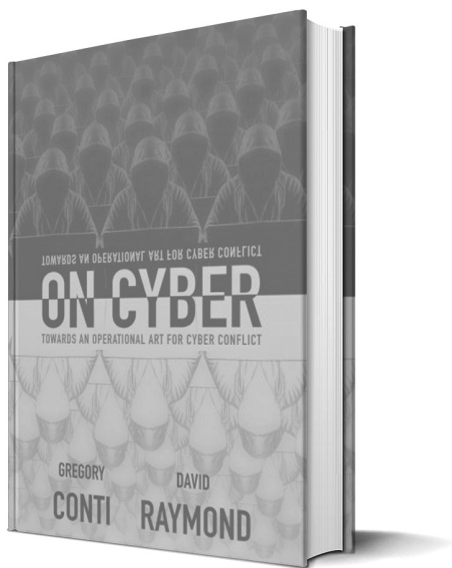


On Cyber: Towards an Operational Art for Cyber Conflict

by Gregory Conti and David Raymond

Reviewed by
Dr. Jan Kallberg



The core of Conti and Raymond’s *On Cyber: Towards an Operational Art for Cyber Conflict* is found in the preface under the self-explanatory title, “Why this book?” and embedded in the following sentence: “The lack of an operational art for cyberspace operations is the inspiration for this book.” Conti and Raymond have identified a wide and open gap in the cyber literature, found not in the cyber hinterlands, but in the pivotal question of, “how do you do cyber operations?” We are now about 20 years into cyber – 20 years ago, cyber defense and cyber operations were all but unknown, and had less than a few references in the now-defunct AltaVista search engine – and, discussions within the cyber community still occur mainly at the strategic and conceptual level, or at the purely tactical level. The larger policy debate is driven by a non-technical community, and the tactical level quickly becomes highly technical as a subset of computer science.

This is where Conti and Raymond’s *On Cyber* found the key terrain and gap in the literature. Both Conti and Raymond are retired Army officers with a background in cyber, and former ACI colleagues. The title, *On Cyber*, resembles Carl von Clausewitz’s classic *On War*, a bold move that raises reader expectations. Conti and Raymond do not claim that their work is the end state of the discipline, or that they have figured it out, but instead invite the cyber community to take a leap forward with them to catalyze activity in the community. Conti and Raymond are eager to force us to think about cyber in an operational context, and stoke our intellectual fire to drive the discourse forward.

This is a work of the U.S. Government and is not subject to copyright protection in the United States. Foreign copyrights may apply.



Dr. Jan Kallberg is Assistant Professor of American Politics in the Department of Social Sciences and Cyber Policy Fellow at the Army Cyber Institute at West Point. He holds a Ph.D. in Public Affairs and a Master's of Political Science from the University of Texas at Dallas; and a JD/LL.M. from Stockholm University. Prior to joining the West Point faculty, Jan was a researcher and Post-Doc at the Cyber Security Research and Education Institute, Erik Jonsson School of Engineering and Computer Science, at the University of Texas at Dallas under Dr. Bhavani Thuraisingham. Dr. Kallberg's research interest is the intersection between public leadership and cyber capabilities; especially offensive cyber operations as an alternative policy option. His personal website is www.cyberdefense.com.

They succeed because, whether it was done on purpose or not, one cannot merely read the book and silently take in the words. Instead, the reader will think, assess, evaluate, agree, disagree, reject, and accept, all of which is beneficial.

Some factors are normally less frequent in cyber works, but are central to cyber as an environment, such as speed and intensity of engagement, and perception of presence in an environment with no object permanence. Conti and Raymond cover these topics and show a clear and well-founded understanding of the unique cyber landscape.

Conti and Raymond also devote significant time and space explaining why things are the way they are, and seek to explain terms, definitions, and arrangements with high granularity and precision. After reading the book, one realizes that this intellectual calibration is a well-thought-out tool to help the reader. The information security community has used military terms loosely in recent decades to explain actions and activities, while the marketing of cybersecurity products and services has diluted the power of the terminology as it fits with marketing plans. The cyber community frequently employs powerful words that lack a common understanding. Military terminology's sole purpose is to communicate with clarity regarding the expectations, activities, and resources required. Once one knows the terminology, the book opens up as a cryptographic key. The inherent power of well-understood terms became apparent to me in my second reading of the book.

The thread woven through Conti and Raymond's *On Cyber* is educational, supported by almost 700 references, with an invitation to challenge their approaches. The book is true to cyber, and that is what makes it worth reading and returning to for inspiration and guidance. 🛡️

Title: *On Cyber: Towards an Operational Art for Cyber Conflict*

Author: Gregory Conti and David Raymond

Publisher: Kopidion Press; first edition
(July 17, 2017)

Hardcover: 108 pages

Language: English

ISBN-10: 0692911561

ISBN-13: 978-0692911563

Price: \$35.00