ABSTRACT

With the emergence of the Internet, businesses can now be conducted via computers, as well as physical storefronts. E-businesses may employ websites as a primary transaction tool among different parties in the supply chain. The Internet has brought countless advantages to the business world. Nevertheless, disadvantages do exist, especially when trade disputes occur. Since web contents are highly dynamic and continually changing, physical or written evidences may hardly be kept. An archive of web contents, which may be needed to settle the disputes by the parties in conflict, is thus necessary. An existing system such as cybernotary will generate evidence when one requests. However, a few people realize to do so until disputes have already occurred.

This dissertation proposes the development of an Automatic E-evidence Archival System (AEAS). It acts as a trusted third party (TTP), which collects, filters, time-stamps, and records web contents and contexts passing through it interactively. E-evidence can then be retrieved at any event points, thus facilitating case evidence referencing. However, this evidence archival process may easily cause information overload. The proposed data reduction technique, CheckDupZip, is required to manage the voluminous E-evidence data to the manageable amount. Information retrieval may be context-based or content-based. A web page comprises several resources. A filter module filters the files related to the parent web page from the database. Then the related files are reconstructed to the original web page by a reconstruction module.

The experiments are designed to validate the integrity of the AEAS. Moreover, data reduction rate analysis is conducted through the real websites.

The system's primary benefit is its ability to store and furnish relevant evidence for the settlement of e-business disputes in an interactive manner.

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