Chapter 2.13
Covert End User Development:
A Study of Success

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ABSTRACT

End User Development (EUD) of system applications is typically undertaken by end users for their own, or closely aligned colleagues, business needs. EUD studies have focused on activity that is small scale, is undertaken with management consent and will ultimately be brought into alignment with the organisation's software development strategy. However, due to the increase pace of today's organisations EUD activity increasing takes place without the full knowledge or consent of management, such developments can be defined as covert rather than subversive, they emerge in response to the dynamic environments in which today's organisations operate. This paper reports on a covert EUD project where a wide group of internal and external stakeholders worked collaboratively to drive an organisation's software development strategy. The research highlights the future inevitability of external stakeholders engaging in end user development as, with the emergence of wiki and blog-like environments, the boundaries of organisations' technological artifacts become increasingly hard to define.

INTRODUCTION

In today's environment of rapid business change facilitated by users with increased technical capabilities, there is a tacit understanding that end user development (EUD) activity is inevitable—development tools are more accessible, and end users are now technologically mature and expected to be proactive in their use of technology to enable enactment of their employment roles (Jawahar & Elango, 2001; Nelson & Todd, 1999). As the end user takes control of the development effort and develops systems with little or no input from information technology (IT) specialists so the ultimate level of end user involvement has arrived—the end user is no longer simply consulted, they have assumed the roles of the designer, developer and tester, they are the IT specialist for their software requirement (Cheney, Mann, & Amoroso, 1986; McGill, 2004).

To date, studies have focused on EUD that management is fully aware of and endorses, the assumption is that EUD activity is small scale and that it will ultimately be brought into the organisation's software development strategy.

However, due to the increased pace of today's organisations, EUD activity increasingly takes place without the full knowledge or consent of management. Such developments can be defined as covert rather than subversive, and it can be argued that they emerge in response to the dynamic environments in which today's organisations operate (Nelson & Todd, 1999; Ouellette, 1999; McLean, Kapperlman, & Thompson., 1993).

This paper reports on a field study on the effects of covert EUD activity in a publishing company. The paper aims to enhance our understanding of covert EUD activity using an interpretive approach. We draw on the literature on the social construction of technology (SCOT) and apply this to covert EUD activity identifying a technology "path" (MacKenzie & Wajcman, 1985). The "path" may be born from an individual vision, but the multifaceted nature of technology requires disparate actors to contribute to technology success. Whilst the paper does not purport to offer definitive solutions, the experiences reported suggest valuable lessons for organisations faced with the challenge of managing the dichotomous relationship of encouraging worker proactivity manifested in EUD whilst controlling maverick EUD activity.

LITERATURE REVIEW

Authors have begun to recognise the futility of attempting to align business strategy and technological infrastructures and have acknowledged that technological "drift" is inevitable, (Ciborra et al., 2000; Sauer & Burn, 1997; Ciborra, 1994; Orlikowski, 1996). This process of "drift" is largely assumed to be an overt process, management being aware that it is happening and either attempting realignment (usually futilely) or allowing the technology to develop a certain momentum of its own (for examples see Kanellis & Paul, 2005; Hanseth & Braa, 1998; Rolland & Monteiro, 2002). What is less frequently consid-

ered is the notion of, and rationale for, covert IT implementations that result in "drift," and the literature that does exist is primarily concerned with covert activity with the intention of sabotage (for examples see Gordon, 1996; Conti, 2005; Verton, 2001; Graham, 2004).

Such covert activity, whether for altruistic or subversive purposes, necessitates a degree of improvisation—using current resources to create new forms and order from tools and materials at hand, such an approach has been defined by anthropologists as "bricolage" (Levi-Strauss, 1966). When considering information systems bricolage, "materials at hand" are usually considered to be information technology hardware and software artefacts. However, it has also been suggested that the use of networking with preexisting professional and personal contacts is also a form of "network bricolage" (Mintzberg, 1994; Moorman & Miner, 1998; Baker, Miner, & Eesley, 2003).

RESEARCH DESIGN

To examine covert EUD activity within an organisation from multiple stakeholder perspectives requires an understanding of the social and contextual relationships that influence the organisation; there can be no single explanation of success. Our epistemological assumptions are that no individual account of social reality can be proven correct. Therefore, the research method employed has been interpretivist, with the aim being to understand the perspectives of the various stakeholders and the historical and socially situated contexts in which they reside (Hirschheim, Klein, & Lyytinen, 1996). The opportunity to gain access to a covert end user developer group emerged during the course of a wider longitudinal study that was undertaken by the author and a postgraduate student that examined the effect on various stakeholders of implementing IT solutions in small- to medium-sized enterprises (SMEs). The postgraduate student was employed by one

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