How Tangible is TEI? Exploring Swatches as a New Academic Publication Format

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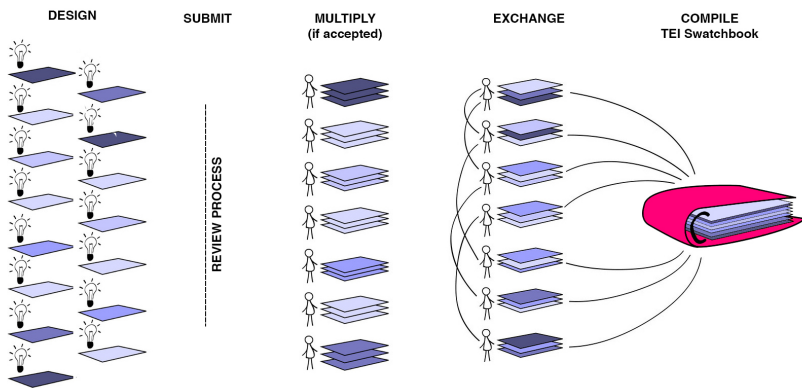
Fig. 1. Process of the TEI'21 Swatchbook as part of the Student Design Challenge.

After the successful organization of the first TEI Swatch Exchange as part of the SDC (Student Design Challenge) in 2021, we would like to propose Swatches as a new and physical publication format to TEI, the Conference on Tangible, Embedded, and Embodied Interaction. We believe TEI should take initiative in exploring possibilities of broadening how academic publishing can look like, and what novel publication formats could be inclusive towards new knowledges and new participants in order to advance academic practice. The focus and nature of the work presented at TEI is uniquely fitted to explore physical publication formats as a novel way to advance, communicate, and cite work that embeds and embodies computing in the physical world. However, we are aware that a physical publication format also poses very specific challenges, including questions of dissemination, accessibility, and citation, to name a few. We propose a Studio to deeply engage with the possibilities and potentials, as well as potential problems of physical publications. We see such discussion as a crucial first step in defining plausible submission processes, publication forms, and means of archiving of new academic formats.

CCS Concepts: • **General and reference** → **General conference proceedings**; **Reference works**.

Additional Key Words and Phrases: tangible publication, physical publication, practice-based research, swatch

1 INTRODUCTION

The *Student Design Challenge* at TEI'21 probed a *Swatchbook* as a new physical publication format [9]. Participants in this track were invited to submit physical samples of their work that capture and communicate their skills and expertise. After a juried selection process, accepted works were multiplied, shipped to the conference location where they were then mounted on pages, bound into book form, and distributed back to participants as the *TEI'21 Swatchbook* [11]. The successful organization and positive feedback from both the participants and the general TEI community sparked our interest to pursue the idea of the *Swatch Exchange*, and the resulting Swatchbook, as an academic publication format, and to propose it as new and physical publication format to TEI, the *Conference on Tangible, Embedded, and Embodied Interaction.*

In the past years, we have seen new publication and presentation formats emerge addressing the diversity of the field, among them the *Pictorial* track, "supporting the presentation and communication of research ideas, design practice, methods, provocations, insights, and contributions in a more visually rich format" [13] or the *Art, Design, and Performance* track seeking "interactive artworks and performances that articulate and provoke alternative viewpoints to facilitate the discussion around the TEI theme of tangible interaction design" [5], and discussions how publication formats in general might need to expand (e.g., [6]). However, these formats are largely rely on written, digital publication. With this Studio, we would like to provide a platform for examining the possibilities and potentials - as well as potential problems - of physical publication formats. We invite researchers from all career stages to join us in evaluating plausible processes, forms, and archives of physical research publications, and to collaborate on the next steps of implementing such a format as part of the TEI conference proceedings. We see the strength of a physical publication format to be inclusive to new forms of producing, documenting and distributing knowledge, new approaches within the field being made accessible to the TEI community, and new audiences being encouraged to publish. It will be core to the Studio to balance the assumed positive effects with new challenges a physical publication format might pose.

In the next sections we lay out some of the core thoughts that guided the TEI'21 Swatchbook, and lessons we learnt from this first *TEI Swatch Exchange.* We propose to take these as starting points for the Studio discussion. The goal of this studio is then to define a clear path forward, towards the inclusion of a physical publication format at TEI in 2023, engaging with both the advantages as well as the challenges of such an endeavour.

2 BACKGROUND

The word *Swatch* is borrowed from the context of textile, where it means a sample quantity of a textile design; a *Swatchbook* is a collection of swatches, often bound in a book or on a string or ring. Since 2013 the swatch exchange format has also developed within the eTextile community as a distributed way of sharing physical work [3, 8]. In previous work, researchers have shown that swatches are useful for collaborations and sharing ideas [1], eliciting feedback [2, 7, 10], and teaching the steps of a new technique [4]. Applying this concept to the work of the TEI community, we take a swatch to mean a sample of work, reduced to an essence that can be multiplied and physically shared with others. It calls not for "fully functioning interactive projects, but rather for the small solutions that make our projects possible. The details that take time to solve, and skill to solve well. In many cases these solutions are not obvious or even visible in final designs. They are often inside the technologies we build. But they work, and when they work well, it makes all the difference." [9] There is no limitation on what the Swatch can include, other than its dimensions meeting certain size constraints to fit the compiled Swatchbook.

Fig. 2. TEI'21 Swatchbook

Fig. 3. TEI'21 Swatchbook Sample Page

3 THE SWATCH EXCHANGE

The following is a summary of the TEI'21 call that resulted in the TEI'21 Swatchbook: Individuals and collaborative efforts participated in the exchange by responding to the call and submitting a unique swatch design of their own by uploading a photo and a description of a first prototype of their design. Following acceptance by jury selection, participants reproduced 8 copies of their swatch, this number being defined by the total number of participants. Participants shipped their swatches and any mounting materials to a central location (the conference venue) where they were mounted on custom printed pages and these pages assembled into a book. Finally, participants received their compiled collection of everybody else's swatches including their own (overview in Figure 1). The Swatchbook thus becomes a platform for sharing physical work samples [3] in the field of tangible, embedded and embodied interaction; to learn from one another not only through online documentation and workshops but through studying first-hand the actual work produced.

Figure 2 and 3 picture the final TEI'21 Swatchbook. The accompanying website *https://tei.acm. org/2021/swatchbook/* additionally documents all Swatches online. Each Swatch is represented through a featured image, an abstract, a list of tools and techniques, links(s) to online information or related work, and a video. The website also displays a summary from the SDC jury statements. In addition to the website and the physical sample, SDC participants were also required to submit a written submission which is now archived in the ACM Digital Library.

During the online TEI'21 conference, the Swatchbook was presented in an online session in which participants had 5 minutes each to introduce their swatch followed by 5 minutes for Q&A. One extra copy of the book was produced to create an official TTEI'21 Swatchbook copy which remains with the TEI'21 Student Design Challenge Chairs for continued exhibition. Currently, this TEI'211 Swatchbook copy is on show at the Ars Electronica Center in Linz, Austria [12].
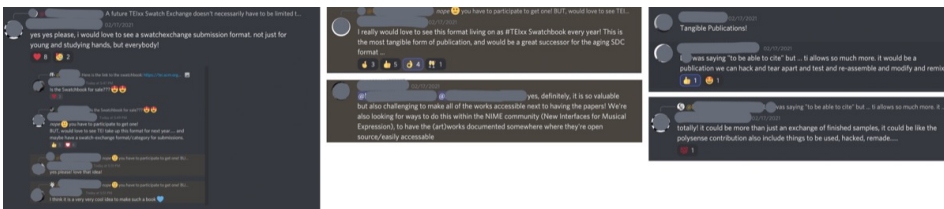

Fig. 4. Screenshots from the discussion at the Swatchbook presentation at TEI'21

Feedback and responses submitted to us during the online presentation at the TEI'21 online conference and via a survey sent out to participants of the SDC after the conference showed a

strong interest to further the idea of a tangible publication format at TEI. We exemplary picture (see Figure 4) and quote some of the comments as a starting point for the continued discussions in the Studio: Participants commented on the format: *"the act of formgiving a method into a physical shape [...] encourages exploration beyond the current shape [...]" "The swatch gave me a nice framework to thoroughly explore one small idea and create a proof of concept for a specific technology."* as well as the review process through an invited jury: *"I particularly valued the feedback from the reviewers and the chance to then iterate on my swatch." "I think having a peer-review process for samples, and this type of tangible work, would help to improve the craft aspect of TEI."* They further commented on the potentials of a physical publication form reaching wider spread recognition: *"anything that is not a paper ends up going to the bottom of the list of priorities (due to necessity). Having a peer-review venue for this type of work would help to legitimize it for the research that it is!".* Further, the necessary multiplication of Swatches was discussed: *"The trickiest part was re-creating the swatches at scale", "I could have experimented a bit more with the making process",* as well as the learning process associated with it: *"Creating the swatches at scale made me think more about the design of the swatch"*

4 THE STUDIO

This Studio proposes a set of synchronous and asynchronous online activities discussing and furthering the idea of a physical publication format. It gathers researchers from diverse professional backgrounds, including, but not limited to: practice-based research, conference organisation, diversity and accessibility. A maximum of 12 participants are selected based on a *Call for Participation* asking interested individuals to submit a position statement.

4.1 Approach

We will kick-off this studio with an introductory round. Positions statements will provide a first set of diverse inputs and opinions, as well as a means of getting to know one another. As Studio leaders we will share our own perspectives as well as experiences organising the Swatch Exchange at TEI'21 and running and participating in the eTextile Swatch Exchanges since 2013. Building off this introductory material, we aim to structure the discussion across three central themes: *process*, *form*, and *archive* and across different scales: from ideal imaginaries, to practical implications of a physical publication format.

4.1.1 Process. Within this set of questions we examine the processes underlying the realisation of a physical publication format. This includes, but is not limited to questions of presentation, production, and distribution, as well as facilitating the processes of reviewing, selecting, and awarding submissions. For example, we ask:

- What new routines need to be set up to facilitate a physical publication format?
- What aspects of academic review processes can be transferred and be beneficial to physical publications?
- How can the necessity of physical distribution be beneficial to a research publication?

4.1.2 Form. Within this set of questions, we engage with the form of a physical publication. This includes, but is not limited to questions of audiences and themes, as well as size, costs and documentation. For example, we ask:

- What audiences and topics can especially benefit from a physical publication format, and what audiences and topics may be confronted with what specific challenges?
- What physical form do we deem desirable, and what constraints can we identify that are practicable but not limiting?

- How can we advance and take advantage of practice-based research publication formats while also being inclusive of the benefits of digital formats?

4.1.3 Archive. Within this set of questions, we enquire about possibilities to archive a physical publication for later reference. This includes, but is not limited to the practical and legal concerns of physical storage, digital representation, citation formats, and dimensions of accessibility. For example, we ask:

- What new possibilities and challenges arise for the archiving of a physical publication, what are appropriate places and formats offline and online to provide ongoing access?
- What are crucial dimensions of referencing existing work as well as being able to reference for physical publication to live up to academic practices?
- How can we guarantee broad inclusive accessibility of a physical publication format?

4.2 Goals

Our three main goals for this studio are: 1) Discuss and decide if and how a physical publication format can be part of TEI, 2) Define the structure of such a format(s), 3) Prepare all necessary documents to further this idea within the conference/community, ideally via the proposal of a concrete format(s). We can imagine the following collective outcomes from this studio: An open letter or academic publication proposing our ideas for possible integration in future TEI conferences; An openly available pdf-handbook for running a TEI swatch exchange that documents the details, from early preparations to shipping out the assembled Swatchbooks.

4.3 Schedule

4.3.1 Pre-Studio Activity (asynchronous). Selected participants will be asked to prepare an idea for a swatch submission of their work (if applicable). We ask this to in order to challenge participants to fully engage with what this format could mean.

4.3.2 Kick-Off & Discussion Session (synchronous). The four-hour-long online kick-off session includes the introduction and first discussions of the topics identified above. This event be scheduled at a time best suitable to the majority of the Studio participants, including the Studio organizers. The discussion will be recorded and made available to those who can not participate live so they also can take part in the following asynchronous activities.

4.3.3 Discussion Sessions (asynchronous). Throughout the conference distributed activities will take place in small teams to further individual aspects as identified in the kick-off session.

4.3.4 Closing Sessions (synchronous). The two-hour closing session compiles the outcomes of the Studio activities as well as a plan for how to proceed. The closing session will take place just after the TEI conference.

4.3.5 Post-Studio Activity (asynchronous). After the Studio, actions identified in the closing session will be worked on in working groups. The Studio organizers take the lead, together with committed participants, to formulate a clear path forward.

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