A Novel Approach of Study of Universal E-Contract Framework for Ecommerce

Biswajit Tripathy, Department of Computer Science and Engineering, Biju Patnaik University of Technology, Rourkela, India
Jibitesh Mishra, Department of CSA, College of Engineering and Technology Bhubaneswar, Bhubaneswar, India

ABSTRACT
This article describes how along with the growth of internet technologies, e-commerce activities are growing exponentially. Electronics contracting is a major part of the e-commerce activity. Contracts between the exchanging sides have been adopted as a solution that guarantees the right of participants and increases mutual trust. Electronic contracts (e-contract) or Trading Partner Agreements (TPA) can be between the stakeholders involved, including the payment authority, buyer and seller. Since 1998, Open Buying on the Internet (OBI) protocols are used for business to business (B2B) internet commerce. XML based frameworks such as BizTalk, commerce XML, eXML, eCo frameworks are increasingly being used to bridge the gap between the buyer and seller. Multiple e-commerce standards need to be integrated in order to have a standard framework. In this article, the authors have studied different frameworks and propose a universal generalized framework for e-contract for e-commerce like B2B, B2C & C2C into consideration.

KEYWORDS

INTRODUCTION
E-commerce facilitates the data exchange in connection to the financial and payment aspects of business in day to day life. Ecommerce has imposed its identity in business scenario around late 1970’s by facilitating online transaction using EDI & EFT. E-commerce has become popular during end of 2000 after introduction of security systems for data and financial transaction, and has encouraged business organisations of America and Europe to launch their business services using World Wide Web early (Nyamaka, 2011). As per the UNCTAD Report(2000), e-commerce is considered to be a novel and cheapest way of doing business. Today, e-commerce has moved from the traditional proprietary networks to more open networks, such as the Internet. Any online buy or sale need to have an underlying contract. A Contract is an agreement with legal force (Nditi, 2004). An agreement can be defined as the promises or a set of promises which is committed by the parties to each other for the consideration (Nyamaka, 2011). Any contract includes three essential elements, e.g., an offer, an acceptance, and consideration, which can be formed when one party or organization accepts an offer of another party or organizations (Gasmelseid, 2007). With recent technological developments

DOI: 10.4018/IJESMA.2018010104

Copyright © 2018, IGI Global. Copying or distributing in print or electronic forms without written permission of IGI Global is prohibited.
a new system of contracting has emerged mainly incorporating writing and/or oral agreements but using electronics as the channel to communicate the contractual arrangements.

Today most business transactions are made electronically by replacing the traditional form of paper-based contract. The traditional contract which was generally based on paper documents are rapidly changing to online contract. The process of online contract not only improves the efficiency, but also requires less paper works and streamline the process. Present legal-system needs to be strengthened to parallelise with developing new technologies. Creation of cyber contracts are entirely based on the electronic-communication (Nyamaka, 2011). The use of ICT makes a remarkable impact in the legal and operational landscape of many businesses worldwide (Shaw, 2000). E-contract is increasing with increased used of internet. (Shah, N.,2016). However, irrespective of the widespread use of electronic contracting, business enterprises have some concern. There are different contract processes for B2B, B2C and C2C. It requires a standard e-contract framework to monitor all the activities related to e-business considering the B2B, B2C and C2C domain. Factors like trust between trading partners is also a matter of concern during transaction. The C2C e-commerce is now increasing due to mobile device based on the factors like usefulness, ease of use, convenience, trust, and security (Leonard, 2010). Though conducting business online is convenient and economy but the challenges still in legal aspect (Tandon, M.,2016). Further the importance of social and technological changes in e-environment put organizations in more competitive environment now (Currás & Limayem, 2010).

In C2C, often the worry of buyers is that they may not receive the commodity if they pay the bill before the commodity is delivered. The Sellers have the worry of not receiving the money, if they deliver the commodities first (Jiang, 2010) and a secure and reliable online e-commerce transaction (Gasmelseid, 2007). In a competitive environment, a small startup like Ariba provide service to smaller organisations during 90’s for e-business (Wang, Yan & Yao, 2010).

In this paper, we have addressed the following:

**RQ1:** Identification of various key aspects based on features and entities of existing framework.

An empirical analysis of the paper contributed by various researchers during 1998 to 2014 is made. We have enlisted different entities and categorised them broadly into four categories.

**RQ2:** Development and validation of the framework based on key aspects and entities of a generalised e-contract.

A valid process for making an e-contract has been defined considering the contexts especially giving more emphasis to accountability and issue related to security. We have made an attempt to generalize a framework for e-contracts taking the domain of e-commerce like B2B, B2C & C2C into consideration. We have statistically tested and analysed to validate our proposed universal framework with the latest appropriate template based model suggested by Radhakrishna & Karlapalem (2013). Our model includes the Internet Service Provider (ISP) as an active stakeholder with accountability of the privacy and security aspects for the e-commerce transaction along with the trading partners.

In Second Section of the paper, the literature-review on architecture, language, standards and framework for various existing e-contract models has been elaborated. In the third section the contextual elements of a contract are classified. Fourth section explains an ideal e-business scenario and e-contract. The fifth section gives a generalized framework for the e-contract, taking the assumptions made in the fourth Section, taking various contract aspects into consideration. In the sixth section, we compare the proposed framework with other existing frameworks for e-contracts. The concluding remarks are given in the last section.
The Impact of Location-Aware Systems in Hospitals: A Tri-Core Perspective
[www.igi-global.com/article/impact-location-aware-systems-hospitals/53227?camid=4v1a](www.igi-global.com/article/impact-location-aware-systems-hospitals/53227?camid=4v1a)

The Management of Services Contracts
[www.igi-global.com/chapter/management-services-contracts/61866?camid=4v1a](www.igi-global.com/chapter/management-services-contracts/61866?camid=4v1a)

e-Government Interoperability Framework in Lithuania: Preconditions and Challenges
[www.igi-global.com/chapter/government-interoperability-framework-lithuania/45783?camid=4v1a](www.igi-global.com/chapter/government-interoperability-framework-lithuania/45783?camid=4v1a)