

Kilnam Chon

The Internet became a global, critical, social infrastructure in this century. In this book, we study how the early Internet and the related networks developed in Asia as well as throughout the world in the 1980s. The book was written collectively by over forty Internet pioneers in Asia and across the world, and many of them are still influential figures in the various Internet organizations that shape the Internet as it goes forward into the future.

The early history of the Internet in the USA has been well documented [Lynch 1993; Leiner 2003; Kleinrock 2010]. So have been some of the early histories of the Internet in several countries in Asia [Chen 2005a; Clarke 2004; Chon 2013; Heyday 2012; Ishida 1991; Palasri 1999; Ramani 2011; WIDE 1999]. However, the early history of the Asia Internet as a whole has never been documented in one place. Thirty years have passed since the initial Internet developments in Asia. Many of the Internet pioneers in Asia are still actively participating in Internet development, but some have passed away. It is thus very important to document thoroughly how the Internet developed in Asia, including both the specific computer-network related histories of particular Asian countries as well as the international history of Internet development in Asia, before any more time slips away. In our preparation for this book, we discovered that no regional Internet history had been documented throughout the world, and so we decided to record some of the international coordination of Internet development including the International Academic NetWorkshop (IANW) and the Coordinating Committee for Intercontinental Research Networking (CCIRN) in the 1980s and the Developing Country Workshop in the 1990s among others. In each chapter, we asked the original researchers and the original developers to participate in writing the chapter. Fortunately, many were still able to contribute. However, in some cases, some of them were unable to join with us as they were no longer available. In such cases, we relied on their early writings as well as the contribution of their colleagues.

ARPANET, the predecessor of the Internet, was developed in the United States in the late 1960s, and its creation began to impact research and development into computer networking in Asia from the 1970s onward. The 1980s was a seminal period for networking in Asia, seeing many nations in Asia achieving some degree of worldwide connectivity during that time.

This book contains the following chapters, apart from this short introduction chapter:

Chapter 2 The beginning

Chapter 3 Internet development in the 1980s

Chapter 4 Internet-related networks in the 1980s

Chapter 5 Meetings and organizations in the 1980s

Chapter 6 Snapshots of the Internet around 1990

Chapter 7 Personal essays

Chapter 8 Retrospective - toward second decade (1991-2000)

In Chapter 2, we describe the computer network research activity in several countries including Australia, India, Japan, Korea, and New Zealand in the 1970s. These countries did not initially contact each other, although all had some contacts with the USA or Europe. In Chapter 3, we describe the initial Internet development in Asia during the 1980s starting from Internet development based on IPv4 in Korea from 1980 onwards. In Chapter 4, we describe

the development of the Internet-related networks of the period including UUCPNET/Usenet, CSNET, and BITNET. In Chapter 5, we describe the initial regional meetings held in Asia including the Pacific Computer Communications Symposium (PCCS), one of the first global Internet conferences, as well as some early regional organizations that have ceased to exist. For Chapter 6, we collected snapshots of the Internet status within various countries in Asia around 1990, as well as continental overviews for the same point in time. In all, we succeeded in assembling articles for eighteen different countries within Asia. In Chapter 7, we have personal essays from over ten Internet pioneers who contributed to the development and shaping of the Internet in Asia, many of whom also wrote articles for our books and involved in the Advisory Groups. Due to the nature of these contributions, we decided to forego peer review on the personal essays, unlike the remaining content of the book that was subjected to peer review.

We also developed a chronology we call the Year Table that records what was happening at particular points in time in the field of computer networking in Asia and throughout the world and have included it in Chapter 8 Retrospective. This may be the first time that such a comprehensive recording of Asian Internet development has been produced. We also decided to include a Russian Internet history of the 1990s in the Appendix. It is the first time that the early history of the Russian Internet is documented in detail in English.

One of our objectives in writing this set of Asia Internet History books (the second book in the 1990s is nearing completion) was to provide a link to relevant documents, and thus we developed an extensive bibliography with several hundred entries. We hope these two Internet history books for the last century with their extensive bibliographies will assist scholars studying various aspects of the Internet in Asia and the world. We have already heard from many researchers who appreciated the information sources we initially provided in the online companion to this book.

To produce this book, we have drawn on many documents that were produced during the 1980s and have scanned and digitized them for inclusion. These sources include:

- IFIP Conference on Networks 80
- International Academic NetWorkshop (IANW) in the 1980s
- Pacific Computer Communications Symposium (PCCS) in 1985
- Joint Workshop on Computer Communications (JWCC) in the 1980s and 1990s
- Research and Development Networks in the World in 1986

The tables of contents of these documents are included in the book. Some of the articles can be found on the Asia Internet History Project website, <http://InternetHistory.asia>. We have also documented the achievements of notable Internet organizational initiatives in the 1980s, including the Coordination Committee for Intercontinental Research Networking (CCIRN), and the Computer Science NET (CSNET) in addition to more activities in the 1990s in the second book. We are also compiling additional information on the Internet for each country

and region in Asia and the world on the project website that is not included in the books. The most valuable contribution this book makes may be the fact that it documents for the first time in detail the development of the Internet in Asia as well as some of the global development. For example, some of the events documented for the first time include the International Academic NetWorkshop (IANW) in Book 1 (1980-1990), and the Developing Country Workshop in Book 2 (1991-2000) as well as the activities of many Internet organizations in Asia such as Asia Pacific Coordinating Committee for Intercontinental Research Networking (APCCIRN) which was renamed the Asia Pacific Network Group (APNG) in 1994. Furthermore, the book was written and edited by the Internet pioneers who were engaged in the development of the Internet both in Asia and elsewhere. Book 2

(currently being finalized) will cover Asian Internet development in the second decade (1991-2000), focusing on Internet organizations in Asia. We hope these books and the Asia Internet History Project website, <http://InternetHistory.asia>, will help readers to understand how the Internet developed in Asia, Asia's interactions in that development with other parts of the world, as well as serve as a valuable source for historians of technology as they do further research on the Internet. The Project website itself, being more easily updated than materials in print, will be updated regularly as we obtain additional information to supplement our knowledge of this dynamic social force we call the Internet. We are updating the content in Asia Internet History Project websites; <http://InternetHistory.asia> and <http://www.InternetHistory.asia>. You can also find additional articles on these websites including IANW and CSNET by Landweber in the Appendixes of Book 1 (the 1980s), but they are not available in the hardcopy book due to the publishing right arrangement.

References

- [Chen 2005] Vincent Chen, "Taiwan Internet Development History: Final Report," Taiwan, 2005. [in Chinese]
- [Chon 2013] Kilnam Chon, et al., "A History of Computer Networking and the Internet in Korea," *IEEE Communications Magazine*, vol.51, no.2, Feb. 2013, pp. 10-15. [Clarke 2004] Roger Clarke, *Origins and Nature of the Internet in Australia (Extended ver.)*, Jan. 2004.
- [Heyday 2012] Heyday, *Down to the Wire: The Story of New Zealand's Internet*, 2012. [Ishida 1991] Haruhisa Ishida, *Konpyuta Nettowaku (Computer Network)*, Iwanami Shoten, Tokyo, 1991. [in Japanese]
- [Kleinrock 2010] Leonard Kleinrock, "An Early History of the Internet," *IEEE Communications Magazine*, vol.48, no.8, Aug. 2010, pp. 26-36.
- [Leiner 2003] Bob Leiner, et al., *A Brief History of the Internet*, Internet Society, 2003.
- [Lynch 1993] Daniel C. Lynch and Marshall T. Rose, *Internet System Handbook*, Addison Wesley Professional, 1993.
- [Palasri 1999] Sirin Palasri, et al., *The History of the Internet in Thailand*, University of Oregon Press, 1999.
- [Ramani 2011] Srinivasan Ramani, "Bringing the Internet to India," in *Netchakra: Fifteen Years of the Internet in India: Retrospective and Roadmap*, Madanmohan Rao and Osama Manzar, Eds., Digital Empowerment Foundation, Delhi, Nov. 2011. [WIDE 1999] WIDE, "History of WIDE Project for 10 Years," *Internet Magazine*, Jan. 1999.