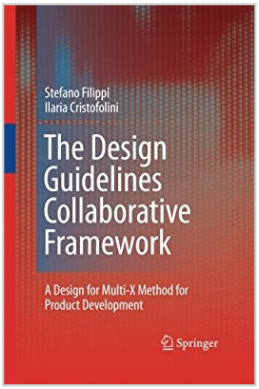

The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development

By Stefano Filippi, Ilaria Cristofolini

The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini

In the industrial design and engineering field, product lifecycle, product development, design process, Design for X, etc., constitute only a small sample of terms related to the generation of quality products. Current best practices cover widely different knowledge domains in trying to exploit them to the best advantage, individually and in synergy. Moreover, standards become increasingly more helpful in interfacing these domains and they are enlarging their coverage by going beyond the single domain boundary to connect closely different aspects of the product lifecycle. The degree of complexity of each domain makes impossible the presence of multipurpose competencies and skills; there is almost always the need for interacting and integrating people and resources in some effective way. These are the best conditions for the birth of theories, methodologies, models, architectures, systems, procedures, algorithms, software packages, etc., in order to help in some way the synergic work of all the actors involved in the product lifecycle. This brief introduction contains all the main themes developed in this book, starting from the analysis of the design and engineering scenarios to arrive at the development and adoption of a framework for product design and process reconfiguration. In fact, the core consists of the description of the Design GuideLines Collaborative Framework (DGLs-CF), a methodological approach that generates a collaborative environment where designers, manufacturers and inspectors can find the right and effective meeting point to share their knowledge and skills in order to contribute to the optimum generation of quality products.

The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development

By Stefano Filippi, Ilaria Cristofolini

The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini

In the industrial design and engineering field, product lifecycle, product development, design process, Design for X, etc., constitute only a small sample of terms related to the generation of quality products. Current best practices cover widely different knowledge domains in trying to exploit them to the best advantage, individually and in synergy. Moreover, standards become increasingly more helpful in interfacing these domains and they are enlarging their coverage by going beyond the single domain boundary to connect closely different aspects of the product lifecycle. The degree of complexity of each domain makes impossible the presence of multipurpose competencies and skills; there is almost always the need for interacting and integrating people and resources in some effective way. These are the best conditions for the birth of theories, methodologies, models, architectures, systems, procedures, algorithms, software packages, etc., in order to help in some way the synergic work of all the actors involved in the product lifecycle. This brief introduction contains all the main themes developed in this book, starting from the analysis of the design and engineering scenarios to arrive at the development and adoption of a framework for product design and process reconfiguration. In fact, the core consists of the description of the Design GuideLines Collaborative Framework (DGLs-CF), a methodological approach that generates a collaborative environment where designers, manufacturers and inspectors can find the right and effective meeting point to share their knowledge and skills in order to contribute to the optimum generation of quality products.

The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini Bibliography

- Sales Rank: #11571737 in Books
- Published on: 2014-11-29
- Released on: 2014-11-29
- Original language: English
- Number of items: 1
- Dimensions: 9.25" h x .46" w x 6.10" l, .64 pounds
- Binding: Paperback
- 186 pages

Editorial Review

From the Back Cover

The Design Guidelines Collaborative Framework describes a knowledge-based ‘design for multi-X’ method, aimed at improving and assisting the work of designers, manufacturers, and inspectors in the areas of product redesign and process reconfiguration.

Designers are not necessarily experts in manufacturing and verification processes; likewise, manufacturers and inspectors may not be experts in design. For this reason, the Design Guidelines Collaborative Framework (DGLs-CF) constitutes a meeting point for all three parties, where their knowledge is formalized, expanded upon, and put at the designers’ disposal, thereby maximizing the user-friendliness of the results.

The DGLs-CF is characterized by the homogeneous union of different algorithms, clear interfaces among the modules that implement them, and clear roles assigned to the different actors. These elements, together with a strong adherence to the ISO GPS standards, make the DGLs-CF the perfect environment for researchers, experts in different fields, and industrial partners to formalize their knowledge, and develop and implement their own algorithms and procedures.

The Design Guidelines Collaborative Framework uses the simple IDEF0 formalism to describe the DGLs-CF framework in a top-down way, in order to facilitate readers’ comprehension, and their adoption and development of the framework. Several case studies on the application of the DGLs-CF in industrial environments show the framework’s effectiveness and robustness.

Industrial and academic researchers will find this book a useful guide to the DGLs-CF and mechanical engineers will be quick to appreciate the streamlined approach it describes.

About the Author

Stefano Filippi is an associate professor of Design and Methods in Industrial Engineering at the Electrical, Management and Mechanical Engineering Department of the University of Udine, Italy. He received his PhD from the Polytechnic of Milan, Italy. His research is mainly focused on Knowledge-based Engineering; Knowledge-based Innovation Systems (he has co-founded APEIRON, a non-profit association focused on studying and disseminating the TRIZ theory in Italy); Rapid Prototyping in Medicine and in Cultural Heritage; and Usability. He has been developing the Design GuideLines framework since 2002, always in strong connection with industrial environments and trying to solve real problems. The usability aspects of methods and tools have always had a key role in his research topics. His research has been published in the International Journal of Production Research; Research in Engineering Design; the Journal of Oral and Maxillofacial Surgery; and the IEEE Robotics&Automation Magazine.

Ilaria Cristofolini is an assistant professor in the field of Design Theory and Methodology at the Mechanical and Structural Engineering Department at the University of Trento, Italy. She received her PhD from the University of Padua, Italy. Her research areas concern Knowledge-based Design Systems;

Geometric Dimensioning and Tolerancing; Standards Evolution; and Application and Verification of Geometric Tolerances. She also worked as Head of the Quality Assurance System in a firm producing sheet metal components. She participates in projects like Laser Interferometry Space Antenna, a joint mission of NASA and ESA for Fundamental Physics Studies, and Study for the Production of Exotic Species. Through her work she managed problems concerning the influence of manufacturing and verification technologies on the final quality of products, and she experienced the need for consideration of these technologies to start with the design process. Her research has been published in Research in Engineering Design; Classical and Quantum Gravity; Powder Metallurgy; the International Journal of Powder Metallurgy; and Measurement and Control.

Users Review

From reader reviews:

Andrew Meadows:

Do you have favorite book? Should you have, what is your favorite's book? Reserve is very important thing for us to learn everything in the world. Each guide has different aim as well as goal; it means that reserve has different type. Some people sense enjoy to spend their a chance to read a book. They are reading whatever they get because their hobby is actually reading a book. Think about the person who don't like reading a book? Sometime, person feel need book after they found difficult problem or perhaps exercise. Well, probably you should have this The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development.

Margaret Head:

Within other case, little people like to read book The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development. You can choose the best book if you like reading a book. Provided that we know about how is important a new book The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development. You can add expertise and of course you can around the world by way of a book. Absolutely right, mainly because from book you can learn everything! From your country till foreign or abroad you will end up known. About simple matter until wonderful thing you may know that. In this era, you can open a book as well as searching by internet product. It is called e-book. You can use it when you feel bored to go to the library. Let's read.

Andrew Schulz:

The feeling that you get from The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development could be the more deep you digging the information that hide within the words the more you get enthusiastic about reading it. It doesn't mean that this book is hard to be aware of but The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development giving you thrill feeling of reading. The writer conveys their point in certain way that can be understood through anyone who read the idea because the author of this guide is well-known enough. This kind of book also makes your vocabulary increase well. It is therefore easy to understand then can go with you, both in printed or e-book style are available. We propose you for having this The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development instantly.

Susan Ross:

Often the book The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development will bring you to definitely the new experience of reading any book. The author style to describe the idea is very unique. In case you try to find new book to see, this book very acceptable to you. The book The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development is much recommended to you you just read. You can also get the e-book from your official web site, so you can more readily to read the book.

Read The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini for online ebook

The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini books to read online.

Online The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini ebook PDF download

The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini Doc

The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini Mobipocket

The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini EPub

OQDLET96AGP: The Design Guidelines Collaborative Framework: A Design for Multi-X Method for Product Development By Stefano Filippi, Ilaria Cristofolini