

CRITICAL MAKING WITH A RASPBERRY PI – TOWARDS A CONCEPTUALIZATION OF LIBRARIANS AS MAKERS

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1. Introduction

Makerspaces are increasingly being incorporated into libraries. These are designated spaces for fostering creativity, technology skills, and knowledge creation in communities. This has obvious practical problems including cost, staff training, noise, etc. But more importantly, it necessitates that libraries and librarians working in a frequently service and materials centric library paradigm engage critically with maker culture social principles.

- Collaboration
- Shared knowledge
- Information peer-led learning practices
- Ethos of learning-by-doing

This poster explains how becoming makers provoked critical reflection on the fundamental principles of makerspaces, how we can engage with these principles as information professionals, and what it means to incorporate “maker” into the librarian identity, a “makerbrarian.”

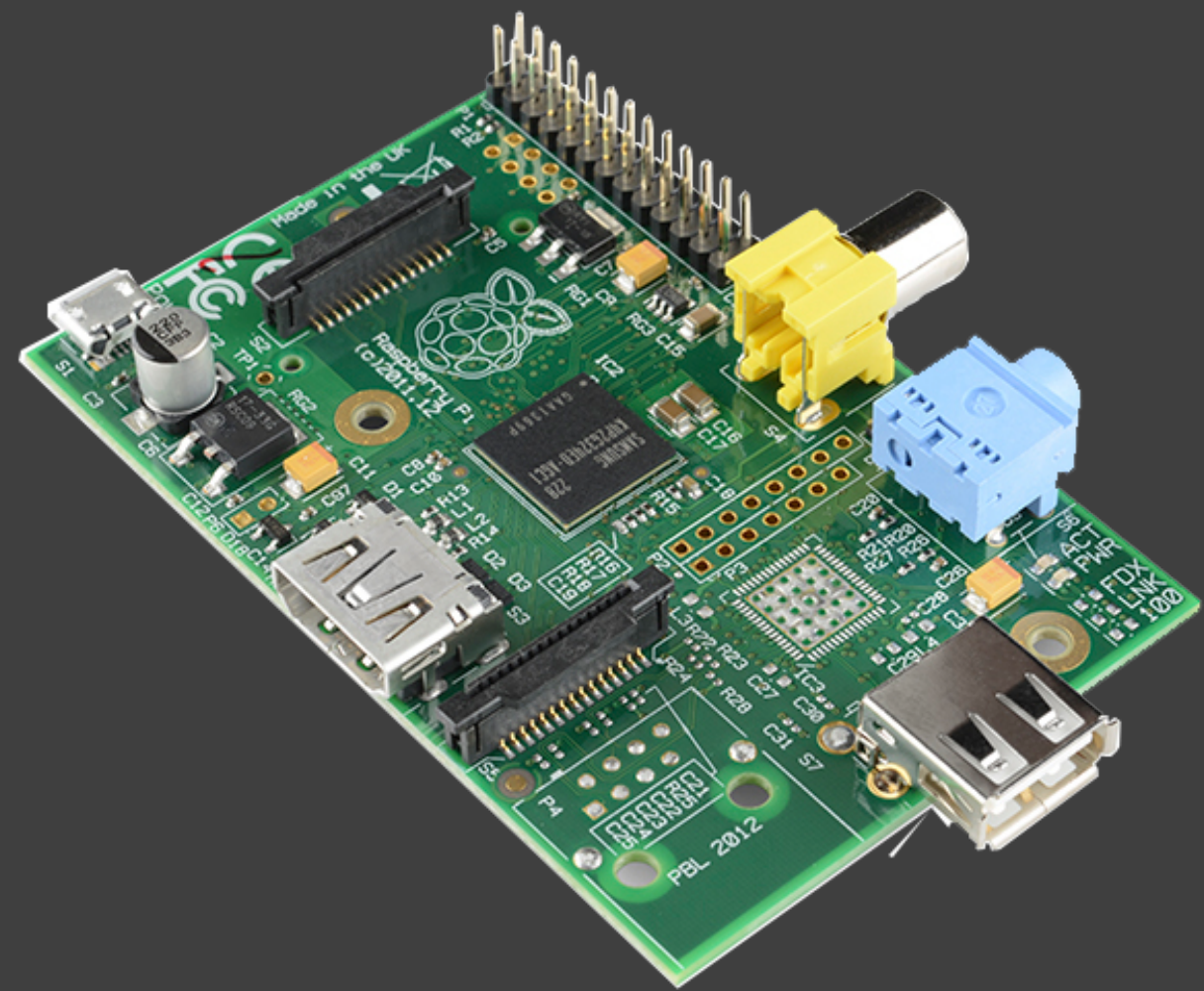


Image: Raspberry Pi Model B (SparkFunElectronics)

2. Framework

Critical Making: the act of material creation as a means of provoking critical reflection (Ratto 2011). Making becomes a transformative process that causes the maker to reveal and confront issues provoked by new technology.

In collaboratively creating a device, we sought to directly engage the junction of library values and maker culture in a material rather than abstract way.

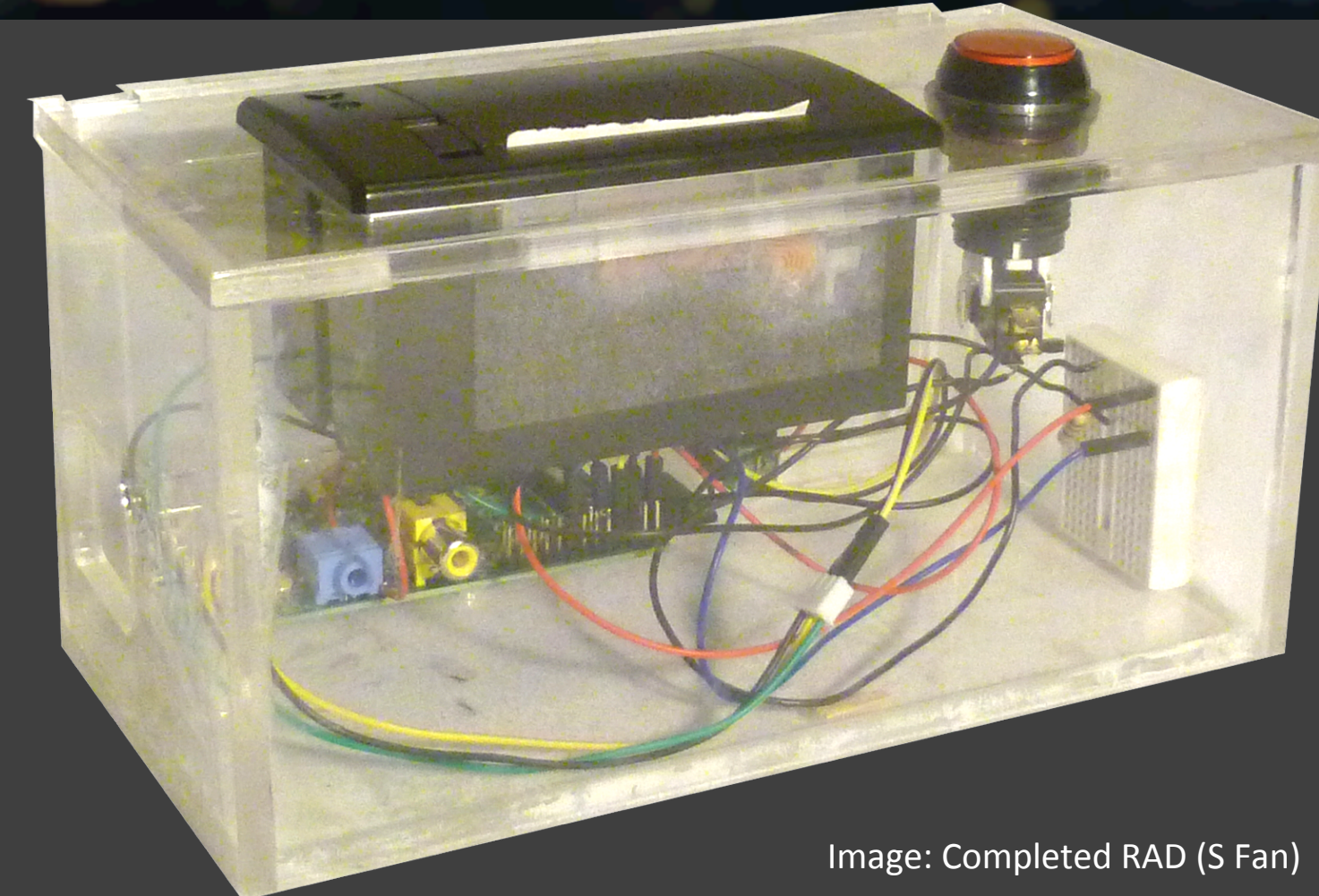


Image: Completed RAD (S Fan)

3. Methodology

The Readers' Advisory Device (RAD): a Raspberry Pi programmed to deliver book recommendations at the push of a big red button.

We selected the Raspberry Pi, a single-board computer, as a technology common to makerspaces and affordable by libraries. Distinct from our academic and professional library experiences, this creative process was entirely peer-led, informal, and highly iterative. Every step, and each misstep, was documented and shared on social media, prompting interactions outside our group. The approach took us out of the role of information purveyors, as it was our job to help and support each other through creative problem-solving to improve existing models.



Image: Setting up at a social (A Ferri)

As we struggled with limitations, critical assistance came from social contact with the maker community and fostering connections outside our professional domain. The final device was shared at the 2014 Vancouver Mini-Maker Faire to complete the circuit of participating in maker culture and to further critical reflection through social interactions around the device.

3. Methodology (cont.)

Making is predicated on building on the knowledge of others and contributing to the community in turn. By adopting a *Critical Making* framework, we inevitably adapted to this social contract of the maker community, engaging with other makers and their ideas and building a networked learning domain fostering creativity and collaboration.

4. Interpretations

Our project sought to manifest the acculturation that results as libraries and makerspaces learn to coexist, finding that:

- Social atmosphere in a makerspace is more important than technology
- Atmosphere is characterised by openness, networked knowledge and peer support
- Creating this atmosphere requires cultural signals, physical and social affordances

Peer-led networked learning was an integral and transformative component, demonstrating in our experience how library makerspaces integrating these principles can be useful for creating healthy, vibrant library communities. Open questions remain about paradigm shifts in libraries to promote the cultural signals and develop the necessary physical and social affordances to support makerspace both in name and spirit, as community learning spaces.



Image: Vancouver Mini Maker Faire (E Meyers)

5. Future Work

Our work exposed tensions between traditional library practices and the integration of new socio-technical spaces. We plan to explore this area by installing the device in a library and soliciting survey responses from patrons and library staff regarding new technologies -- specifically whether this technology interaction is welcome as a whole. By initially focusing on the Readers' Advisory aspect of the device rather than makerspaces, this work will advance our understanding of patron and staff attitudes towards integrating technology into traditionally service oriented, interpersonal library practices.

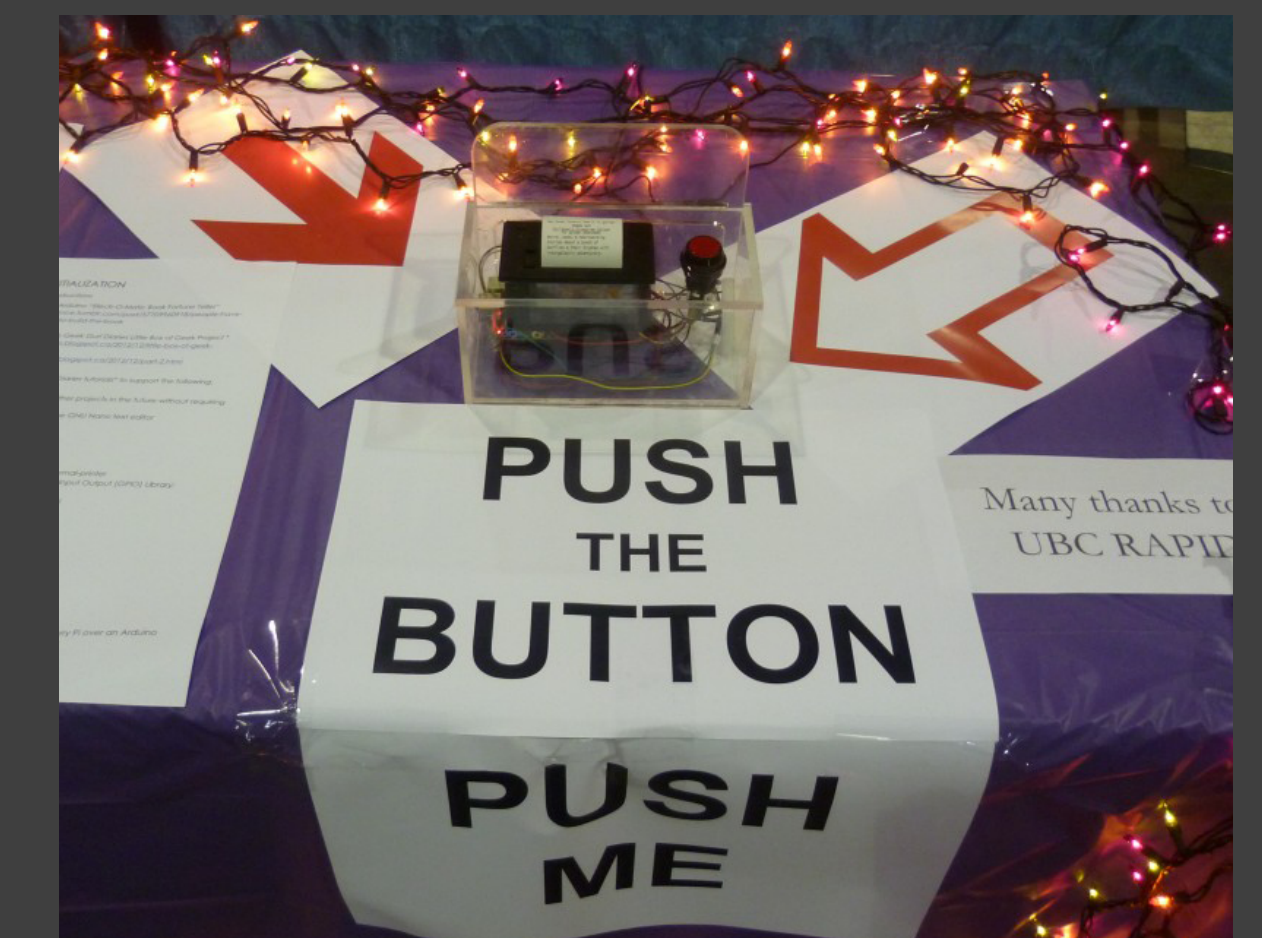


Image: RAD at Maker Faire (E Meyers)

6. References

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7. Acknowledgements

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