

Chapter 13

On Actors, Networks, Hybrids, Black Boxes and Contesting Programming Languages

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ABSTRACT

In the mid 1990s the programming language Visual Basic (VB) fought hard to enter the undergraduate information systems curriculum at RMIT University, against resistance from two incumbent programming languages. It could not, of course, work alone in this and enlisted the assistance of a human ally known as Fred. The incumbent programming languages, Pick Basic and the Alice machine language simulator, also had their human allies to assist them in resisting the assault of the newcomer. In many ways, it is useful to think of all these programming languages as black boxes made up of hybrid entities containing both human and non-human parts, along with a conglomeration of networks, interactions, and associations. The non-human cannot act alone, but without them, the human parts have nothing to contest.

INTRODUCTION

This paper provides an actor-network account of how Visual Basic (VB) entered the information systems (IS) curriculum at RMIT University in Melbourne in the 1990s. The first question I must address, however, is: Why is something that took place in one university in the 1990s still

relevant? Although the events recounted here took place over 15 years ago, I will argue that similar processes, interactions and associations to those here described are likely to be found in any curriculum innovation and indeed in most situations of change. I will argue, through this example that actor-network theory is able to shed light on the processes involved in change.

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Analysis of the events described in this article does, however, assume that the academics and educational institutions involved here had some choice in determining the details of their curriculum. While in some countries much of the IS curriculum is pre-determined by ‘bodies of knowledge’ and accreditation processes set up by professional associations or otherwise prescribed, this is not the case in Australia where individual universities control their own curricula.

Until the late 1980s and early 1990s Australia had a dual system of tertiary education comprising both Universities and Colleges of Advanced Education. The original idea in setting up this dual system was that the previously established universities would continue to handle the academic work and perform research while the Colleges would handle more vocationally and practically related tertiary teaching. In the late 1980s the Federal Government took a decision to support only one type of tertiary educational institution, and initiated a process of mergers of Colleges and Universities to create a smaller number of ‘new’ or ‘merged’ Universities. By the mid 1990s this process was complete and Australia had a smaller number of larger, and in many cases multi-campus, tertiary institutions, all of which were known as universities.

This story begins at a time when two Colleges of Advanced Education (CAE) in Melbourne: Phillip Institute of Technology (PIT) and RMIT¹ were about to merge to form RMIT University (Tatnall & Davey, 2001; Tatnall, 2007). It will be considered in four parts:

1. Existing programming languages in the IS curriculum at RMIT before the merger
2. Fred’s discovery of Visual Basic at PIT and his first attempts at its use in the IS curriculum
3. Entry of Visual Basic into the IS curriculum at RMIT University
4. How VB continued to maintain its place in the curriculum despite challenges.

RMIT

The institution now known as RMIT University opened its doors to students in June 1887 as the Working Men’s College. Unlike its London namesake which was devoted to “literary subjects, Christian principles and the humanities” (RMIT, 1997b), the Working Men’s College in Melbourne was more concerned with general and technical education, and in 1899 it began to offer full-time diploma courses in Engineering and Applied Science (Murray-Smith & Dare, 1987). During the 1950s, the college developed new courses in Food Technology, Transport Studies, Accountancy, Real Estate and Advertising. In 1960 it adopted the name Royal Melbourne Institute of Technology (RMIT). In 1965 RMIT became a member of the Victorian Institute of Colleges, and the non-tertiary parts of RMIT were reconstituted as RMIT Technical College (RMIT, 1997b), later to become RMIT TAFE (Technical and Further Education) and VET (Vocational Education and Training). After the merger with Phillip Institute in 1992, RMIT was granted formal university status and adopted its current name: RMIT University.

RMIT had always prided itself as being a “technological educator” (RMIT, 1997a), and had worked closely with industry over the years to justify this title indicating, at the time of events described in this paper, that:

“We emphasise education for employment, and our research solves real-world problems. Our courses and research projects are technologically oriented, client focused, creative, innovative and - above all - practical.” (RMIT, 1998)

RMIT has always maintained close ties with industry and commerce and made every effort to keep its courses relevant to the needs of industry. This vocational orientation has been maintained, and the university’s teaching and learning strategy at the time of this story (RMIT, 1995) emphasised

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