INTRODUCTION

Knowledge management (KM) is an emerging discipline (Ives, Torrey & Gordon, 1997) and characterised by four processes: generation, codification, transfer, and application (Alavi & Leidner, 2001). Completing the loop, knowledge transfer is regarded as a precursor to knowledge creation (Nonaka & Takeuchi, 1995) and thus forms an essential part of the knowledge management process. The understanding of how knowledge is transferred is very important for explaining the evolution and change in institutions, organisations, technology, and economy. However, knowledge transfer is often found to be laborious, time consuming, complicated, and difficult to understand (Huber, 2001; Szulanski, 2000). It has received negligible systematic attention (Huber, 2001; Szulanski, 2000), thus we know little about it (Huber, 2001). However, some literature, such as Davenport and Prusak (1998) and Shariq (1999), has attempted to address knowledge transfer within an organisation, but studies on inter-organisational knowledge transfer are still much neglected.

An emergent view is that it may be beneficial for organisations if more research can be done to help them understand and, thus, to improve their inter-organisational knowledge transfer process. Therefore, this article aims to provide an overview of the inter-organisational knowledge transfer and its related literature and present a proposed inter-organisational knowledge transfer process model based on theoretical and empirical studies.
BACKGROUND: AN OVERVIEW OF KNOWLEDGE TRANSFER AND RELATED LITERATURE

Knowledge Transfer within an Organisation

Knowledge transfer implies that knowledge is transferred from the sender(s) (person, group, team, or organisation) to the recipient(s) (person, group, team, or organisation) (Albino, Garavelli & Schiuma, 1999; Lind & Persborn, 2000). It may happen within an organisation or between organisations. Szulanski (2000) argues that knowledge transfer is a process in which difficulty should be seen as its characteristic feature. This process view may help organisations identify difficulties in the knowledge transfer. He further proposes a process model for intra-organisational knowledge transfer as shown in Figure 1, which contains four stages: initiation, implementation, ramp-up, and integration.

In the initiation stage, the effort aims to find an opportunity to transfer and to decide whether to pursue it. An opportunity to transfer exists as soon as the seed for that transfer is formed, that is, as soon as a gap is found within the organisation, and the knowledge to address the gap is thought to be available. In the implementation stage, following the decision to transfer knowledge, attention shifts to the exchange of information and resources between the source and the recipient, that is, “learning before doing” for the recipient. In the ramp-up stage, the recipient begins using acquired knowledge, and tries to ramp-up to satisfactory performance, that is, “learning by doing” for the recipient. In the integration stage, the recipient takes subsequent follow-through and evaluation efforts to integrate the practice with its other practices (Szulanski, 2000).

The process model demonstrates that knowledge transfer within an organisation is complex and difficult. However, knowledge transfer between organisations is even harder and more complicated. When knowledge is transferred within an organisation, the organisation should try to expand the amount of shared knowledge among its employees to an appropriate level (or to the highest level possible) (Lind & Seigerroth, 2000) so as to develop (or preserve) its competitive advantage. When transferring knowledge between organisations, the organisations have to face “the boundary paradox” (Quintas, Lefrere & Jones, 1997), which involves more complicated factors impinging on the transaction. It also requires the negotiation between participating parties, strict governance mechanisms to regulate the transfer content, and higher loyalty by relevant employees.

Inter-Organisational Knowledge Transfer

Inter-organisational knowledge transfer may have different types. For instance, von Hippel (1987) classifies know-how trading between firms into two types: informal and formal. He defines informal know-how trading as the extensive exchange of proprietary know-how by informal networks in rival (and nonrival) firms. Here is an example, when a firm’s engineer who is responsible for obtaining or developing the know-how his/her firm needs finds that the required know-how is not available in-house or in public sources; the engineer may, through his/her private relationships, seek the needed information from professional counterparts in rival (and nonrival) firms. Formal know-how trading is referred to as official knowledge exchange agreements between firms such as agreements to perform R&D cooperatively or agreements to license or sell proprietary technical knowledge (von Hippel, 1987). von Hippel further argues that the main differences between the informal and formal trading are (1) the decisions to trade or not trade proprietary know-how in the former are made by individual, knowledgeable engineers; no elaborate evaluations of relative