



Chapter XII

A Model of Internet Commerce Adoption (MICA)

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INTRODUCTION

The commercialisation of the Internet has led to widespread usage of on-line services and being connected to the Internet has become a high priority for both large and small to medium size enterprises (SMEs) (Wai-Pun, Farhoomard and Tunnainen, 1997). Internet usage around the world is doubling every 10 days, with the number of people on the Internet expected to increase ten-fold from 100 million to 1 billion by 2005 (Network Wizards, 1995). The biggest transformation is in the area of e-commerce, which is expected to boom from (US) \$6 billion in 1997 to more than \$300 billion in 2002 (NOIE, 1998b). There is no doubt that it will be an imperative for any business to be part of the global Internet commerce community.

Doing business online provides new opportunities for business, as well as presenting new business opportunities, facilitating new forms of e-commerce across industries in both the business to consumer and business to business context. It also provides new one-one as well as the more traditional one-many customer relationships and greater opportunities for customer-supplier interaction (Rayport and Savioka, 1995). The result will be more open economies and a levelling of opportunities for all businesses. This will enable small companies to overcome the main advantages (such as economies of scale and greater access to resources) of their larger counterparts.

The proliferation of e-commerce and the exponential growth of the Internet as a commercial medium has resulted in the development of a number of frameworks that seek to enable a better understanding of what businesses are doing on the Web.

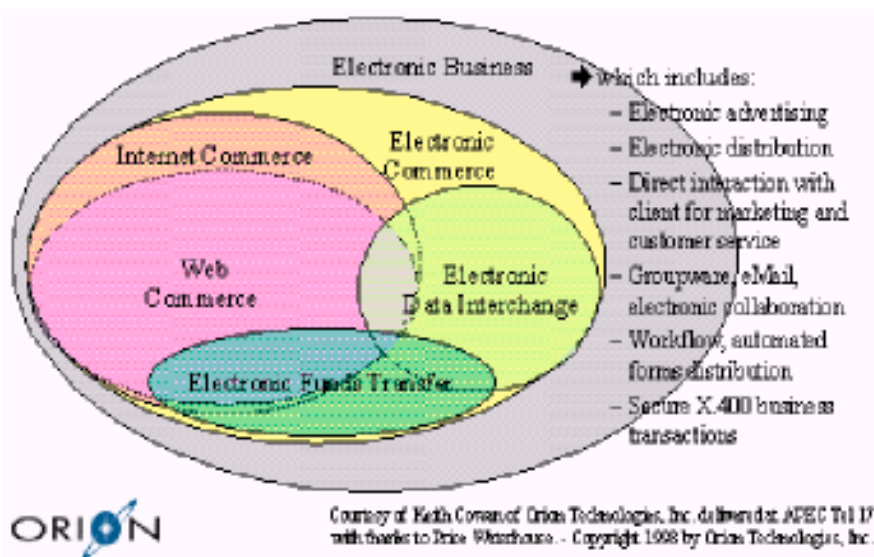
New forms of e-commerce are emerging across industries in both the business-consumer and business-business arenas. In addition there has been numerous studies and surveys undertaken to report on the status of e-commerce within SMEs (Anderson Consulting, 1998; Dowler, 1998; Poon and Jevons, 1997; Poon and Swatman, 1997; Telstra Small Business Index, 1998; Wai-Pun et al., 1997; Wales Information Society, 1998).

However, these studies have failed to address the e-commerce evolution process, that is, the way in which organisations' Web sites develop and evolve over time.

Recent research contends that "business Web site development typically begins simply and evolves over time with the addition of features as the site takes on more functionality and complexity" (Sumner and Klepper, 1998). Past empirical research of commercial web sites supports this notion. The literature reports that firms imitate what others do on the Web, partially in a desire to keep pace with competitors or to gain an advantage over competitors in one's own industry by replicating what firms have done in other industries (Sumner and Klepper, 1998; Timmers 1998). However there is a lack of academic enquiry in regard to the evolutionary process followed by SMEs in the development of commercial web sites. A Model of Internet commerce Adoption (MICA) was designed in an attempt to explain the different stages of e-commerce that SMEs pass through in the process of developing their web sites. MICA is a tool for both locating the position of an industry on the Internet Commerce Road Map and how it has progressed to that location.

In this chapter, the model, MICA is outlined. A discussion of MICA's two functions is provided: one, for identifying the stage of Internet Commerce an organisation or industry sector is at; and two, to describe the evolutionary process of development followed by organisations in reaching that stage. The Metal Fabrication Industry Sector is analysed using MICA and the results of a longitudinal study on this sector are reported. Justification for MICA's viability as a suitable model for such a study is provided and the results compared with other recent studies of SMEs and Internet commerce developments.

Figure 1: What is Internet Commerce?



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