

Ritual Machine IV: A Message in a Jam

David Chatting¹, Paulina Yurman², Jo-Anne Bichard³, David S. Kirk⁴

¹Open Lab. Newcastle University, Newcastle upon Tyne, UK, david.chatting@ncl.ac.uk

²Design Department. Goldsmiths University of London, London, UK, p.yurman@gold.ac.uk

³The Helen Hamlyn Centre for Design. Royal College of Art, London, UK, jo-anne.bichard@rca.ac.uk

⁴Northumbria University, Newcastle upon Tyne, UK, david.kirk@northumbria.ac.uk

ABSTRACT

We present *A Message in a Jam* a bespoke machine for a female lorry driver working away from her family for 5 nights every week. It is designed to extend an existing ritual of gift giving through the delivery of audio messages, played only on the occasion of a traffic jam; an otherwise frustrating daily event. We have developed this as a Research Through Design inquiry and consider here our specific material concerns through this process.

Author Keywords

Ritual; Family; Bespoke; Mobility; Materiality.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

Changing patterns of both work-related mobility and domestic arrangements mean that *mobile workers* face challenges to support and engage in family life whilst travelling for work. This is the subject of our inquiry in the project Family Rituals 2.0.

With a Research Through Design (RtD) approach [4], incorporating phases of design ethnography, critical technical practice and prototyping we have developed five bespoke Ritual Machines for five real families who experience regular separation from home due to work, as material explorations of their lives and practices. The machines are playful and provocative; they are not solutions to *the problem* of absence, but rather a way of provoking reflection. We identified existing domestic rituals by using Cultural Probes [5] and interviews, creating a bespoke machine that enables, extends or perturbs these during absence. Each machine typically lived with the family for a period of one month.

Here we describe the machine we designed for family four. Lisa and Will live in Kent with their children: Alex (26), Oliver (16), Steve (12), Kevin (11), Billy (9) and Rachel (8). Lisa is a *tramper*, a long distance lorry driver, working across the UK. She is away for up to 5 nights every week, sleeping overnight in the cabin of her truck. Her working week begins on Tuesdays and she returns home on Saturdays. Whilst Lisa is *on the road*, Will manages the home. At the time of writing the machine is complete, but we have not delivered it to the family.

DESIGN ETHNOGRAPHY

We got to know the family through interviews and the materials they generated from a set of Cultural Probes we developed for the project; we give details of these in [1,6] in the tradition of Gaver et al [5]. We were drawn to the lorry cabin and Lisa as the focus of the interaction, wanting to further explore this space and her attitudes to work and home. In addition, we gained insights into the family's personal tastes and the environments in which our machines would need to work.

We were quickly disavowed of our romantic notions of *life on the road*. The cabin operates both as a work and home space for Lisa for five days a week; it is confined with few amenities. There are few opportunities for her to make material changes: nothing can be attached to the walls and the front glass needs to be kept clear from any distractions on the road. Lisa has a pink rug on the floor which she feels gives her cabin a homely feeling, and a feminine touch (see Figure 1). While we did get a sense of her *freedom of the open road*, this is constrained by a relentless schedule of deliveries and regulated driving hours. When away she stayed intimately connected with the quotidian events at home such as homework schedules, bedtime routines and shopping trips using a range of communication and location sharing strategies. A recurring theme was Lisa's identity as a woman and a mother in an extremely male-dominated profession. She told us proudly of her nails, that despite the manual demands of her job she kept unchipped and painted brightly pink. At home Lisa's love of pink is to be found in her car (Figure 2) that her and Will built together.

We sketched a range of design responses, but focused on an existing ritual of gift giving. These gifts were the notes and cards regularly hidden in Lisa's bag by the children – cherished little mementoes from home.

A MESSAGE IN A JAM

A Message in a Jam allows the family at home to leave messages for Lisa that are automatically played when there is a traffic jam. Messages are spoken into a jam jar by removing the lid and played through a speaker in the cabin but only at the point of a traffic jam – see Figure 3. Hold-ups seriously impact Lisa's day and cause a good deal of stress in meeting tight delivery times. We wondered if we could make a counterpoint to this.

The machine consists of two elements: a speaker for Lisa that is hung in the lorry and a jam jar for the family at home – see Figure 4. We wanted to build something that Lisa would adopt and find a place for in her confined home from home; this gave us a clear direction for materials, form and colour. Our use of the gingham pattern on both devices reflects a nostalgia that we read in Lisa.

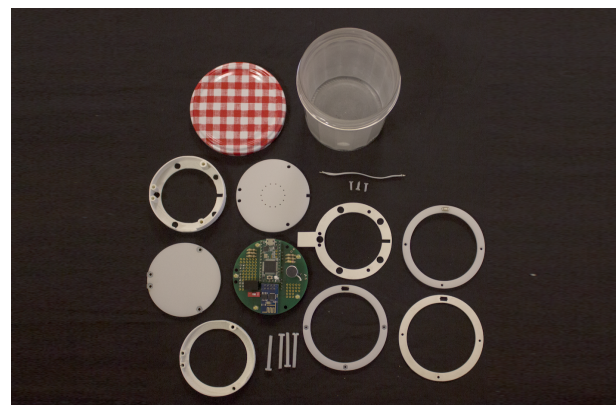
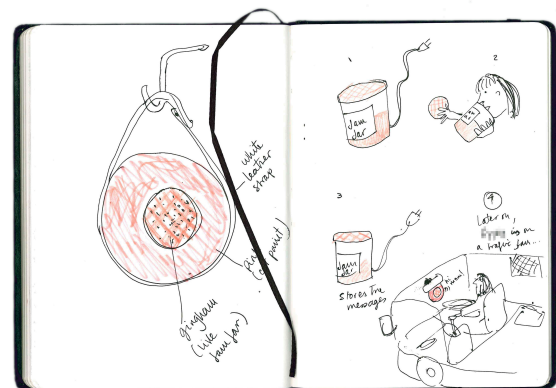
The speaker is built of an acrylic shell with a pink leather body and strap; allowing it to be secured with the cabin. The device is wireless, but needs to be charged periodically. The case houses an Android phone using GPS to locate the lorry and measure its speed; in combination with online traffic services it determines if Lisa is currently in a traffic jam or not, replaying any new messages from the jam jar if she is. An external amplifier circuit, power management module and LiPo battery is also housed within. We describe in detail our strategy and rationale for the use of a mobile phone in Chatting et al. [1].

To give Lisa control over the amount of information from home she receives she can mute the device using the volume switch on the front; new messages will wait until it is unmuted. There is a tiny point of screen the back of the speaker, that reports status (battery, GPS and data) and allows Lisa to replay recent messages with small touch gestures. A power button on the back panel allows her to turn it on and off. This panel can be removed for maintenance and gives access to the phone and its buttons. The phone and electronics are contained within a removable internal frame.

The jam jar is a readymade with a gingham lid that we have sandblasted to frost the glass. It contains custom electronics on a printed circuit board that records audio messages, illuminates the jar to show a message is contained and connects to WiFi to transfer the recording to the server. A combination of laser cut and 3d printed components house the electronics. A tiny switch in the lip of jar senses when the lid is removed. Rubber rings secure the elements in place. See Figure 5.

At home messages are spoken into the jam jar. Removing the lid starts the recording and stops when the lid is replaced. While recording, the LEDs inside the jar illuminate with the intensity of the voice, once the recording is made it becomes *trapped* within the jar – the sequence of illumination is replayed until the message is sent. We were inspired by Roald Dahl's Dream Jars from the BFG - an attempt to create wonder for the younger children.

This design work is intended to create experiences and moments of reflection for the family allowing us to have a rich dialogue about their attitudes to home and work. We will report on the success of this after the deployment.



Figures 1-5 Lisa's cabin at night; Lisa's car; Concept sketch; The speaker and jam jar; Elements of the jam jar.

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BIOGRAPHIES

David Chatting is a designer and technologist who works in software and hardware to explore the impact of emerging technologies in everyday lives. He is a Research Associate at Newcastle University's Open Lab, a Visiting Research Fellow at the Goldsmiths' Interaction Research Studio and he has his own design practice. davidchatting.com

Paulina Yurman is a designer and researcher. She is currently a PhD candidate at Goldsmiths College Design Department. Her research Designing for Ambivalence looks at the competing discourses offered by smartphones to mothers and their young children, and how experiments in design can explore ambivalent attitudes towards the device. yurman.co.uk

Jo-Anne Bichard is a design anthropologist whose research focuses on multi and inter-disciplinary collaboration, engaging users participation in the design process. She is a Senior Research Fellow in The Helen Hamlyn Centre for Design at the Royal College of Art. rca.ac.uk/more/staff/jo_anne_bichard/

David Kirk is Professor of Digital Living at Northumbria University. His research is in the area of Human- Computer Interaction (HCI) studying the design of interactive (computational) technologies. In particular he is interested in exploring human experience and the ways in which technology design can be centred on rich understanding of user contexts and cultures. dskirk.org