Energy Babble: embodiment of a research device

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ABSTRACT

We will present the Energy Babble, a networked audio based artefact, as the object outcome of a design and social science research project. This device is an interface for a system that provides a kind of automated talk radio to communities of practice concerned with energy demand reduction within the UK. Designed with a *ludic design* approach, the Energy Babble is an example of how the physical and aesthetic attributes of an object outcome are developed as a means to encourage playful engagement with a research context.

Author Keywords

Design; research through design; ludic design; prototype;

ACM Classification Keywords

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

INTRODUCTION

The Energy Babble is the design outcome of the project Energy and Co-Designing Communities (ECDC) [1], a project that investigated energy demand reduction within the context of UK based communities of practice. The research was undertaken through collaboration between Design and STS (Science and Technology Studies) and it combined ethnographic studies with design-led methods to highlight and problemetise the social and technical practices of communities engaged in energy demand reduction.

In this research context, the aim of the Energy Babble as an exploratory research device was to engage its users, members of local communities, in a playful and ambiguous ways to reflect on issues of energy in order to reframe the problem of energy-demand reduction. This *ludic design* [2] approach not only influenced the system, but it also provided an important framework for the development of the material language of the Energy Babble, as the physical presence of the object would contribute to creating this type of engagement. If we think of Madeleine Akrich's notion of *script* [3] as the set visions and scenarios that designers 'inscribe' into a new object, the script that would define the Energy Babble's form would be one to prompt curiosity and uncertainty rather than prescribe explicit forms of engagement.

Briefly, the Energy Babble is an internet appliance that broadcasts environmental and energy related content in audio form. Multiple units were produced and deployed to a number of communities in the UK as a part of a long-term field trial. These networked devices play audio files constructed from a large variety of internet news sources ranging from Twitter to the National Grid, intertwined with direct input from the users via SMS, email or speech input via a built-in microphone (which is automatically converted to text). This content is converted to synthesised speech audio by a text-to-speech system, and interspersed with a variety of jingles and sound effects to create a kind of automated talk radio programme to be played by the Babble devices.

Developing the material characteristics on the device required explorations along various lines, from functional and pragmatic requirements to the technical demands of the hardware contained enclosed within the form. Overall however, was the deep investigation of the aesthetic qualities of the object that had to embody all of these concerns as well as the key research agenda and questions.

Figure 1: Multiple iterations of the enclosure of the Energy Babble.
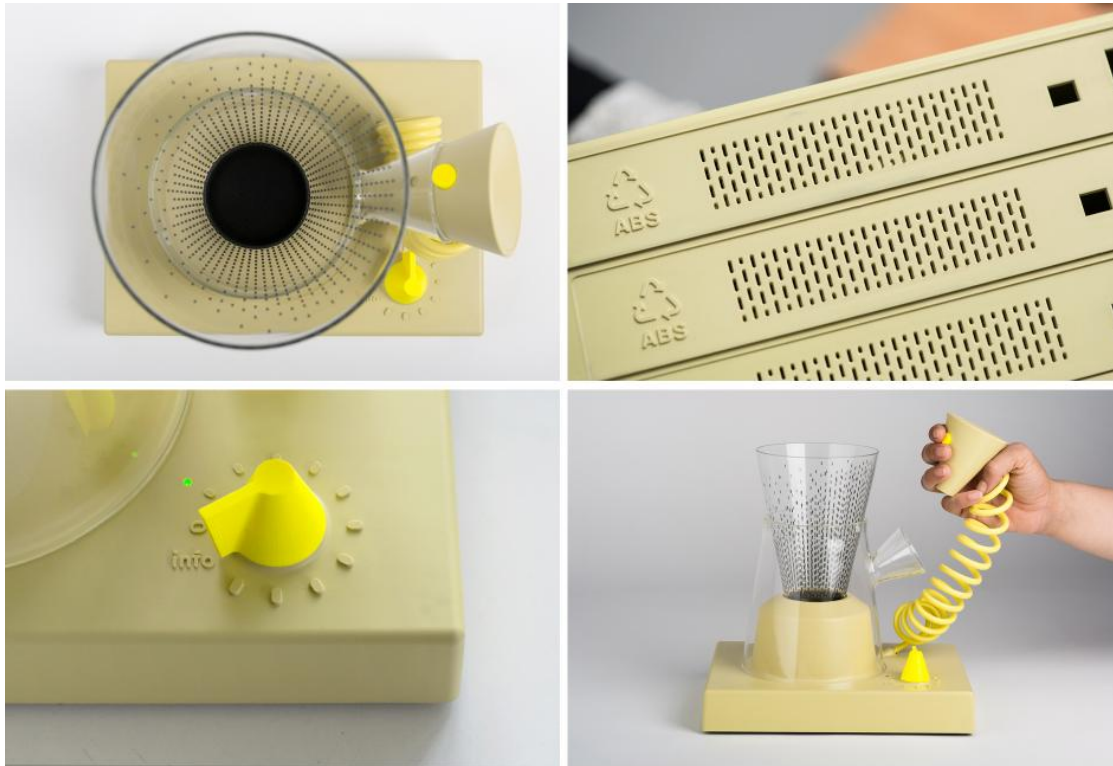
Figure 2: The Energy Babble.

By drawing attention to the materials produced throughout the design process of the Energy Babble, such as models and sketches, we can have a better understanding of the extent of material practices of research-through design and the role of objects in addressing the main research themes.

DISCUSSION

In this workshop, we will discuss the role of material and visual practices in the development of research artifacts, and how unpacking the design process behind the objects can bring a better understanding of practice-based research. We will also argue that the design and production of artefacts not only address the research questions, but also open a space for contribution on the areas the object touches upon, such as technological innovation, making processes and aesthetic explorations.

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REFERENCES

1. Gaver, W., Michael, M., Kerridge, T., Wilkie, A., Boucher, A., Ovalle, L., & Plummer-Fernandez, M. (2015). Energy Babble: Mixing Environmentally-Oriented Internet Content to Engage Community Groups. Proc. CHI'15. ACM Press. pp. 1115–1124.

2. Gaver, W., Boucher, A., Pennington, S., and Walker, B.,2004. Designing for Homo Ludens. *I3 Magazine,* 12, 2-6.

3. Akrich, M. et al. (1992). The de-scription of technical objects. In *Shaping technology/building society*. MIT Press, pp.204-224.