

Grounded Innovation: Strategies for Creating Digital Products

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DOI: 10.1145/2413038.2413054

<http://doi.acm.org/10.1145/2413038.2413054>

Grounded Innovation: Strategies for Creating Digital Products is written by Lars Erik Holmquist, and published by Morgan Kaufmann, © 2012 (paperback), ISBN 978-0-12-385946-4, 218 pp., USD 34.95.

I suspect there are many engineers that wish they could find the answer to “How will you design the next big thing?” The book’s back cover, which poses this question, also promises that the reader will “learn how to create a digital product that has an effect on the world”. Well, this is certainly not the first time that a book’s cover promises a bit more than the book itself can deliver. It’s still a book you should consider reading if you are looking for inspiration on how ideas for digital products can be generated. The book is sprinkled with nuggets of interesting observations, concepts, and stories that make it a worthwhile read, and the author’s tone is entertaining as well.

The book is split into two parts. In the first part, the nature of digital products is introduced; the author's approach of grounded innovation is explained; and the principles of inquiry, invention and prototyping are elaborated. The second part devotes one chapter to each of the five properties that constitute the nature of digital products: information processing, interaction, networking, sensing and proactivity. This part provides many (commercial) examples and (academic) case studies that illustrate the properties, and I will not describe these chapters in detail.

The fast-paced introductory chapter takes the reader through Memex, Sketchpad, Dynabook, Alto, ubiComp and much more. It clarifies that digital products mean for the author "a man-made object that relies on computation in some form to function" (p. 9). Chapter 2 makes a useful distinction between invention (creating something new as such) and innovation (creating something new that gets adopted in a community). Thus, while invention is often sufficient from an academic perspective, from a business perspective only innovation translates into success. Another important point about innovation is that it can be seen as "a design process without a goal" (p. 17). Innovation is conceptually split into two dimensions: invention and inquiry. While the first is about idea generation, the latter is performed to "understand the world better" (p. 25). The goal of grounded innovation is to maximize the degree of both innovation and inquiry. The author acknowledges that this is an "ideal" goal that cannot be realistically achieved, but it provides you with a useful mind-set. Chapter 3 discusses user and technical inquiry, providing a starting point for those who are not familiar with these ideas. Perhaps surprisingly, for user inquiry "it is not always a good idea to ask directly what the users want" (p. 42). Chapter 4 discusses invention, stressing that "design and innovation are not the same thing" (p. 58) and that it's rather an artistic process where personal qualities play a major role. I particularly appreciated the discussion of the cultural probes and bootlegging techniques with case studies that illustrate these techniques nicely. Especially the latter technique, developed by the author, seems an effective approach to brainstorming, also in a research group. The last chapter of the first part is about prototyping in the form of mockups and demonstrators. Personally, I am very much in favor of prototyping because this is where the rubber meets the road, or as the book puts it: "when you put real people in the equation, the results will always be surprising" (p. 77). However, I never did consider that "demonstrators can also give the wrong impression, because while they may work well on a technical plane, [they] [...] may be completely useless when considered from a societal, commercial, or user-experience perspective" (p. 81).

The whole book represents a summary of the author's research in academia over 10 years. (The back cover states that the author is now a researcher at Yahoo, but his appointment took place after the book was written and may give the wrong impression that the book is based on industrial experience.) Many case studies (I counted 16) of inventions are presented in detail (often over 5+ pages), which have been developed in an academic setting (and published at research conferences). However, almost all of them have not been developed into a real product to demonstrate that they are true innovations. That being said, many of them have interesting properties and are certainly stimulating input for own inspirations. The author's HCI background is apparent throughout the book, determining to a large extent its scope and case studies. I found this focus appropriate and appreciated the author's opinions about the HCI community's approach to conducting

research and invention.

On the downside, throughout the book I was wishing for more rigor and in-depth discussions of the introduced concepts. Given the author's track record of innovations, I was also hoping for more concrete recipes and practical lessons' learned – i.e., the *strategies* promised in the book's subtitle. For me it was somewhat surprising to find that this is not a book on how to go through the whole innovation process and not necessarily useful for someone thinking about a start-up (i.e., how to commercialize and generate money). It also doesn't address ways in which an organization/group can become more innovative. Instead the book focuses on "opportunities and sources of innovation" (p. 20). This is not necessarily a drawback because it appears firmly grounded in the author's practical experiences. Academics can get inspiration on how to approach their own research from a more innovation-conscious viewpoint with the aim of generating ideas and prototypes that are more or less close to a real product.

The book also made me aware that as a researcher you should answer for yourself the hard question of how far you want to really go in the innovation process: You may be perfectly happy to stop at the idea/principle/prototype stage – perhaps this is the point where the most creative activities already took place and where you produced most publishable results –, rather than trying to move outside of your core area of expertise and take the perhaps glorious but also long and windy road towards a real product.

Going from content to substrate, I noticed that the book has no notice or seal that its paper is from sustainable foresting. So, perhaps better save some trees and instead send a message – digital, mind you – to the publisher that they should work with their Chinese printer to rectify this shortcoming.

(Personal note: After receiving a free copy of the book for my review, I became aware that the publisher is an imprint of Elsevier. I then decided to go ahead with my review even though I have put my name at <http://thecostofknowledge.com/>.)

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