Analysis of the Internet Impact on the Real Estate Industry

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ABSTRACT

Real estate is an information intensive industry where realtors/agents represent information intermediaries between buyers and sellers. This paper analyzes the evolution that the Internet brings to the real estate transactions at different levels. The authors discuss the stages of both traditional and internet based residential real estate transaction. The authors perform UML language modelling and analysis of the transactions in the real estate industry for both traditional and using Internet. The authors also compare their models to the frameworks in the service science area. Then the authors discuss how transactions costs may be reduced and provide competitive advantage for new services.

Keywords: Cost, Internet, Model, Real Estate, Service Science, Transactions, Unified Modeling Language (UML)

1. INTRODUCTION

Since 2008 the real estate industry became a news topic because of the crisis in this industry. Consequently, the real estate companies try to optimize their activities and services in a competitive market. The Internet is an excellent vehicle for creating and capturing value and has a tremendous impact on the industry.

The utilization of the Internet in the real estate industry facilitates the transactions between the different entities and improves the transparency of real estate activities. A large number of real estate consumers have used online sites to search real estate listings and keep track of the real estate market using online resources. We can mention for example these websites: Zillow, Redfin, Realtor, YahooRealEstate, Trulia, Homes and ZipRealty.

Customers use the real estate sites to browse homes for sale, view property photos, virtual tours and videos, research schools and neighborhoods, look-up home values and use mortgage calculators.

Traditionally real estate brokers/agents have offered a full package of services to sellers and buyers, including marketing the seller’s home or assisting the buyer’s search, holding open houses for sellers and showing homes to buyers, preparing offers and assisting in negotiations, and coordinating the steps to close the transaction.

In the traditional real estate industry, the buyer is responsible of the real estate agent

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services charges and the purchase transaction cost. But today, buyers and sellers can use the Internet to list and search for houses, potentially bypassing traditional real-estate agents.

The Internet and World Wide Web can disaggregate the above services. The Internet enables users to search the real estate residential properties, and provides a list of property alternatives. It provides information about real estate properties, their values, and neighborhoods. Internet enables matching and negotiation of buyers and sellers. It may assist with property selection, and lender search. (Robert J. & al., 1999).

After reviewing the literature, we noticed that almost all papers analyzing the impact of the Internet on the real estate industry in USA do not use formal model specifications.

For example, Baen and Guttery (1997) examine the potential impact of the Internet and other information technology on the residential real estate industry. They predicted that increased use of the Internet and information technology would have a dramatic and negative impact on the real estate industry in terms of both income and employment levels.

Muhanna and Wolf (2002) revisited Baen and Guttery’s (1997) examination of technology effect on the real estate industry. They found that in general their most ominous predictions of income and employment loss have not materialized.

Muhanna (2000) shows a dramatic rise in the number of firms using the web channel during the second and third quarter of 1999. Approximately 75% of the real estate firms surveyed had established some sort of presence on the web, with another 13% indicating plans to do so by 2001.

Sawyer et al. (2005) discuss three industry-level changes in the US residential real estate industry due to the uses of information and communication technologies (ICT) over a 10-year period of rapid computerization. They didn’t include formal descriptions.

We referred to this paper to describe the four stages before and after the emergence of the Internet in the real estate industry. And then we use the Unified Modeling Language (UML) to describe the transactions in the real estate industry both traditional and using Internet. (Grady et al., 2000)

On the other hand, Guttery, Baen and Benjamin (2000) express their concerns about broker disintermediation. They consider that if more information about real estate markets is available to the general public through technology, this would signal a transfer of power to consumers that will devalue information and services previously available only through REALTORS®.

In the first part of this work, we will model the real estate traditional transactions and on-line transactions in USA markets using the Unified Modelling Language (UML) [ModelSphere] (Schmuller, 1999).

The utilization of the UML language aims to better illustrate the evolution of the real estate transaction from traditional industry to online industry. No similar work has not been published before.

After reviewing the literature, we notice that the UML is used in the cadastral information system in term of functional, static and dynamics models (Mutambo, 2003; Eleni et al., 2003). A cadastre (also spelled cadaster), using a cadastral survey or cadastral map, is a comprehensive register of the metes-and-bounds real property of a country. In most countries, legal systems have developed around the original administrative systems and use the cadastre to define the dimensions and location of land parcels described in legal documentation. In USA cadastres relates only to land parcels.

Our work relates to the new area of Service Sciences. Service science will combine multiple disciplines to increase our understanding of value co-production in Socio-technical systems. Ultimately, this deeper understanding of service system evolution could lead to more systematic approaches to service innovation. Service innovations have the potential to impact service productivity, service quality, and rates of growth and return for service systems. We will review
Monitoring Services in a Federated Cloud: The RESERVOIR Experience
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Applying Security Policies in Small Business Utilizing Cloud Computing Technologies
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