

Design Artifacts, Participants and Continued Dialogue: What Happens During and After the Deployment?

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Field deployment is a widely used method in Research through Design (RtD) to situate design artifacts in real-world contexts and evaluate their functionality, acceptance, and the lived experiences of participants. Although participants play a critical role in the design research, there are challenges when working with participants. We often face unexpected challenges in the deployment, or more broadly, in the design process, such as failure, waiting or pause. Drawing on two projects, Queue Player and Beyond Looking Back, we aim to explore how RtD extends beyond bounded deployment phases, illustrating how time shapes our relationships with participants for deployment and beyond, and how ongoing dialogue can serve as avenues for new knowledge in design research. Our motivation is to share how our long-term engagements reveal critical points of reflection and to explore questions on continuing dialogue during and after the design process with other researchers in the field.

CCS CONCEPTS • Human-centered computing~Human computer interaction (HCI)~Field studies; User studies;

Additional Keywords and Phrases: Research through Design; Deployment; Participant Engagement; Alternative Research Outcomes

ACM Reference Format:

First Author's Name, Initials, and Last Name, Second Author's Name, Initials, and Last Name, and Third Author's Name, Initials, and Last Name. 2018. The Title of the Paper: ACM Conference Proceedings Manuscript Submission Template: This is the subtitle of the paper, this document both explains and embodies the submission format for authors using Word. In Woodstock '18: ACM Symposium on Neural Gaze Detection, June 03–05, 2018, Woodstock, NY. ACM, New York, NY, USA, 10 pages. NOTE: This block will be automatically generated when manuscripts are processed after acceptance.

1 POSITION STATEMENT

In Research through Design (RtD), field deployment is a widely used approach for placing design artifacts in real-world contexts to evaluate how they function, are accepted, and shape participants' lived experiences (e.g., [5, 7, 8]). By embedding research prototypes, systems, or design interventions into people's everyday environments, researchers aim to gain richer insights into how people interact, adapt, and find meaning in these artifacts. Often, unexpected disruptions surface during engagements throughout the process, such as delays, pauses, or transitions to different design goals [9]. Practical obstacles—such as difficulties in recruitment, scheduling conflicts, or varying levels of technical limitations in development—can also introduce additional friction into the process.

Focusing solely on a deployment period may overlook the evolving connections between researchers, participants, and the design artifacts. These unexpected turns present challenges but also become unique opportunities for reflection and new knowledge in the design process [1, 4]. Even after a field deployment concludes, questions persist regarding how relationships with participants evolve or what happens to the deployed artifacts. As design processes rarely follow a neat, linear path, artifacts and participants remain intertwined beyond the scheduled timeline, leading to critical questions about maintaining connections, honoring participants' contributions, and closing research projects responsibly.

In this paper, we introduce two RtD projects—Queue Player [10] and Beyond Looking Back [11, 13]—to discuss how the passage of time and ongoing dialogue shape participant relationships from deployment to the completion of the project. Reflecting on our experiences on the non-linear nature of RtD, we aim to highlight how continued dialogues with participants foster deeper involvement and new perspectives in generating design knowledge. Ultimately, we hope this discussion offers insights into how ongoing researcher-participant relationships offer avenues for deeper reflections on the artifacts, participant engagement and meaningful contributions beyond academic achievement that may be sustained after the end of the projects.

2 QUEUE PLAYER

Over the course of 3 years, we took an RtD approach to develop Queue Player. As a multidisciplinary team of designer-researchers, we created a small batch of four networked Queue Players, which enable four close friends to synchronously explore and co-listen to a collective archive of their music through a tap-tempo interaction. We also designed the Queue Players to function over distance and over long periods of time.

Our design process was highly influenced by temporality, both in the making process and in the design of Queue Player itself, which was informed by several slow technology qualities outlined by Odom et al. [6]. The Queue Players were deployed for a 6-week study, where they lived in the homes of four close friends in Vancouver, Canada. During the deployment, we asked participants to engage in 4 collective listening sessions, where they would all listen to their Queue Players together so that we could observe each participant's use of and experience with their Queue Player individually and as a part of the friend group.

While the timeline of the deployment limited participants' ability to fully explore their listening histories and the connections embedded in shared songs, we sought an alternative way to convey these shared moments in an accessible format by creating a zine [2, 3] that visualized the number of shared songs between participants, offering a tangible way to contextualize temporal listening events. Zines revealed unnoticed shared moments and encouraged ongoing interactions and reflections even after the completion of the study.

Completing and reflecting on the Queue Player project, we find more questions arise at the end of the design process. Although the 6-week deployment was not long, we engaged with the participants for a year prior to the study, where

our lead researcher had pre-existing friendships with all participants, further building rapport and trust for the researcher-participant relationship since the initial recruitment. During this year, we also observed participants' interest and attachment to the Queue Player project grow. So we now ask, to what extent did participants' relationships evolve through their experiences with Queue Player, and is there a lasting effect? During the research process, there were also times when the study was delayed because of frictions in the RtD process, yet participants were still engaged with the research team, continuously taking part in the study. How can we, as designers and researchers, help participants bridge temporal gaps—uncovering what they may have missed—throughout the design process and when a long-term deployment concludes?



Figure 1: Conducting the *Queue Player* Field study with one of the participants (Left). For the *Beyond Looking Back* project, we shadowed participants to capture their experience entirely in sound and extract audio highlights (Right).

3 BEYOND LOOKING BACK

Beyond Looking Back takes a blend of RtD and co-design approaches to designing technology for people with blindness to enrich their experience of reminiscence. Since 2019, we have been working with a group of blind people in the local community through a series of individual and group interviews, participatory activities and co-design workshops. Since the beginning of the project, working with participants has been a central focus of Beyond Looking Back. While reminiscence and blindness are actively researched topics in HCI, limited work has been done in this area, leaving a gap in this intersection. This gap, combined with the fact that none of the research team members is blind or visually impaired, motivated our approach to stay close to the participants, paying close attention to their lived experiences, desires, challenges and wishes.

Being engaged in a multi-year project, there have been times when we had to pause or wait for the right time, like during the pandemic. Although no research artifact has been created specifically for field deployment, multiple artifacts are created as outcomes at different stages that pivot the direction and our understanding of creating knowledge in the design process. The first encounter was upon sharing a published paper from the exploratory study on understanding blind people's experience of reminiscence [13]. Letting participants read academic papers with screen readers was not an ideal way to share the results of appreciating their contribution. Thus, we translated the paper into an audio documentary on SoundCloud that can be easily digestible and enjoyable for our blind participants [12].

Another encounter happened when taking an unexpected turn based on the ideas suggested by participants to develop novel participatory activities. We, the research team, and the participants agreed to explore deeper on remembering through sound. In the brainstorming sessions at the group interviews, participants made a few suggestions

for making audio memories and ways of capturing key moments without interfering with the flow of their experience. Instead of making a robust prototype, the approach we originally planned, we ‘acted out’ an imaginary prototype that sonically captures the moment of interest. We shadowed participants throughout events of their choice (e.g., horseback riding, walking with a granddaughter, medieval sword fighting) to record their entire experience in audio and create audio highlights. Later, these audio highlights primed and shaped the co-design workshop, where three sonic mementos are created based on their cherished audio recordings [11].

The audio documentary, audio highlights, and three sonic mementos are tangible outcomes of the design process that invite participants to the next stage of research and serve as design artifacts that symbolize their contributions. Although there were ups and downs in the project timeline, ongoing engagement with participants and the outcomes at different research stages have been critical points of reflection, generating valuable insights and leading to new knowledge in the design process.

4 CONTINUING DIALOGUE

From both projects, we found that the design process is far from linear, and we encountered many design events [9], such as failures or moments of waiting, to get to the point of deployment. Life events such as holidays, school, parenthood, and traveling also affected the timeline of our projects. However, keeping in close contact with participants throughout the design process, even when paused, and properly moving on at the end of a project remains a challenge, as they are still engaged in the design process and also with research artifacts—whether deployed or in development. With these in mind, we have questions to share at the workshop surrounding RtD, field deployments, and researcher-participant relationships:

- When there is an unexpected turn in the research process, failures and waiting, how can we keep participants engaged with a project?
- What can be learned from continued researcher-participant relationships during the moments of pause?
- What are the impacts of retrieving research artifacts that have lived with participants for an extended period, particularly when they are deeply intertwined with participants’ everyday lives?
- What should happen when a research project comes to an end? When we move on to a new project, what things are left behind? What values, artifacts, and relationships should be honored, generated and continued to live?

We wish to participate in this workshop to discuss the non-linear nature of RtD, the complexities of designing with temporality, and the value of continuing dialogue with research participants. By critically reflecting on these aspects, we hope to contribute to a broader conversation on how design research unfolds over time, even after its completion, and how these insights can inform future work in this space.

ACKNOWLEDGMENTS

The Social Sciences and Humanities Research Council of Canada (SSHRC) (752-2024-2448, 435-2020-0752), the Natural Sciences and Engineering Research Council of Canada (NSERC) (RGPIN-2018-06273), and the Canada Foundation for Innovation (CFI) support our research projects described in this paper. We also thank the Homeware Lab for its work on the Queue Player and Beyond Looking Back projects.

REFERENCES

- [1] Desjardins, A. and Key, C. 2020. Parallels, Tangents, and Loops: Reflections on the “Through” Part of RtD. *Proceedings of the 2020 ACM Designing Interactive Systems Conference* (New York, NY, USA, Jul. 2020), 2133–2147.

- [2] Fox, S. and Rosner, D.K. 2016. Continuing the Dialogue: Bringing Research Accounts Back into the Field. *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (New York, NY, USA, May 2016), 1426–1430.
- [3] Hay, K. 2022. Zineography: Exploring the Participatory Design Process of Collaborative Zine Making. *Proceedings of the Participatory Design Conference 2022 - Volume 2* (New York, NY, USA, Aug. 2022), 313–316.
- [4] Howell, N. et al. 2021. Cracks in the Success Narrative: Rethinking Failure in Design Research through a Retrospective Trioethnography. *ACM Transactions on Computer-Human Interaction*. 28, 6 (15 2021), 42:1-42:31. DOI:<https://doi.org/10.1145/3462447>.
- [5] Hutchinson, H. et al. 2003. Technology probes: inspiring design for and with families. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (New York, NY, USA, Apr. 2003), 17–24.
- [6] Odom, W. et al. 2022. Extending a Theory of Slow Technology for Design through Artifact Analysis. *Human-Computer Interaction*. 37, 2 (Mar. 2022), 150–179. DOI:<https://doi.org/10.1080/07370024.2021.1913416>.
- [7] Odom, W. et al. 2016. From Research Prototype to Research Product. *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems - CHI '16* (Santa Clara, California, USA, May 2016), 2549–2561.
- [8] Odom, W.T. et al. 2014. Designing for Slowness, Anticipation and Re-visitation: A Long Term Field Study of the Photobox. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (New York, NY, USA, 2014), 1961–1970.
- [9] Oogjes, D. and Desjardins, A. 2024. A temporal vocabulary of Design Events for Research through Design. *Proceedings of the CHI Conference on Human Factors in Computing Systems* (New York, NY, USA, May 2024), 1–12.
- [10] Pinder, S. et al. 2025. Queue Player: Investigating Distributed Co-Listening Experiences for Social Connection across Space, Time, and Tempo. *Proceedings of the CHI Conference on Human Factors in Computing Systems* (Yokohama, Japan, Apr. 2025).
- [11] Yoo, M. et al. 2024. Remembering through Sound: Co-creating Sound-based Mementos together with People with Blindness. *Proceedings of the CHI Conference on Human Factors in Computing Systems* (New York, NY, USA, May 2024), 1–19.
- [12] Yoo, M. et al. 2022. Storywork & Reciprocity: On the Design of an Audio Documentary that Extends HCI Research back to Participants. *Designing Interactive Systems Conference* (New York, NY, USA, Jun. 2022), 1345–1357.
- [13] Yoo, M. et al. 2021. Understanding Everyday Experiences of Reminiscence for People with Blindness: Practices, Tensions and Probing New Design Possibilities. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (Yokohama Japan, May 2021), 1–15.