Mental Models: Design of User Interaction and Interfaces for Domestic Energy Systems

Kirsten M. A. Revell, Neville A. Stanton
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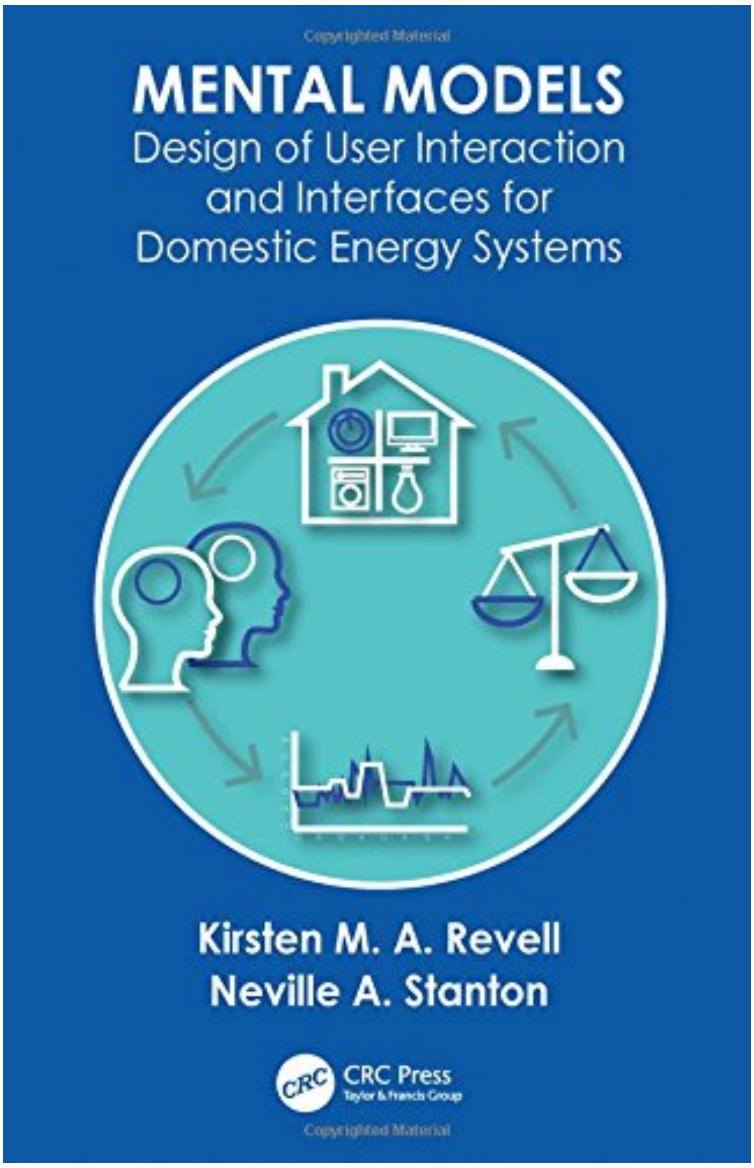

#8858574 in Books 2017-04-21Original language:English 10.00 x 7.00 x .50l, #File Name: 1498762174312 pages | File size: 52.Mb

Kirsten M. A. Revell, Neville A. Stanton : Mental Models: Design of User Interaction and Interfaces for Domestic Energy Systems before purchasing it in order to gage whether or not it would be worth my time, and all praised Mental Models: Design of User Interaction and Interfaces for Domestic Energy Systems:

There is a resurgence of interest in mental models due to advances in our understanding of how they can be used to help design and due to the development of practical methods to elicit them. This book brings both areas together with a focus on reducing domestic energy consumption. The book focuses on how mental models can be applied in design to bring out behaviour change resulting in increased achievement of home heating goals (reduced waste and improved comfort). This book also offers a method to extract and apply mental models to interface design. The approach enables mental models to be applied across domains when behaviour change was sought, and is validated as a useful design method.

"This is a valuable piece of work for most, if not all, interface designers practicing user-centered design in the industry. The mental models methodology and approach discussed in the book benefits not only on reduction of energy consumption in domestic energy systems, but also helps readers in understanding the behavior and behavioral changes of consumers in other design domains. I would believe a wide range of researchers and practitioners would be interested in the practical examples, insights and guidance provided by the two experienced authors in this book." Alan HS Chan, City University of Hong Kong "When Stanton and colleagues address a topic, its important to pay attention to what they have to say. I recently heard a famous inventor talk about the difference between unintended, unanticipated, and perverse consequences of innovation. This book on mental models for home energy systems gives me a great working example of this complex aspect of sociotechnical impacts of technology innovation." Barrett Caldwell, Purdue University, Indiana, USAAbout the Author Kirsten M A Revell, PhD, graduated from Exeter University in 1995 with a BSc (Hons) in Psychology BSc at Exeter University. Her dissertation focused on the use of affordances in product design, and she has been fascinated with user centred design ever since. After graduating, Kirsten worked in Microsoft Ltd., implementing and managing the EMEA Services Academy, which prepared graduates for technical and consulting roles within Microsoft, across Europe, Middle East and Africa. In 2005 Kirsten undertook a second degree in Industrial Design, at Brunel University that included an industrial placement with the Ergonomics Research Group. During this time, Kirsten joined a major field trial for the Human Factors Integration Defence Technology Centre (HFI DTC) focused on the usability of digital mission planning and battle-space management systems. After graduating from Brunel University in 2009, Kirsten joined the Transportation Research Group, University of Southampton. Working again for the HFI DTC, her research investigated methods for metaphorical design of digital systems for mission planning. In 2010, Kirsten embarked on a EPSRC sponsored PhD in Human Factors at the University of Southampton, investigating a mental models approach to behavior change with domestic energy systems. This brought together both psychology and design disciplines to further her expertise in user-centred design. Professor Neville A Stanton, PhD, is both a Chartered Psychologist and a Chartered Engineer and holds the Chair in Human Factors in the Faculty of Engineering and the Environment at the University of Southampton. He has degrees in Psychology, Applied Psychology and Human Factors and has worked at the Universities of Aston, Brunel, Cornell and MIT. His research interests include modelling, predicting and analysing human performance in transport systems as well as designing the interfaces between humans and technology. Professor Stanton has worked on cockpit design in automobiles and aircraft over the past 25 years, working on a variety of automation projects. He has published 30 books and over 200 journal papers on Ergonomics and Human Factors, and is currently an editor of the peer-reviewed journal Ergonomics. In 1998 he was awarded the Institution of Electrical Engineers Divisional Premium Award for a co-authored paper on Engineering Psychology and System Safety. The Institution of Ergonomics and Human Factors awarded him The Otto Edholm Medal in 2001, The Presidents Medal in 2008 and The Sir Frederic Bartlett Medal in 2012 for his contribution to basic and applied ergonomics research. The Royal Aeronautical Society awarded him and his colleagues the Hodgson Prize and Bronze Medal in 2006 for research on design-induced flight-deck error published in The Aeronautical Journal. The University of Southampton have awarded him a DSc in 2014 for his sustained contribution to the development and validation of Human Factors methods.