

# Web Information Extraction for Assessing E-Commerce Website Trustworthiness

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**Abstract** - Trust is an important issue for the success of e-Commerce transactions. Trustworthiness will determine whether a customer will purchase an item or leave the site. There are five trust attributes that have been identified to be placed in the e-Commerce website for it to become a trustworthiness e-Commerce website. The trust attributes are company telephone number, company email address, privacy policy, company address and third party for secure transaction. However, there is no tool available to search these five attributes to establish confidence between e-Commerce parties. The purpose of this study is to review techniques for web information extraction and propose a model to assess website trustworthiness using a web information extraction technique. This paper also suggests future works to validate the proposed model, develop a prototype and test the prototype for assessing e-Commerce website trustworthiness.

**Keywords:** Online, e-Commerce, Trust, Web Information Extraction, Web Mining

## 1 Introduction

Internet is the global network of networks that allows the exchange of information among computer users worldwide. Recent statistics has shown that the explosion of the Internet somehow cause the Internet user to have strong and strict expectations when they go online [2]. The Internet also has become a platform for purchasing, selling, and exchanging of goods and services between organizations, among organizations and consumers and even between consumers. With the development of the Internet, more and more enterprises or businessman are going to regard the Internet as a new channel of advertising and marketing. The people have to trust the virtual environment in order for e-Commerce becomes a success.

Several studies have focused on various aspect of trust to understand how to gain trust from consumer in accomplishing transactions in e-Commerce. These studies include proposing different kinds of models and frameworks [2] and trust attributes that affect trustworthiness in an e-Commerce website [1]. Besides

that, there are also studies about information extraction and how data can be extracted from web documents [4-9]. There are five trust attributes that have been identified that an e-Commerce website should place in their website in order to gain trust from consumers.

However as far as the authors are aware, there are no researches conducted that focuses on how to search trust attributes in e-Commerce websites in order to help consumers to assess the trustworthiness of the website. Thus, in this paper, the authors review the technique for web information extraction and propose a model to assess website trustworthiness by using regular expressions as extraction rules.

## 2 Trust in E-Commerce

### 2.1 Trust Concept

Everyone has their own definition about trust but most of them will have problem to give a specific definition of the concept. Trust means different things to different people, to different roles and in different scenarios. Trust is a fundamental principle of every business relationship. Trust is characterized by uncertainty, vulnerability and dependence. These characteristic are affected in an e-Commerce transaction where customers cannot see the face of the seller and physically examine the product or collect the product after payment has been made. Besides, communication through the Internet sometimes cannot ensure comprehensive information, i.e. insufficient information about the service providers, goods or products as well as published and online users and consumers have to take the risks that can leave them in vulnerable position.

### 2.2 Trust Attributes in E-Commerce Website

Due to the complexity on understanding trust in e-Commerce field study, researchers and academicians are trying to conduct more researches about trust issues in this field. As we know, there are a lot of factors that affect a consumer's trust. Research that has been conducted by Che-Hussin et al. [1] through online questionnaires have identified the most important trust