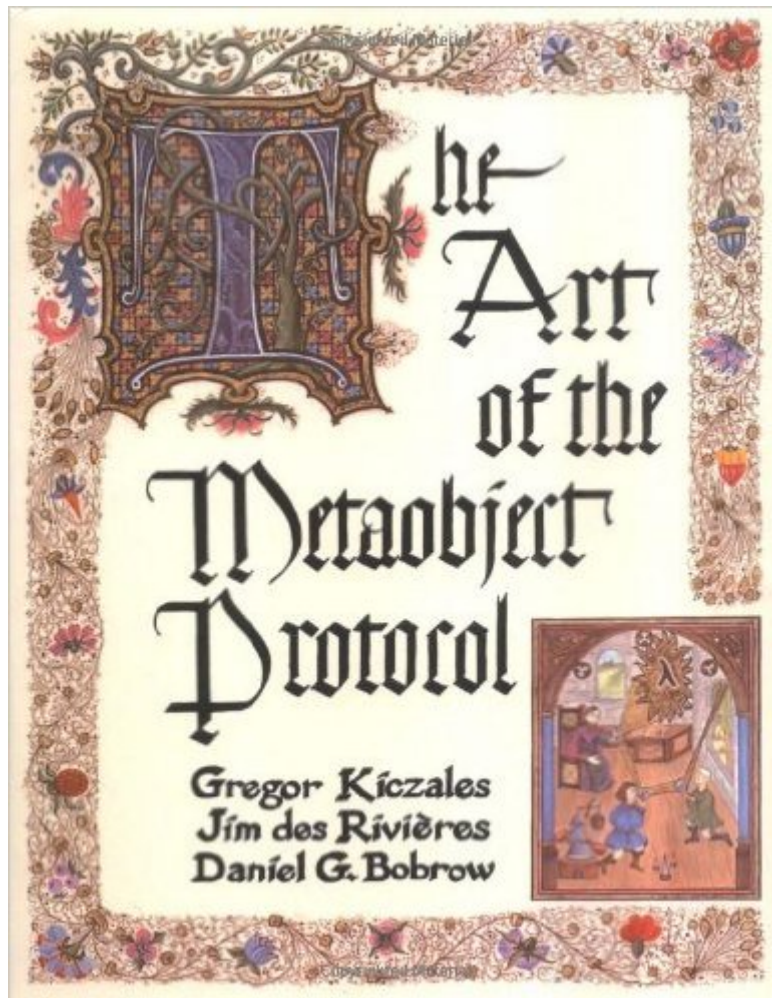# The Art Of The Metaobject Protocol

Synopsis

The CLOS metaobject protocol is an elegant, high-performance extension to the CommonLisp Object System. The authors, who developed the metaobject protocol and who were among the group that developed CLOS, introduce this new approach to programming language design, describe its evolution and design principles, and present a formal specification of a metaobject protocol for CLOS.Kiczales, des RiviÃ¨res, and Bobrow show that the "art of metaobject protocol design" lies in creating a synthetic combination of object-oriented and reflective techniques that can be applied under existing software engineering considerations to yield a new approach to programming language design that meets a broad set of design criteria.One of the major benefits of including the metaobject protocol in programming languages is that it allows users to adjust the language to better suit their needs. Metaobject protocols also disprove the adage that adding more flexibility to a programming language reduces its performance. In presenting the principles of metaobject protocols, the authors work with actual code for a simplified implementation of CLOS and its metaobject protocol, providing an opportunity for the reader to gain hands-on experience with the design process. They also include a number of exercises that address important concerns and open issues.Gregor Kiczales and Jim des RiviÃ¨res, are Members of the Research Staff, and Daniel Bobrow is a Research Fellow, in the System Sciences Laboratory at Xerox Palo Alto Research Center.

Book Information

Paperback: 345 pages

Publisher: The MIT Press (July 30, 1991)

Language: English

ISBN-10: 0262610744

ISBN-13: 978-0262610742

Product Dimensions: 7 x 0.7 x 9 inches

Shipping Weight: 1.2 pounds (View shipping rates and policies)

Average Customer Review: 4.4 out of 5 starsÂ Â See all reviewsÂ (5 customer reviews)

Best Sellers Rank: #648,014 in Books (See Top 100 in Books)   #34 inÂ Books > Computers & Technology > Programming > Languages & Tools > Lisp   #849 inÂ Books > Computers & Technology > Programming > Software Design, Testing & Engineering > Object-Oriented Design #3697 inÂ Books > Computers & Technology > Computer Science

Customer Reviews

As a presentation of how to implement the Metaobject Protocol, this is about as authoritative a presentation of CLOS as can exist, short of being a formal (dry!) standards document.Unfortunately, it falls way short in motivating the USE of the MOP. It shows how it is implemented, and has some examples of how to modify its behaviour. Which is wonderfully useful if your interest is in building your own implementation of MOP. It is not nearly so useful if you're trying to figure out how to apply it to less extraordinary purposes.To that end, Keene's book on CLOS, which demonstrates quite a number of usage examples, is a vital companion...

Although I am mostly a C/C++ programmer, I still found this book to be an interesting read. If you, like me, have an interest in programming language design and implementation I highly recommend it. As other reviewers have noted, however, the book has little material for Lisp programmers who just want to use the MOP without looking under the hood. I don't consider this a shortcoming - understanding the design and implementation of your language and tools helps in using them effectively.

This was a disappointing purchase for me, as I read some of the book on-line (in CMU-CL's "Encycmuclopedia") and was rather stunned at the beauty and possibilities of the MOP (which, in short, is defining the core object system itself in terms of the object system, allowing you to use the full power of the object system class hierarchy/relationships to control your object semantics). The book is a pretty straight forward implentation discussion, which is certainly nice as a case study in implementing such an interrelated system and boot-strapping the MOP into use, but it is only that. The MOP is one of those perfect ideas with such vast potential that I would much rather have seen actual expressions of that potential instead of mere inner working details. If I'd know that, I would not have bought it--but then neither will I be selling my copy.

This book is the first so far to completely discuss the mechanisms of the Metaobject Protocol. This is an advanced treatment and will be of value to the experienced Lisp programmer. The book covers all aspects of the MOP in great detail and when the reader has finished it, he or she will be very comfortable with CLOS mechanisms, and even more importantly, why these features have been implemented in the ways that they have.

This is powerful, but it's also dense and takes a lot of work to read.I'm a Ruby guy with a lot of metaprogramming experience... So to me this feels "obscured", but only because the vocabulary

and conventions have changed a lot in 20 years. I don't think you *could* have explained these concepts better 20 years ago.It's powerful to see all the reasoning behind this -- in some ways it boils down to inheritance and hooks for the basic object-oriented processes themselves (slot and method inheritance order, generic method lookup). But it's nice to see a very different structure for this than, say, Ruby takes.

The Art of the Metaobject Protocol Protocol for Wireless Localization Systems: Communications Protocol for RF-based Wireless Indoor Localization Networks The Wahls Protocol: How I Beat Progressive MS Using Paleo Principles and Functional Medicine Total SNMP: Exploring the Simple Network Management Protocol (2nd Edition) Managing Internetworks With Snmp: The Definitive Guide to the Simple Network Management Protocol, Snmpv2, Rmon, and Rmon2 (Network Troubleshooting Library) Managing Internetworks With Snmp: The Definitive Guide to the Simple Network Management Protocol (Snmp and Snmp Version 2) Snmp: Versions 1 & 2 Simple Network Management Protocol Theory and Practice Total Snmp: Exploring the Simple Network Management Protocol TCP/IP Protocol Suite e/4 Protocol Oriented Programming with Swift The Wahls Protocol: A Radical New Way to Treat All Chronic Autoimmune Conditions Using Paleo Principles 5 Steps to Restoring Health Protocol: Helping those who haven't been helped with Lyme Disease, Thyroid Problems, Adrenal Fatigue, Heavy Metal Toxicity, Digestive Issues, and More! Defeat Chronic Fatigue Syndrome: You Don't Have to Live with It -- An Eight Step Protocol The Hormone Cure: Reclaim Balance, Sleep and Sex Drive; Lose Weight; Feel Focused, Vital, and Energized Naturally with the Gottfried Protocol The Hormone Cure: Reclaim Balance, Sleep, Sex Drive, and Vitality Naturally with the Gottfried Protocol Chinese Business Etiquette: A Guide to Protocol, Manners, and Culture in thePeople's Republic of China Business Etiquette & Protocol: Professional Development Series Art: Painting For Artists - Styles: Acrylic And Oil Painting (art history, art books, art theory, art techniques Book 2) Sketching (30 minute ART) (30 Minute Art (Discover Art)) Zentangle Inspired Art: A Beginners Guide to Zentangle Art and Zentangle Inspired Art and Craft Projects