minute float time has been included to allow for varied attendee walking paces. Escalators and lifts will be used if needed during the SIG, but we anticipate that only slight elevation may be present. Attendees will be made aware that there are seldom chairs or tables when sketching on location, thus comfortable clothing, shoes, and a non-cumbersome bag, e.g., a backpack, are suggested. SketCHI 5.0 is suitable for wheelchair users due to ACM SIGCHI accessibility guidelines; however, it may be unsuitable for people with reduced mobility.

Remote SketCHI 5.0 will follow the successful format of SketCHI SIG 4.0, engaging with Google Arts and Culture Streetview to explore and sketch local heritage sites. Attendees will follow a successful approach to engagement / interaction with heritage sites remotely [9]. Attendees will have access to the conference platform closed captioning, additionally, microphones and webcams will be used to support communication between in-person and remote attendees. The Miro platform will be set to allow for zooming in up to 300% without problems, keyboard navigation will also be supported. Each workstream will be supported by in-person and remote facilitators. A slack channel will be used to support on-the-day communication amongst facilitators. An introduction to the communication channels, in-person and online, will be provided at the beginning of the SIG. Additional support will be offered to participants if technical difficulties or accessibility issues arise. The

authors will ensure all text and verbal utterances will be clear, simple to understand, and in English. All shared imagery will contain Alt Text with appropriate color contrast. Opportunities for support, questions, and comments will be present throughout the workshop regardless of in-person or online delivery.
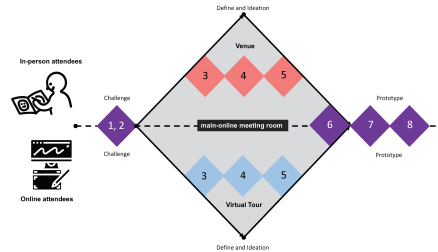

Figure 2: Summary of SketCHI 5.0 schedule for in-person and online workstreams (see section 4.2 for more information).

3   SCHEDULE

(1) **Introduction main-online meeting room (5 minutes):** Introduction to technology to be used, the SketCHI 5.0 SIG background, and goal followed by the formation of groups, 4 to 6 attendees, depending on numbers, each group will be facilitated by an author. Followed by an introduction to the CHI 2023 conference venue (in-person attendees) via a map of the venue, and The Hamburg Port Museum's Virtual Tour of the PEKING artsandculture.google.com/partner/hafenmuseum-hamburg, on Google Arts and Culture Street View (remote attendees).

(2) **Warm-up sketching, main-online meeting room (10 minutes):** To support community building, attendees will be asked to 'Draw what diversity means to you?' then craft AltText or AltNarrative [7] for their sketch(es), followed by Show+Tell and accessibility critique.

(3) **Breakout #1 (15 minutes):** Groups move into their groups or breakout rooms and take part in an icebreaker sketching exercise – sketch your immediate environment (Figures 1) – i.e., mapping their real-life sketching tools including both physical and digital tools using an annotation technique. Attendees, in their groups, will be asked to introduce themselves: name, institution, research interests, and how they use sketching in their HCI research. After this attendees will be asked to share their sketches with the group using show & tell (in-person by holding up their sketch or remote using a real-time online whiteboard). One of the SIG authors will facilitate and capture the discussion using virtual post-it notes on the real-time online whiteboard.

(4) **Breakout #2 (10 minutes):** Attendees are invited to enter the main lobby of the conference (in-person attendees) or enter The Hamburg Port Museum - PEKING (remote attendees), they will be asked to find and sketch a different feature in the location e.g., people, devices, and technology whilst discussing How do you feel about diversity and accessibility in sketching in HCI? How do you ensure your sketches in HCI are diverse and accessible?

(5) **Breakout #3 (10 minutes):** Attendees move to a second location of the conference venue (in-person) or a different area of The Hamburg Port Museum - PEKING (remote) in their groups focusing their sketches on the wider scene (architecture, nature, traffic, and people) whilst discussing What resources, experiences, practices have you used or intend to use to make your sketches in HCI more inclusive and accessible? How could the importance of diversity and accessibility in sketching be better communicated in HCI and CHI?

(6) **Main-online meeting room and real-time online whiteboard (10 minutes):** with the support of the authors, attendees (in-person and remote) will be asked to post their sketches to the real-time online whiteboard space, either by uploading digital files or photographing their physical sketches. Followed by, 'show and tell' whereby attendees (in-person and remote) present their scenes on the allocated real-time online whiteboard space and a spokesperson from each group will summarize their discussions.

(7) **Main-online meeting room and real-time online whiteboard (30 minutes):** Attendees will return to their groups (in-person and online) and then be invited to co-create their thoughts and ideas and present them in the allocated 'design workspace'. They will be asked to focus their efforts on co-creating adaptation or iteration of the Sketching in HCI manifesto, using sketches and post-it notes on flipchart paper (in-person) or the real-time online whiteboard (remote) best practice for diverse and accessible sketching in HCI. Following this, in-person attendees will be asked to upload a photograph of their creations to the real-time online whiteboard, view each other's creations, and provide comments/feedback using the comments feature.

(8) **Main-online meeting room (5 minutes):** Wrap up and next steps – attendees will be invited to join a research group looking at the future of online sketch interfaces with the view to developing publishable research and funding opportunities in this space. To accommodate all attendees, we will provide an alternative schedule (if required) where in-person attendees will remain in the SIG room and follow a remote format with one of the authors and join remote attendees' activities and discussions.

4 ATTENDEE MATERIALS

In-person attendees will be provided with a SketCHI 5.0 handout (e.g., Figure 1), however, sketching materials will not be provided. Online attendees will be given access to a real-time online whiteboard (Miro) with a digital version of the in-person hand-out (e.g., Figure 1), however, sketching materials will not be provided. It is suggested all attendees attend with an A5 or A4 hardback spiral sketchbook for additional sketches/to lean on; black drawing pen; two colored markers or pencils (a grey to add depth, color to highlight important areas) or if they prefer a digital tablet and stylus with a simple digital drawing tool e.g., Apple iPad (Air, Pro, Mini) with Apple Pencil and Procreate. Attendees will be encouraged to sketch with bold pen/markers and digital brushes because mistakes cannot be erased, ensuring attendees keep sketching. Furthermore, we will ask attendees and to play with different ways of filling the

space (e.g., Figure 1). We want to emphasize the process and its creative side effects instead of focusing on the ensuing result.

5 SIG DELIVERABLES

The authors will synthesize the co-created posters into a series of visually depicting, and through AltText/AltNarrative, thoughts, resources, and exemplars of Diversity & Accessibility at the core of Sketching in HCI, to create a featured blog or article for ACM Interactions, with appropriate authoring and attribution. Attendees will also be invited to join (SketchingHCI.slack.com) to further build the community and further investigate the interests and possibilities raised by the SIG. We shall also make a Sketch Gallery using the #SketCHI hashtag and #CHI2023 on social media. Previously authors have made Diversity & Accessibility statements [3], to the Sketching in HCI Manifesto, which was established by SketCHI 2.0 community [8] and published at CHI 2022 [7]. The outcome from SketCHI 5.0 SIG could also be incorporated into the HCI curriculum in colleges such as Sketching for Interaction Design, for example, as in using contextual inquiry, sketches come in handy to illustrate the scenarios [4]. The SIG would also act as an informal gathering of the new Arts in HCI ACM SIGCHI Chapter.

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