Chapter 3
The Duality of Information Technology Roles:
A Case Study

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ABSTRACT
This investigation documented the interpretation of the Chief Information Officer (CIO) and Chief Technology Officer (CTO) roles on the senior management team of a financial organization. Confidential one-on-one interviews were conducted to document research participant’s interpretations. A qualitative approach was adopted, employing Narrative Inquiry to document these interpretations. Results suggest that the organization benefits in many ways with these two roles as members of the senior management team. The team is more collaborative and is able to approach planning in a proactive manner, while decision making is both efficient and effective because of the immediate consideration for both the affect on business processes and the availability of technological support.

INTRODUCTION
This manuscript presents the results of a project which investigated the interpretation of the senior management committee team regarding the involvement of both the Chief Information Officer (CIO) and Chief Technology Officer (CTO) on the senior management team.

In order to apply information technology strategically corporate information must be considered a valuable resource. Thus, the attitude of senior management must be that managing information strategically should be treated with the same level of interest as managing finances, human resources, operations, and all the other more traditional functions within the organization (Meagher, 2003).

Both of these functions, CIO and CTO are important. What is also important is the alignment or agreement between the CEO and the CIO that the role will involve those aspects associated with a CIO role or a CTO role. Interpretations by the CIO, CTO, and the CEO must be clear and explicit. Oren (1995) suggests that successful managers must ensure they accurately interpret...
the perception of their role. Further, Potter (2003) suggests that CIOs must be able to manage the expectations of their supervisors. With regards to the relationship between the CIO and CEO, Potter (2003) suggests that trust between the two individuals is the most important aspect of the relationship. The same holds true for the CTO. The establishment of trust takes a long time. If the CEO is not familiar with the capabilities of information technology it is incumbent upon the CIO and CTO to provide the necessary education. While this process will go a long way towards providing enlightenment and reduce the probability of the CEO having over-optimistic expectations, it will also contribute to the development of trust between the two individuals.

Peppard (2007) suggests that the role of the CIO may be becoming too big for just one individual. The role is complex due to the necessity of the social capital concepts of bonding and bridging (Adler & Kwon, 2002; Broadbent et al., 1999). Bonding refers to internal relationships within the functional unit. Bridging refers to the external links with individuals and groups. Peppard (2007) suggests that the focus of the CIO should not be on managing IT but rather to manage the delivery of business value through the use of IT. The project described below involves the investigation of a financial organization which has addressed this complexity issue by establishing both the CIO and CTO roles on the senior management team.

The establishment of these roles suggests that organizations are prepared to formally recognize that information is a valuable resource and that it must be managed at a senior level in the organization. The roles must bridge the gap between information technology and the business. The individuals filling these roles must know how information technology can be applied to positively impact the business. Also, however, other members of senior management must become aware of information technology and related business processes; and how this may be applied to their functional areas within the organization. Overall,
in order for information to be successfully regarded as a valuable resource and for it to be employed in a beneficial way there must be alignment between the expectations of senior management and the consequent CIO and CTO roles.

The next section provides some general context for this investigation with reference to other research into the roles of CIOs and CTOs. Then the method employed to conduct this investigation is described. Following this section is a presentation of the results obtained from the interviews. These results are organized by the major themes which emerged from a thorough review of the transcripts. Finally, general conclusions are presented.

LITERATURE REVIEW

The following discussion of literature is organized by themes. To begin context is provided through a presentation of the historical evolution of the CIO role. Upper Echelon Theory (Hambrick & Mason, 1984) is briefly reviewed to serve as an introduction to alignment issues relating to IT and business. Finally, the expanding role of the CIO leads to changes in perspective and the eventual emergence of the CTO role.

In 1986 Business Week (Bock et al., 1986) reported on the emergence of a new breed of manager, the “Chief Information Officer” and their introduction into the senior management team. The CIO was expected to be able to relate to the company’s non-technical managers and those more technical managers of the, then named, data processing department. A very interesting point made by the Business Week article was that the emergence of the CIO role followed the emergence of the CFO role by about twenty years. Also, in the late 1980s it was estimated that approximately one-third of major companies in the United States had identified the necessity for a CIO role and had filled