Towards Accessible Design Knowledge

Opening up design knowledge and its production in industry and academia

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1 Introduction

- There is a gap in design knowledge publication between industry and academia.
- There is also a gap in knowledge publication between design and other disciplines (software dev, for example)
- A lot of knowledge is produced, but is not made accessible, especially in industry

  It is obvious that the proprietary behavior of design practitioners will not make new knowledge widely available and that universities must take on the roles of knowledge generation and dissemination. (Davis 2009)

- Both industry and academia would benefit from more knowledge made accessible
- Two examples will illustrate how this could be done

2 The state of design knowledge publication

- Where can we find design knowledge? the product, process, practice, sideproducts

- everything is design knowledge: everything a designer knows and remembers from past projects; every artefact and deliverable that came out of a design project (Pierce 2014), even the least interesting recording of a brainstorming session (Gaver 2012), practice and side products (Schön 1990) Every brainstorming session is a form of knowledge, because it is informed by the designer's past experience. "I would think of this, given the experience I have".
- companies keep their design and development proprietary for quite obvious reasons LOOK FOR EXAMPLES IN (Davis 2009)
- patents
- competition, best of them all
- making money
- first to market
- exclusiveness
- intellectual property
- if knowledge is hidden/invisible, it is not useful. the designer knows most about the artefact and design decisions. but if a second designer cannot recognise that knowledge, and thus put it to further use, is it really knowledge?
- there are examples where opening up the process leads to: innovation, trust, better products, quicker development
- academia publishes in a linear format, which does not represent knowledge adequately

3 Examples

3.1 Open Innovation - The Eclipse Foundation

IBM with Eclipse?

"Eclipse is a consortium of major software vendors, solution providers, corporations, educational and research institutions and individuals working together to create an eco-system that

enhances, promotes and cultivates the Eclipse open platform with complementary products, services and capabilities."

The Eclipse community embraces the importance of value capture. We are consciously focused on building a commercially profitable ecosystem

http://www.eclipse.org/org/foundation/membersminutes/20070920MembersMeeting/07.09.12-Eclipse-Open-Innovation.pdf

The Business Model for Open Source

- Shared implementations of infrastructure
- Save time to market
- Increase rate of standards adoption
- Reduce risk
- Provide thought leadership and first mover advantages

Vendors still compete!

- Product differentiating features
- Service, support
- Branding, channels

Transparent

- Project discussions, minutes, deliberations, project plans, plans for new features, and other artifacts are open, public, and easily accessible.

The Eclipse open source community is uniquely focused on achieving both goals associated with innovation networks:

- Open governance and development processes allow individuals and corporations to cooperatively develop product-ready software (value creation)
- Focus on ecosystem opportunities supports use of this technology in successful products (value capture)

3.2 Distributed version control in open source development

- comments in code
- code itself
- commit messages are annotations/explanations/documentation
- diffs are precise documentation

3.3 Tesla - patents

(Musk 2014)

Maggiolino and Montagnani (2013) put forward a framework for companies to pledge patents to the public, in order to foster innovation. So ein schöner Satz.

4 Ways forward

- habits that we have to integrate into our practice and research
- Making use of open standards http://en.wikipedia.org/wiki/Open_standard
- Publishing non-critical internal documents - transparency
- Releasing patents
- Accompany the design & development process of a product with blog posts etc pp
- Document the process publicly - like many companies/agencies already do and use as an asset/for trust/as USP
- Make use of fitting representations of intermediate-level knowledge, kinda like annotated portfolios? (Löwgren 2013)

(Gaver 2012)

5 Conclusion

Design, as a discipline and an industry, can learn much from movements such as *open source* and *open innovation*. While software development is arguably, due to the very immaterial and digital nature of it, predestined and privileged to be taking place in the open, design practice often has material and informal components which are difficult to document in-the-moment. However, we can make use of existing, easy to create representations of knowledge that we share with the design community. Other disciplines show that sharing enables innovation and does not endanger economic streams.

Alles wird gut.

References

Davis, Meredith (2009). *Why Do We Need Doctoral Study in Design?* International Journal of Design. URL: http://www.ijdesign.org/ojs/index.php/IJDesign/article/view/481/223 (visited on 02/02/2015).

Gaver, William (2012). "What should we expect from research through design?" In: *Proceedings of the SIGCHI conference on human factors in computing systems*. done. ACM, pp. 937–946. URL: http://dl.acm.org/citation.cfm?id=2208538 (visited on 01/20/2015).

Löwgren, Jonas (2013). "Annotated portfolios and other forms of intermediate-level knowledge". In: *Interactions* 20.1, pp. 30–34. URL: http://dl.acm.org/citation.cfm?id=2405725 (visited on 01/27/2015).

Maggiolino, Mariateresa and Maria Lillà Montagnani (2013). "Standardized Terms and Conditions For Open Patenting". In: *Minnesota Journal of Law, Science & Technology* 14.2. URL: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2298593 (visited on 02/06/2015).

Musk, Elon (2014). *All Our Patent Are Belong To You*. URL: www.teslamotors.com/blog/all-our-patent-are-belong-you (visited on 02/05/2015).

Pierce, James (2014). “On the Presentation and Production of Design Research Artifacts in HCI”. In: *Proceedings of the 2014 Conference on Designing Interactive Systems*. DIS ’14. New York, NY, USA: ACM, pp. 735–744. ISBN: 978-1-4503-2902-6. DOI: 10.1145/2598510.2598525. URL: http://doi.acm.org/10.1145/2598510.2598525 (visited on 01/29/2015).

Schön, Donald A (1990). *Educating the reflective practitioner*. San Francisco: Jossey-Bass. ISBN: 1555422209 9781555422202.