

# Slow Technology: Critical Reflection and Future Directions

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## ABSTRACT

Interactive technologies are being designed, produced, used, re-purposed, discarded and destroyed more rapidly than ever before. With these shifts, new concerns have steadily emerged across the design and HCI communities over how the growing presence of interactive technologies in people's everyday lives—and the values embedded in their design—might shape people's current experiences and practices as well as the lives of future generations. Over a decade ago Hallnäs and Redström's seminal article on *Slow Technology* [6] argued that the increasing availability of technology in environments outside of the workplace requires interaction design to be expanded from creating tools to make people's lives more efficient to creating technology that could be embedded in everyday environments over long periods of time. Since then, the Slow Technology design agenda has expanded to include issues such as (i) designing for slowness, solitude, and mental rest, (ii) designing interactive systems to be used across multiple generations and lifespans, and (iii) designing for slower, less consumptive lifestyles and practices. This one-day workshop aims to advance the Slow Technology design program by exploring the various practical, methodological and theoretical motivations, challenges, and approaches implicated in doing research and design in this growing space.

## Author Keywords

Slow Technology

## ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

## General Terms

Design

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## INTRODUCTION

Interactive technologies are being designed, produced, used, re-purposed, discarded and destroyed more rapidly than ever before. With these shifts, new concerns have steadily emerged across the design and HCI communities over how the growing presence of interactive technologies in people's everyday lives—and the values embedded in their design—might shape people's current experiences and practices as well as the lives of future generations.

In their seminal article on *Slow Technology*, Hallnäs and Redström argue that the increasing availability of technology in environments outside of the workplace requires interaction design practice to be expanded from creating tools to make people's lives more efficient to “*creating technology that surrounds us and therefore is part of our activities for long periods of time*” [6, p. 161]. These authors outline a design agenda aimed at inverting values of efficient performance and emphasizing creating technologies that support moments of reflection, mental rest, slowness and solitude. Over a decade later, these issues remain areas of inquiry in the HCI and design communities, and there has recently been a resurgence of work in this area [e.g., 5, 8, 13, 14]

Building on the slow technology design philosophy, Mazé and Redström discuss how crafting artifacts embedded with “computational material” requires interaction designers to “*investigate what it means to design a relationship with a computational thing that will last and develop over time – in effect, an object whose form is fundamentally constituted by its temporal manifestation*” [9, p. 11]. Mazé and Redström describe the necessity for designers to consider how interactive artifacts might persist and change with people and environments, across time and space. Since this work, issues surrounding how more enduring forms of technologies could be designed have steadily been gaining purchase within the HCI community. There has been a special interest in how technologies and systems might be passed down over multiple lifespans and how technologies might serve future generations [1, 7]. Recently, Friedman and Nathan [4] propose expanding research and design initiatives in the HCI community to consider multiple lifespans. They highlight the need for new methods and approaches to help embrace the inherent complexity in designing for longer timeframes.

In parallel to these works, and often motivated by such concerns, there has been an ongoing interest in the design community to slow down the consumption (and disposal) of designed artifacts and technologies by prolonging their longer-term use (and re-use) across people and communities [e.g., 11, 12, 15, 16]. Additionally, the slow food movement has been used as a metaphor for developing design frameworks to slow consumption of interactive artifacts across design [10] and, more recently, HCI communities [2].

Collectively, the works described above (and many more) illustrate the contemporary re-emergence of research related to Slow Technology. The core goal of this workshop is to critically reflect on the work that has emerged since *Slow Technology* was originally proposed, in order to forge understanding of the challenges, limitations and opportunities characterizing the contemporary design space.

### Workshop themes

Some possible themes for submissions include, but certainly are not limited to:

*Consumption of objects and technologies:* There exist a range of work in the HCI and design communities exploring how emotional attachment to technologies might extend their longevity and increase their value [e.g., 3, 16, 17]. How are existing frameworks of emotional attachment used in designing for longer term interactions with technologies? What are the limitations to this approach? How does design promote reflection on or address current trends of planned obsolescence, both business models and social expectations? And, how might more systemic or service-oriented approaches complement a move towards designing for developing enduring attachment?

*Legacy and consideration of multiple generations:* As technologies and systems are interacted with over relatively long periods of time, questions of how they will be passed down to future generations are becoming increasingly important [e.g., 1]. In what ways can both digital data and interactive products be designed with notions of sentimentality and persistence across multiple generations in mind? To what extent should interaction designers take into account the responsibility of supporting the lives of future generations into their practice? What are the practical, ethical, and/or moral issues of doing so?

*Slowness and reflection:* Slow technologies can aim to invert values of efficiency in the service of supporting experiences of pause, contemplation, and reflection. Considered in contrast to efficiency and productivity, what role might “slowness” through design play in contexts including the home, the neighborhood, and the workplace? What kinds of interaction mechanisms and functionalities characterize Slow Technologies? In what ways do they compare or contrast to contemporary consumer technologies?

*Infrastructural, engineering and technical concerns:* Designing material technologies that can support slowness both raises questions and requires solutions regarding distinct technical challenges. What kinds of new hardware and software will be required for technologies to persist over longer periods of time? How is the durability of information and materials handled effectively and appropriately over time? To what extent can digital data and hardware be designed to endure over time?

*Theoretical & ethnographic accounts of slowness:* Case studies and theoretical accounts of existing people and practices can help inform the various strands of slow design. For example, how can rich accounts of durable / non-durable practices (e.g., passing down heirlooms; purging basements of unwanted clutter) inform slow technology design practice?

### Benefits and significance of workshop

Considering the breath, diversity and overlapping interests of the emerging subsets of Slow Technology work, it is the aim of this one-day workshop to bring together a diverse, multidisciplinary group of people working in and concerned with the growing Slow Technology design program in and outside of the HCI and design communities. The specific aim of this workshop will be to critically reflect on the practical, methodological and theoretical motivations, challenges, and approaches to doing research and design practice in Slow Technology that have emerged over the past decade.

This aim will be achieved through (i) seminar-based discussions and critiques of workshop participants’ Slow Technology argument positions and/or artifacts, (ii) breakout discussions critically reflecting on issues and concerns related to specific subset areas, and (iii) a reflection session on insights and conclusions collaboratively developed over the course of the workshop. The ultimate goal will be to use insights, experiences and conclusions from the workshop to forge a critical understanding of the contemporary Slow Technology design space in light of the diverse body of work that has emerged over the past decade.

### Overview of workshop and planned activities

The proposed one-day workshop will be held on site at the Newcastle University Culture Lab.

Time	Activity
9-9:30am	Welcome and introductions by organizers; overview of workshop
9:30-11am	10-minute seminar-style critiques of participants’ position on Slow Technology and/or artifact (half of participants)*
11-11:30am	Group discussion

11:30am-1pm	Lunch (off site)
1-2:30pm	10 minute seminar-style critiques of participants' position on Slow Technology and/or artifact (2 <sup>nd</sup> half of participants)*
2:30-3pm	Group critique / discussion Breakout groups to discuss sub-issues in Slow Technology design space
3-3:30pm	Coffee break
3:30-4:30pm	Discussion of additional Slow Technology artifacts brought by participants
4:30-5:30pm	Open reflection / discussion moderated by organizers aimed at critically mapping the contemporary Slow Technology design space

\*We will thematically group morning and afternoon participant critique/discussions based on how contributions fit with workshop themes. After reviewing all submission we will exact thematic areas that will form the basis for morning and afternoon sessions. For example, the morning session may focus on issues around slowing consumption of objects and technologies, whereas the afternoon may focus on designing for slowness and reflection, and across multiple generations. There will clearly be overlap in these areas; the thematic groupings will help focus group discussion following each session.

We intended for our seminar-style workshop structure to differ from a more traditional “mini-conference” workshop framing. Importantly, we anticipate and encourage that submissions may be more exploratory in nature, as opposed to established or fully formed bodies of work. Our submission format is also intended to encourage authors with various strengths (e.g., critical analysis, conceptual exploration, craft-based).

#### Anticipated outcomes

Workshop proceedings will be documented on the workshop website, which will remain active after DIS 2012 and can be forum enabled for future discussion. An intended outcome is to establish connections and partnerships among researchers and designers working in the Slow Technology design space. We intend for the workshop website to help to continue to facilitate these relationships after the workshop's conclusion. We will also aim to coalesce findings from the workshop in research publications such as a paper and/or a special issue of a journal (e.g., International Journal of Design, Personal and Ubiquitous Computing) mapping the contemporary slow technology design space. While dependant on the outcomes of the workshop, we speculate this will emphasize future design and research critical opportunities, issues and challenges in the service of productively guiding future work.

#### Biographies of the workshop organizers

**William Odom** is a Ph.D. student at Carnegie Mellon University's Human Computer Interaction Institute. He is interested in the possibilities and consequences of designing more enduring forms of technology. He has organized several workshops at the CHI and EPIC conferences.

**Richard Banks** is a principle interaction designer for Microsoft Research in Cambridge, UK. He's part of the Socio-Digital Systems team, which spends most of its time looking at family life, trying to understand the complexities of home, in order to figure out how the digital should fit in appropriately. Richard is a Fellow of the Royal Society of Arts in the UK, and recently published “The Future of Looking Back” [1], a book examining issues of digital legacy.

**Abigail Durrant** is a Senior Research Associate in the Culture Lab at Newcastle University. She has a background in Interaction Design and has a PhD in Social Psychology. She has a longstanding interest in HCI from an experience-centred design perspective, exploring interdisciplinary methods for combining the social sciences and design in inquiry to address human values, ethics and challenges for living in a global digital economy. She has previously run a number of CHI workshops.

**David Kirk** is a Senior Lecturer in Experience-Centred Design in the Culture Lab at the School of Computing Sciences, Newcastle University. A psychologist by background his work addresses a variety of HCI areas relating to archiving, memorabilia and memorialization. Recently his work has explored intersections of the global digital economy and memorialization practices in Rwanda and Slovenia. He has run several CHI workshops.

**James Pierce** is a Ph.D. student in Human-Computer Interaction at Carnegie Mellon University. His research involves understanding, critiquing and designing everyday technologies to support everyday practices in sustainable ways, particularly as they relate to the consumption of energy and material goods.

#### DRAFT CALL FOR PARTICIPATION

Interactive technologies are being designed, produced, used, re-purposed, discarded and destroyed more rapidly than ever before. With these shifts, new concerns have steadily emerged across the design and HCI communities over how the growing presence of interactive technologies in people's everyday lives—and the values embedded in their design—might shape people's current experiences and practices as well as the lives of future generations.

Over a decade ago Hallnäs and Redström's seminal article on *Slow Technology* argued that the increasing availability of technology in environments outside of the workplace requires interaction design to be expanded from creating tools to make people's lives more efficient to creating technology that could be embedded in everyday environments over long periods of time. Since then, the

Slow Technology design agenda has expanded to include high level themes such as (i) designing for slowness, solitude, and mental rest, (ii) designing interactive systems to be used across multiple generations and lifespans, and (iii) slowing the consumption (and disposal) of objects and technologies. Example subthemes include but are not limited to: *consumption of objects and technologies, legacy and consideration of multiple generations, infrastructural, engineering and technical concerns, and theoretical & ethnographic accounts of slowness.*

This one-day workshop aims to advance the Slow Technology design program by exploring the various practical, methodological and theoretical motivations, challenges, and approaches implicated in doing research and design in this growing space.

We invite participants to submit a short written position paper as well as a depiction of an artifact perceived to be constitutive of Slow Technology. The written portion consists of a short 1-2 page submission formatted using the ACM DIS 2012 template that responds to the statement "Slow Technology is..." This introductory statement is intended to provoke the author(s) to take a specific position on the Slow Technology agenda and offer their conceptualization of what Slow Technology is. This workshop paper could (but is not required to) use the author(s) own philosophical, theoretical, empirical, or design/craft-based work to support their position. The artifact submission is intended to be something that the authors deem constitutive of Slow Technology. These could include a personal object (e.g., personal reflection on a family heirloom), experiential accounts of "slow practices" (e.g., use of cooking tools for elaborate meal preparation), analysis of design research artifacts that incorporate the theme of "slowness" (e.g., an artifact built by the author), or existing artistic works that can offer commentary and inspiration that explores slowness (e.g. a painting or documentation of a performance piece). The artifact may be depicted pictorially; for example through a design process book or through a single image or collection of images.

We encourage submissions from diverse backgrounds including (but not limited to): art and design, the humanities, the social sciences, the information sciences, and industrial engineering. Industry and non-profit organizations are similarly encouraged. Submissions will be selected based on originality, quality, and potential to generate discussion. Both completed and in-progress work is welcome.

Submissions and questions should be directed to William Odom ([wodom@cs.cmu.edu](mailto:wodom@cs.cmu.edu)). At least one author of each accepted paper must register for the workshop and at least one day of the ACM DIS 2012 conference.

#### RECRUITMENT STRATEGY

In keeping with our desire to recruit a diverse group of practitioners and researchers working in the Slow

Technology design space, we plan to recruit participants from various venues related to HCI, Design and the humanities. We will post general calls for participation on several listservs related to these disciplines. Additionally, we will directly recruit participants that we are aware are conducting research in the Slow Technology design space. Institutions we will target specific participants.

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