Saffer, Dan. *Designing Gestural Interfaces*. O'Reilly, 2008
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Book Review by Janette Dimitrova

The technology around us is rapidly developing and changing – in a similar fashion as it did at the beginning of 19th Century. But there is one major difference. The machines then were intended to serve people, yet people had to learn to interact with the technology, if they wanted to make this technology work. The equipment used, often required isolated environment and separation from the nature.

Today the new technologies are aimed at communicating with people and the real world. They are more and more portable and more intuitive. With the increasing prevalence of physical and gestural interactivity, from the iPhone and Android phones to Jeff Han's election night Magic Wall spectacle on CNN, to the Wii and the newest set of SixthSense system technologies, it's likely we're all going to be faced with the excitement and challenge of interacting with and designing devices and environments in completely new ways.

The very process of creation of an augmented reality experience is becoming a process available to wide range of people around the world. Most of the latest technologies are Open Source and the hardware is possible to assemble at very affordable prices.

The new opportunity to create much closer interactions between the real world and the world of data will attract more innovators willing to try it. This is the new target audience of the Dan Saffer's new book Designing Gestural Interfaces.

I recommend this book for anyone who needs to know how to approach designing intelligent tangible systems, from the Wii, to ATM's to Arduino Physical Computing projects, and Mobile Physical Computing projects combining the power of Android with Arduino, to smart phones and facial expression recognition systems.

The book is not intended to provide specific code examples but aims to prepare the developer at conceptual level and give "the big picture" approach to the future design and development work.

One of the biggest challenges associated with physical interactivity is the lack of lucidity into the "commands" or actions available with a given device or environment. The graphical user interface brought a huge improvement over the previous idioms of the command line because it made it much more obvious what commands were allowable in a given context. The new Gestural interfaces are the

next dramatic advancement toward the future of physical interactivity. Developers are faced with the need to create new language, idioms and vocabulary that are as discoverable, intuitive and useful for the human participant.

Clear definition and understanding of the basic building blocks of this new language and accounting of the existing concepts and protocols is large part of the Dan Saffer's book content. As always the new input method and interaction paradigm brings the expectation that everything will be automatically easy to use. However when going beyond the first obvious set of physical interactions, it becomes apparent that when we want to use gestural commands for abstract notions, we start to lose the benefit of our kinesthetic intelligence and things become a little (or quite a lot) less intuitive.

The main contribution of Designing Gestural Interfaces is the bringing together and defining the grammar and syntax of physical interactions language. The book provides a well detailed overview of the important things to consider when designing for touch screens and motion-sensitive controllers, as well as good design practices like prototyping and documentation.

Each chapter has some very good "further reading" recommendations. You'll come away from this book knowing the issues involved in designing gestural interfaces.

I found particularly interesting is the section entitled "Communicating Interactive Gestures," which describes how to provide affordance and express interaction idioms to users with written instructions, illustration and demonstration. It gives open field to our imagination to discover more solutions how to use animated and audio feedback to motivate physical action - there are great possibilities for using dynamic feedback to help users learn better control over a physical input mechanism.

The book is unique because none of the existing design guides goes through the methods of designing for a physical system which interacts with the user in a new way, whether that method involves touch, facial action, dancing or drawing in the air. While all of these interaction techniques are now available on the palette of the Interaction Designer, Product Developer, and Electronic Systems/Physical Computing Engineer, until now no book has been written to encompass these intriguing but complicated design opportunities. This is the first and best book to date which has addressed the physical, software, electronic design, and interaction paradigm issues which must be confronted in designing these new systems.