

ITRAINONLINE MMTK

Additional resources: Advanced Networking

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Books

1. Perman Radia, **Interconnections: Bridges, Routers, Switches, and Internetworking Protocols (2nd Edition)**, September 14, 1999, Addison-Wesley Professional
ISBN: 0201634481

Editorial Review

This latest release of *Interconnections* is a competent update of a networking classic. Radia Perlman explains hundreds of details about getting computers--and computer networks--to talk to one another smoothly, accurately, and efficiently. Perlman, inventor of the spanning-tree bridging algorithm, covers the Open Systems Interconnect (OSI) reference model, bridges, switches, hubs, Virtual Local Area Networks (VLANs), plus connection-based and connectionless networks. She also does a great job of explaining the underpinnings of internetworking protocols, including packet format, addressing, routing (both generically and in terms of RIP, RTMP, OSPF, and other protocols), and security. There's plenty of IPv6 information here, mostly from a theoretical vantage point.

The best parts of Perlman's approach to her subject are the little thought experiments that explain why various aspects of internetworking behave the way they do. For example, Perlman talks about Maximum Transmission Unit (MTU) discovery by presenting four different hypotheses for figuring out MTU. For each possible solution, she discusses strengths, weaknesses, and real-life considerations. She applies this method to dozens of other problems and phenomena, making *Interconnections* a very close approximation of learning by experiment. --David Wall

Topics covered: Open Systems Interconnect (OSI) reference model, bridges, switches, hubs, Virtual Local Area Networks (VLANs), and internetworking protocols.

2. Tanenbaum Andrew S, 2003, **Computer Networks**, Fourth Edition, Prentice Hall PTR,
ISBN: 0-13-066102-3
3. Gast Matthew, April 2005, **802.11 Wireless Network: The Definitive Guide**, Second Edition, O'Reilly. ISBN: 0-596-10052-3