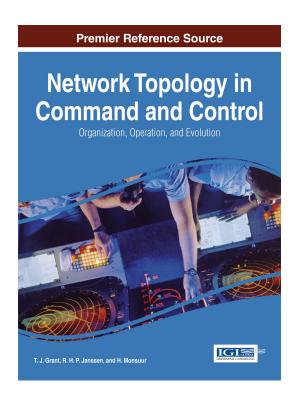
An Excellent Addition to Your Library!

Released: May 2014

Network Topology in Command and Control: Organization, Operation, and Evolution



ISBN: 9781466660588; © 2014; 330 pp.

Print: US \$215.00 | Perpetual: US \$325.00 | Print + Perpetual: US \$430.00

Part of the Advances in Information Security, Privacy, and Ethics Book Series

T. J. Grant (R-BAR, The Netherlands),

R. H. P. Janssen (Netherlands Defence Academy, The Netherlands), and H. Monsuur (Netherlands Defence Academy, The Netherlands)

Network-enabled Command and Control (C2) and network science both emerged in the mid- to late-1990s. Found in applications ranging from military operations and emergency management to process control, modern C2 systems link tens of thousands of computers and their users. With unmanned vehicles, sensors, and other devices being added, the number of C2 nodes is increasing exponentially. Modern network science provides the mathematical techniques for representing and analyzing networks with millions of nodes, i.e. for handling "big data".

C2 has been making a transformation from top-down, directive command to Network Centric Operations (NCO) and Network Enabled Capability (NEC), self-synchronization, and agility. As the terms NCO and NEC suggest, C2 systems are regarded as networks, rather than a hierarchy. Accordingly, it is appropriate to view the C2 process and C2 systems through the lens of network science.

Network Topology in Command and Control: Organization, Operation, and Evolution aims to connect the fields of C2 and network science. Featuring timely research on topics pertaining to the organization, design, operation, and evolution of C2 networks, this publication is ideal for reference use by professional users and developers, academicians, and students in the fields of C2 and network science. No previous books have comprehensively applied network science to C2, as this book does. It advances the state of the art by covering networked organizations and the modeling and design of C2 systems, and by broadening the applications of network science techniques.

Topics Covered:

- · C2 System Design
- · Command and Control
- De-Conflicting the Activities of Coalition Partners
- Integrating Cyberspace into Land, Sea, Air, and Space Domains
- Modeling C2 Systems as Networks
- · Network Science
- Networked Organizations
- Situation Awareness in Networks of Sensors and Actors
- Viewing C2 Systems as Multi-Layered Networks

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners. Ideal for classroom use.



Publishing Academic Excellence at the Pace of Technology Since 1988

Chapter 1 De-Conflicting Civil-Military Networks Improving C2 Effectiveness Based on Robust Connectivity P.C. van Fenema (Netherlands Defence Academy, The Netherlands) S. Deller (Textron Defense Systems, USA) S. Rietjens (Netherlands Defence Academy, The Netherlands) A. Tolk (SimIS Incorporated, USA & Old Dominion University, USA) B. Besters (Netherlands Defence Academy, The Netherlands) G. Rabadi (Old Dominion University, USA) S. Bowling (Bluefield State College, USA) Shaping Comprehensive Emergency Response Networks W. Treurniet (Netherlands Organization for Applied Scientific Research TNO, The Netherlands) Chapter 9 C2, Networks, and Self-Synchronization A. H. Dekker (University of Ballarat, Australia) Networked Operations: Taking into Account the Principles of Modular Organizing E. J. de Waard (Netherlands Defence Academy, The Netherlands) Complex Adaptive Information Networks for Defence: Networks for Self-Synchronization J. Moffat (Defence Science and Technology Laboratory, UK) Chapter 4 Modelling Command and Control in Networks E. Jensen (Swedish National Defence College, Sweden) Cyber Security in Tactical Network Infrastructure for Command and Control J. Sigholm (Swedish National Defence College, Sweden) Chapter 5 Formalized Ontology for Representing C2 Systems as Layered Networks Chapter 12 T.J. Grant (R-BAR, The Netherlands) Smart Surveillance Systems L. J. M. Rothkrantz (Delft University of Technology, The Netherlands) Modeling C2 Networks as Dependencies: Understanding What the Real Issues Are B. Drabble (Independent Researcher, USA) Dynamical Network Structures in Multi-Layered Networks: Implementing and Evaluating Basic Principles for Collective Behavior R. H. P. Janssen (Netherlands Defence Academy, The Netherlands) H. Monsuur (Netherlands Defence Academy, The Netherlands) A. J. van der Wal (Netherlands Defence Academy, The Netherlands)

Order Your Copy Today!	
Name:	Enclosed is check payable to IGI Global in
Organization:	US Dollars, drawn on a US-based bank
Address:	☐ Credit Card ☐ Mastercard ☐ Visa ☐ Am. Express
City, State, Zip:	3 or 4 Digit Security Code:
Country:	Name on Card:
Tel:	Account #:
Fax:	Expiration Date:
E-mail:	