Chapter II

Topological Transformations: The Co-Construction of an Open System

Andrew Wenn
HPS University of Melbourne and
Victoria University of Technology

The kind of systems we envisage will be open-ended and incremental – undergoing continual evolution. In an open system it becomes very difficult to determine what objects exist at any point in time.

> Hewitt, C., and de Jong, P. (1984)
> *Open Systems*

... VICNET provides an information "shopping mall" giving ease of access and a convenient user-friendly approach to a wide range of information "shops"—databases and networks, among which customers can browse, inspect, try out, avail themselves of free demonstrations and offers, and, if they choose, purchase from commercial outlets.

> http://www.vicnet.net.au/vicnet/abtvic.html

INTRODUCTION

This chapter describes some aspects of the development of VICNET, an assemblage of computers, cables, modems, people, texts, libraries, buildings, dreams and images. It is a system that is difficult to characterise, it is dynamic both in geographical and ontological scope, size and usage. I have attempted to capture some of its nature through the use of several vignettes that may give the reader a small insight into parts of its being, then using some of the techniques and explanatory and exploratory mechanisms available from the field of science studies such as heterogeneous engineering and Actor Network Theory (ANT), I reveal

some of the ways that VICNET came into existence. Many computer systems are undergoing continual evolution and it is extremely difficult to discern their configuration and what objects have agency at any given point in time; they can be thought of as open systems as described by Hewitt and de Jong (1984). VICNET, an Internet information provider established in 1994 as a joint venture between the State Library of Victoria and Royal Melbourne Institute of Technology, is one such system; it is being used by a large number of people and public libraries, yet simultaneously it is evolving and being shaped by the technology, the users and the environment of which it is part. Consider the system, VICNET as it is called, as a node of a much larger network. I have attempted to unfold this node to reveal the social and technical worlds contained therein, but I also fold the VICNET node in itself so that it becomes part of a much larger sociotechnical system – the Internet. This process of folding I refer to as a topological transformation and it is by studying transformations of this type that may help us understand how open systems come into being and evolve.

In what follows, I provide a brief background to VICNET and the data collection method I used. Next, I discuss some the analytical techniques that are available for those who wish to study the development of technological systems. Following this all-too-brief comment I then present a selection of vignettes that show the varied nature of this socio-technical system. Presenting these then allows me to develop further the idea of social topologies introduced in the section on analytical techniques. In the final section there is some discussion as to why this way of looking at socio-technical systems may be useful.

BACKGROUND

In 1995, the Premier of Victoria officially launched VICNET, Victoria's Net-work. VICNET is a collaborative project between the Royal Melbourne Institute of Technology (RMIT) and the State Library of Victoria (SLV), funded from the Community Support Fund by the State Government of Victoria as part of its commitment, as the Office of the Minister for the Arts (OMA) News Release said, to "restore Victoria's library system and develop its capability to take full advan-tage of modern technology" (OMA, 1994). After many months of negotiations, during which time a pilot scheme was established to test the feasibility of the project, VICNET had finally gone public. In simple terms, VICNET is an informa-tion provider[1] connected to the global Internet, which in a less global sense aims to provide access for all Victorians to the world of electronic information.

The public launch was simply the "coming out" of the results of many months of work during which time: equipment was purchased, installed, configured and tested; staff were hired; documents formatted using HTML (the standard markup language for web documents) and published; and negotiations between a variety of organisations took place. The launch however did not mean that VICNET was complete—far from it —all that it indicated was that it was ready to enter the public arena and start to discharge its responsibilities.

Many readers, when encountering discussions of Internet systems, will think first and foremost of them as collections of computers, cables, network cards,

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