

Introduction to Show Networking

REVIEWED BY KARL G. RULING

INTRODUCTION TO SHOW NETWORKING covers the basics of how networks work and how to put together a reliable system for a show. The author, John Huntington, works in the entertainment industry as a systems consultant and sound engineer, and also is a professor of Entertainment Technology at New York City College of Technology. I like his practical—this is what you need to know to make it work reliably—approach. The book doesn't tell everything there is to know about networks, but it tells the reader what's necessary to put together a reliable show network, strategies to plan a network, and enough of the technical detail to figure out what might be wrong if it doesn't work. It's great for people working in the entertainment industry, and also would be useful for anyone who finds themselves being the network sys-op in the office.

The emphasis is on reliability and the technology commonly used now. Ethernet (*IEEE 802.3*) is the most widely used networking technology, and it is extremely flexible, able to support a wide variety of show data and various protocols, so the book is mainly about Ethernet. Huntington covers Wi-Fi (*IEEE 802.11*) networks and basic steps to take for wireless network security, but his advice for reliability is to use wires (or optical fiber) whenever you can. With wired systems, he mostly writes about IPv4 addressing, since this is ubiquitous now, and the addressing range is adequate for show networks. However, he offers a few pages on IPv6 addressing, since this is gaining acceptance in the industry. It's not widely used yet, but people should have a clue when they see the address 2002::7003:0:0:0:70.

In chapter 1 Huntington starts with some very basic information about what a network is, how networks are used on shows, and different types of networks. He quickly deals with some terms commonly used with networking (and I can imagine a student asking about), such as bit rate/bandwidth, determinism and latency, data encoding, error detection, packets and frames, packet

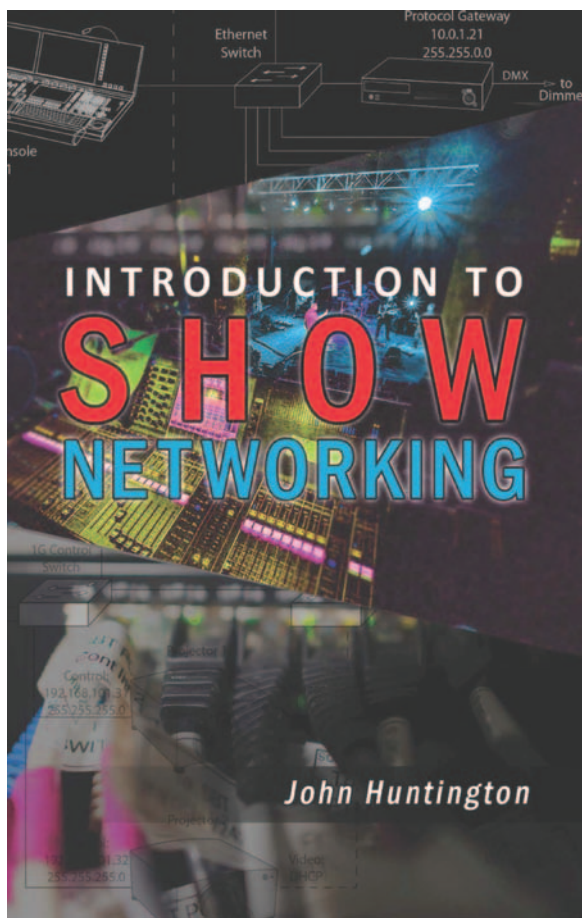
forwarding, “category” cables and shielding, solid or stranded conductors, connectors, the TIA-568 cabling standard, optical fiber networks, Wi-Fi networks, the OSI model, and finishing with “Here's Everything You Need To Know About Show Networking!” The last part is a bit facetious, but it lays out in essence what the following chapters will say:

- using the appropriate hardware,
- setting addresses and subnet masks,
- keeping cable run-lengths reasonable, avoiding unmanaged loops in the network topology, and following best practices, and then
- methodically following best-practices design, implementation, and documentation.

There's more, of course. Chapters 2 through 4 flesh out the topics touched on in Chapter 1 and add more information, explaining ports, ARP, NAT, IGMP, VLANs, VPNs, and a lot more. Chapter 5 then puts it all together with some examples of

planning particular show networks, assembling them, checking that everything is talking to whatever it is supposed to be talking to, and then documenting it so the system can be maintained—and also to help narrow down what's wrong if something stops working.

I can't find anything missing in the text for putting together



a reliable show network and for understanding what is making it work. I am often frustrated by books called “the essential guide” that tell me step by step what to do, but leave me almost clueless when the screen shots don’t match my screen and things are not working as advertised. On the other hand, too deep a dive also is not helpful. If you really want to know the details of Ethernet and Wi-Fi, the *IEEE 802.3* and *802.11* standards will tell you in about 8,300 pages. However, they won’t tell you anything about planning a network or keeping the cables sorted. Huntington hits the right level of detail to help a person put together a reliable show network, demystifying terms a technician or student may have heard but doesn’t really need for a show network, while giving suggestions for what might be needed in special situations.

The title says the book is about show networks, but it would be handy in the office, too. For many years the ESTA office network was maintained by ESTA staff and spouses; to avoid frustration and being off-line, we belatedly adopted many of the network planning, testing, and documentation steps Huntington suggests for show networks. How much simpler it would have been if we’d read *Introduction to Show Networking* and done those things from the start! ■

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