How Not to Network a Nation: The Uneasy History of the Soviet Internet (Information Policy)

Benjamin Peters
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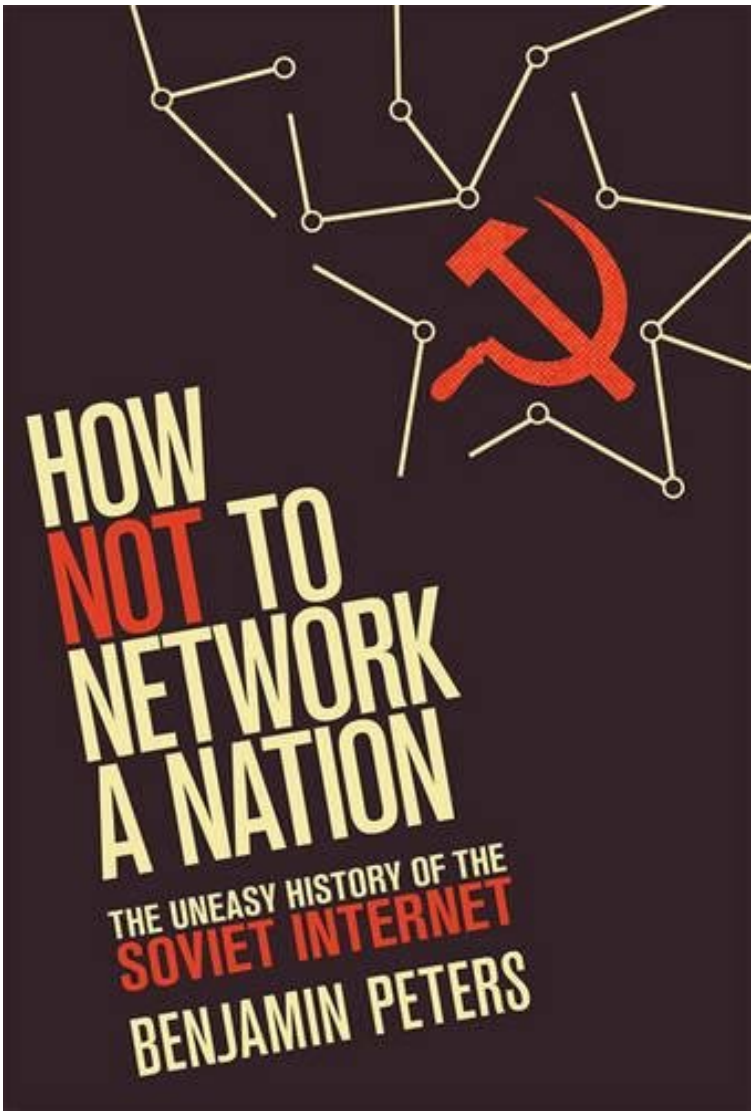

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Benjamin Peters : How Not to Network a Nation: The Uneasy History of the Soviet Internet (Information Policy) before purchasing it in order to gage whether or not it would be worth my time, and all praised How Not to Network a Nation: The Uneasy History of the Soviet Internet (Information Policy):

16 of 17 people found the following review helpful. An Excellent Set of Insights to the Soviet Mind and System via its NetworksBy Dr. Terrence McGartyPeters book on Networking the Soviet Union is less a tale of the technology developed in the then Soviet Union than a tale about the structure of the centralized bureaucracy that managed to

nearly bankrupt the entity. As regards to the actual technology I would go back to the mid-1970s when I was in Washington. At the time I was at Comsat and was "befriended" by the Technical Attaché at the Czechoslovakian Embassy. Also the home of the Cuban delegation as less than an idle point of interest. As part of my tasks at the time I followed my new friend around as he tried from one occasion to another to collect data on US telecommunications and network systems. At the same time, I had the task of connecting what was then the early stage of the ARPA Net to the Intelsat system connecting Etam West Virginia to Goonhilly in the UK and Trondheim in Norway. In the US we basically placed all of this in the public domain so I would guess my "friends" job was fairly easy.I saw him I believe in the Fall of 1977 at a Conference at Cornell at which time the Diffie Hellman encryption algorithm was discussed. I guess that half the attendees were not necessarily who they may have said they were.Then some twenty plus years later I now had partners in Russia running my Russian network and the former head of the Czech PTT was now my Czech partner. My former "friend" used to work for him. Small world. Since I had worked on the Comprehensive Test Ban Treaty Negotiations in the late 1970s, doing the networking for the seismometers, my Russian friends clearly knew me. During one of my conversations I was told by my Czech partner, a senior figure both in Czech as well as Soviet circles that they used the Bell System Technical Journals to design their telecom systems and the IEEE journals for data systems.In fact, one of my Russian partners was one of the first to introduce the Internet to Russia and we completed the task in the late 90s. As such I have a different view than the author, one based on technical facts of the network and its operations.This book is NOT about the Internet or its Soviet clone from a technical or operational perspective. Rather it is about the Soviet bureaucratic system and the need to make some sense out of its overwhelming administrative overhead using networks on both the economic administrative side and the military side.Chapter 1 is a discussion of Wiener and Cybernetics. The author presents one of the best discussions regarding the acceptance of Cybernetics in the Soviet Union I have seen. Wiener was a brilliant mathematician and in addition could think in large scale systems. His book on Cybernetics was warmly received in the US but its theme was understanding large scale systems and the US was no longer, at that time, interested in that. It was moving from a War footing and into a capitalist industrial footing in the 50s. The Soviet Union on the other hand was further consolidating a centralized command and control economy and Wiener's ideas rang bells. Thus they adopted his view of the world. Chapter 2 presents a good overview of how the Soviet Union then took these ideas and tried to integrate them into this centralized world.Chapter 3 is allegedly an attempt to present the networks used. It really is a discussion of the people and the politics and not the technical issues. Although interesting I really wanted to see some discussion of what the Russian had implemented and how their designs differed from ours. There were a mass of varying data protocols and data speeds and network transport mechanisms that were developed in the US and I wondered what did the Soviets do in parallel. The author depicts the Soviet's response as a response to SAGE and then I wondered what the response was to the packet ideas of Baran. In fact, the work of Roberts and in turn Kahn at ARPA were almost all in the open literature and the goal was a survivable network, apparently perceived by the Soviets as a threat. If so I wondered just what they did. I am certain that there must now be a great deal of unclassified CIA and DIA reports that would clarify that but the discussion is missing.Chapters 4 and 5 go through the 60s and then 70-80s respectively and the author presents the principals who tried to accomplish something in this realm. The politics seemed to be always creating roadblocks and the innovation that ARPA allowed seemed to foster what we have today.The author has an interesting discussion on the Mansfield Amendment, that in 1969 put an end to DoD funding anything but specific program supported work. Until that time DoD funded what has become the foundation of our information based economy, and with Mansfield we saw a total collapse of that development. I often wondered if the Soviets saw that for what it did.Overall the book is an excellent presentation of the people and politics of what would become some of the infrastructure in the Soviet Union. I wondered what the role of a RosTelecom would be in that mix, an element not discussed. In addition, the Soviets had satellites the Molyniya System which were not equatorial but polar, and thus their communications ground stations were expensive and subject to failing. Their cable connections were also mixed with spotty interconnections across the wide expanses. The author provides some maps but it would have been more useful to have some detail.This is a well-organized and presentation of the system, as politics, not the system as technology. Given how closely the Soviets monitored US technology and how open we were then and now, I have often wondered what the Russian created from whole cloth and what was reproduced. The Russians were and are technologically on a par with the West in terms of human capital but it was often the weight of the system that slowed them down. That burden was lifted after the fall but I wonder how much may have returned.During the period from 1960 thru 1990 Russia developed a variety of networks, many for military use and many for central command and control. Based upon my own personal first hand experience working with them they clear were at the same level as the west. Thus in rethinking the book by Peters teviewed here, thought that his title was most likely totally out of place.Using the title How Not to Network a Nation: The Uneasy History of the Soviet Internet was in my opinion out of place. The Internet was a construct that grew out of the arrogance of ATT more than any uniqueness on the part of US technology. If ATT had agreed to work with ARPA then this would have just been an extension of the monopoly network. Instead the arrogance of the monopolist, the entity that saw itself above everything else, created the creative destruction that led to its collapse.Thus there is a real story of a set of brilliant technologists in Russia that may very

well go untold. It was not a question of "How Not to" but the advantage the early ARPA team had in facing an adversary, not Russia but ATT, and having the resources to overcome it.Perhaps some day there will be a work on Soviet networks, a works which commends the efforts of many brilliant men and women in Russia who created a parallel universe and who when the borders fell allowed in a seamless manner the full expansion of the global IP network.If one further looks at the time one also sees the IBM SNA network, akin to many of the centralized schemes we may see in Russia and Europe. But as a backdoor way to get around ATT we had TCP/IP.Thus understanding the reality of what occurred, it is not, "How not to" but ask ourselves the question; what really happened. Also one hopes there is a tale of Russia's advances to tell the complete story. From that we can learn that our then adversaries were as bright as we think we were.0 of 2 people found the following review helpful. OuchBy CustomerAn interesting book about how messed up networks can get. There but for the grace of God go I.1 of 4 people found the following review helpful. Five StarsBy Frank MartinOutstanding book.

How, despite thirty years of effort, Soviet attempts to build a national computer network were undone by socialists who seemed to behave like capitalists.Between 1959 and 1989, Soviet scientists and officials made numerous attempts to network their nation -- to construct a nationwide computer network. None of these attempts succeeded, and the enterprise had been abandoned by the time the Soviet Union fell apart. Meanwhile, ARPANET, the American precursor to the Internet, went online in 1969. Why did the Soviet network, with top-level scientists and patriotic incentives, fail while the American network succeeded? In How Not to Network a Nation, Benjamin Peters reverses the usual cold war dualities and argues that the American ARPANET took shape thanks to well-managed state subsidies and collaborative research environments and the Soviet network projects stumbled because of unregulated competition among self-interested institutions, bureaucrats, and others. The capitalists behaved like socialists while the socialists behaved like capitalists. After examining the midcentury rise of cybernetics, the science of self-governing systems, and the emergence in the Soviet Union of economic cybernetics, Peters complicates this uneasy role reversal while chronicling the various Soviet attempts to build a "unified information network." Drawing on previously unknown archival and historical materials, he focuses on the final, and most ambitious of these projects, the All-State Automated System of Management (OGAS), and its principal promoter, Viktor M. Glushkov. Peters describes the rise and fall of OGAS -- its theoretical and practical reach, its vision of a national economy managed by network, the bureaucratic obstacles it encountered, and the institutional stalemate that killed it. Finally, he considers the implications of the Soviet experience for today's networked world.

Benjamin Peters's book is not only a scintillating explanation of why the Soviet Internet failed to materialize but also a first-rate sociopolitical investigative report and a delicious tale of how Soviet efforts to manage a command economy left them without either command or an economy. (Todd Gitlin, Professor and Chair, PhD Program in Communications, Columbia University; author of Media Unlimited: How the Torrent of Images and Sounds Overwhelms Our Lives)Peters offers a compelling account of the Soviet Union's failed attempts to construct their own Internet during the Cold War period. How Not to Network a Nation fills an important gap in the Internet's history, highlighting the ways in which generativity and openness have been essential to networked innovation. (Jonathan Zittrain, Professor of Law and Computer Science, Harvard University; Director, Berkman Center for Internet Society)As early as 1962, cybernetics experts in the Soviet Union proposed a complex, large-scale computer network. It fit with a socialist vision but not with bureaucratic politics and a faltering command economy. It was never realized, but the story sheds light both on Soviet history and on the social conditions that shape computing and communications networks. It is a previously unknown story, now elegantly told by Benjamin Peters together with a thoughtful analysis that makes the early history of computing seem full of possibilities not obvious. (Craig Calhoun, FBA, Director and President, London School of Economics and Political Science)[A]n immersive read that covers the ground in impressive detail. (Times Higher Education)Anyone interested in the history of the internet, comparative systems, or the history of the Soviet Union should read this book. (Marginal Revolution)About the AuthorBenjamin Peters is Assistant Professor in the Department of Communication at the University of Tulsa and affiliated faculty at the Information Society Project at Yale Law School.