Record Keeping for Digital Contracts

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**INTRODUCTION**

A challenge in electronic commerce is to keep proper records of business contracts made over the Internet. A common type of contract is a purchase order that a buyer places on a vendor using the Web or a private network. The government has to step in to adjudicate disputes if and when they arise. It is in the public’s interest, therefore, that formal and indisputable methods are developed for recording contracts digitally.

On June 30, 2000, the Electronic Signatures in Global and National Commerce Act (E-sign Act) was passed in USA, and it legalized electronic signatures in contracts. This paved the way for the rapid growth in electronic commerce which is estimated to be $3.2 trillion in the USA (Freeman, 2004). With this sizable business, it is very likely that disputes involving electronic contracts arise.

In this article, we suggest a few models and processes for creating and storing authentic contract documents so that future disputes can be settled more effectively.

**BACKGROUND**

Disputes could be about any aspect of a contract. They could be about the quantity, the price, or the quality of the product or service stated in the contract. In the former case, the dispute may concern the exact wording of a clause in the contract. If the contract is in digital format, then we have to make sure that the contract has not been altered by any of the parties. In a hard copy, alterations can be easily detected, but in a digital format, alterations can be difficult or impossible to detect. One way, almost an ideal way, to avoid alteration is to use digital signatures (Anthony, 2004; Freeman, 2004; Landau, 2000). A digitally signed electronic document cannot be altered or forged. The scheme will work as follows: The buyer sends a digitally signed purchase order, usually with an expiration date, to the seller which declares the buyer’s offer to pay for the goods or services mentioned in the order. When the seller accepts the order, the seller digitally signs and dates the order that is already signed by the buyer. The seller then sends a copy of the doubly signed document to the buyer. Now both parties have a doubly signed unalterable document and there can be no dispute about the content of the contract. This scheme is practicable when both parties are rich enough to possess public keys necessary for digital signatures. In practice, though, the buyers of consumer products such as personal computers may not have public keys and will not be able to sign documents digitally. Yet, they would like to be able to place purchase orders over the Web without fear of fraud. Also, the seller, usually a large corporation, should be able to accept as many orders as possible without fear of dispute.

Another case is a large buyer who purchases many types of products from many small suppliers. In this case too, a third party can keep the records of all contracts so as to minimize disputes.

In this article, we provide a few approaches to generate and store electronic contracts between a customer and the business. These approaches differ in the following aspects: average dollar worth of the sales transaction, likelihood of default or a lawsuit, and the technical infrastructure with which the business operates.

**MAIN FOCUS OF THE ARTICLE**

In this section, we present a few models in which a third party stores the contracts so as to minimize the chances for disputes. The third parties may be certified by some governmental authority, or an international authority, so that credibility of such an entity is established. To avoid the need for additional governmental expenses, existing trade authorities can be entrusted with this task of certifying third parties.
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