

ditions, thereby precluding the possibility of effectively directing propaganda at the West German working class. (SECAM signals would only be visible in black and white and with somewhat diminished quality on PAL televisions.) Then again, SECAM incompatibility with PAL might also help keep West German propaganda out of the GDR, but there were concerns that the West Germans might set up special SECAM broadcasts directed to an East German audience. Decisions, decisions. In the end, though, it is perhaps not surprising that the GDR decided to side with its superpower protector, and SECAM technology remained the norm throughout the last two decades of its existence as a Soviet satellite.

This book provides a nice overview of the main features of the debate based on evidence from German and French archival sources and on interviews. It is not without faults, however. The notion that technological development is apolitical until the politicians get involved is somewhat naive. Likewise, the implication that there was a four-year “controversy” about this issue in the GDR is misleading; the East German Ministerial Council actually agreed to adopt SECAM as early as December 1966. And, as Glaubitz himself indicates, problems involving SECAM/PAL incompatibility were being overcome as early as 1967 by means of transcoding. Still, *Die PAL-SECAM-Kontroverse in der DDR* is a well-organized, splendidly documented, and generally well-argued case study in the politics of technology.

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### **Technology, Television, and Competition: The Politics of Digital TV.**

By Jeffrey A. Hart. New York: Cambridge University Press, 2004.  
Pp. xiv+248. \$60.

This is a dense volume that takes its reader through a quarter-century of technological and regulatory debates surrounding the implementation of high-definition television (HDTV) and digital television (DTV). It focuses on the most technologically advanced nations—the United States, Japan, and several in western Europe—that were already established in both broadcasting and consumer electronics manufacturing when digitalization of television first became a topic of consideration. Jeffrey Hart states at the outset that his book will focus on the importance of digital convergence to setting standards for HDTV and DTV. He next observes that the period during which discussion of these new technologies began in earnest, the 1980s and 1990s, “is particularly interesting because it coincides with a time of questioning of the ability of the United States to lead the capitalist world as it had done since the end of World War Two” (p. 3). His key point is that

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the established interests connected with broadcasting, program production, and consumer electronics resisted the changes that advances in digital technologies made possible. Although some of these interests eventually came to favor some change, representatives of the information-technology industries advocated even more radical change. What emerged was a compromise that failed to satisfy anyone and resulted in confusion on the part of both consumers and producers.

Throughout, Hart is concerned with the ways in which the interests of multinational media corporations have superseded the mandates of traditional regulatory models in determining policy. There is a great deal of background on each of the critical decision-making entities. The second chapter consists primarily of histories of broadcasting technology and regulation in various countries during the early twentieth century—material that is covered in excruciating detail, making this perhaps the least helpful chapter in the book. Because Hart draws very liberally from *Television in Europe* (1991) by Eli Noam, along with a few other comprehensive volumes, one must wonder why a reader lacking background is not simply referred to these resources.

Chapter 3 seems much more pertinent to the topic at hand. Here, the analysis concerns the competitive disadvantage the United States now faces against other nations—particularly East Asian countries—in consumer electronics markets. While some of the detail might lie beyond the comprehension of nonexperts, Hart offers a pithy conclusion: By the latter 1990s, both U.S. and European consumer electronics interests had put themselves in a position where it was essential to ally with successful East Asian firms as they pursued digital technologies.

The next five chapters track the development of HDTV and DTV technologies in Japan, Europe, and the United States. Hart describes Japan's founding role in HDTV, with national broadcasting company NHK having begun investigating the technology as far back as 1970. He discusses the complex series of decisions leading to the establishment of the Federal Communications Commission's regulatory framework for HDTV. And he shows how European HDTV standards came closest to meeting the interests of private broadcasters—surely a significant move away from precedents set by the original broadcasting frameworks in these nations. With regard to DTV, Hart does a good job of capturing the spectrum of national constituencies having a stake in the future of television broadcasting—from politicians to citizen groups to cable interests to public broadcasters.

In chapter 9, Hart enumerates the universal protocols that have been implemented successfully—including TCP/IP and HTML—in order to highlight the failures of digital television standards. Then, in the concluding chapter, he offers a thorough summary of the material covered in his book. This chapter (perhaps in combination with the introduction) would prove more than adequate to familiarize most readers with the relevant issues. It is

worth emphasizing, however, that Hart's book clearly is intended for the broadcast policy expert. It has a dry, academic writing style, with jargon and data that go beyond basic textbook (or newspaper-based) understanding of the core issues. One hopes that the information collected here can inform future volumes that are more accessible to nonexpert readers.

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### **The Second Information Revolution.**

By Gerald W. Brock. Cambridge, Mass.: Harvard University Press, 2003.  
Pp. 336. \$39.95.

Gerald Brock, a leading scholar of telecommunications policy, offers a new interpretation of our current information revolution. He compares the regulated telephone monopoly of AT&T, a key part of the "first information revolution," with the unregulated computer and electronics industries that developed the personal computer, the Internet, and wireless telephony—the "second information revolution." He argues that the former excelled at providing universal and reliable service by sacrificing potential technological progress, while the latter was free to develop innovative products and services. Brock's theoretical framework is the "new institutional economics," particularly the work of Douglass North and Oliver Williamson, whose basic idea is that "the success of a market system is dependent on the institutions that facilitate efficient private transactions" (p. 16). While both information revolutions made transactions more efficient, Brock credits the Internet and wireless "with usage costs and prices that are distance-insensitive and very close to zero" (p. 6).

Although he concentrates on the contrast between the regulated telephone industry and the unregulated computer and electronics industries, Brock surveys the history of communications from the postal system onward, providing an excellent account of the changing relationship between technology, economics, and regulation. He presents a clear discussion of this relationship in some arcane yet important areas, such as the development of microwave transmission technology after World War II and spectrum management in early wireless telephony. He also presents clear explanations of some thorny regulatory issues, such as the conflicting goals of antitrust enforcement by the Department of Justice and the maintenance of a regulated telephone monopoly by the Federal Communications Commission (FCC), and the FCC's long struggle to incorporate the evolving field of data communications within its regulatory framework.

Despite the book's value I have three concerns, two interpretive and one methodological. Drawing on his institutional economics framework, Brock