

Pitney Bowes provides a suite of mailstream software, hardware, services and solutions to help companies manage their flow of mail, documents and packages to improve communication. Pitney Bowes' Internet postage solution for eBay positions the company to become the world's leading provider of Internet postage.

Pitney Bowes provides solutions that enable our clients (for example credit card companies and utilities) to communicate with their customers through electronic and paper channels, for increased effectiveness. An example of such solution is an electronic bill presentment and payment (EBPP) system which is driven by the same data stream used to create the physical communication (paper bills and statements). The end user can select the preferred method of communication, electronic and/or paper. Another example is the browser-based online postage solution that gives eBay customers access to shipping services. This solution provides strong mutual authentication between multiple parties which are involved in a financial transaction resulting in securing the postage and corresponding payment for the shipment of packages.

We believe a usable web authentication scheme should be extensible to the real world environment in which users transact. In particular, identification and authentication mechanisms should extend to 1) the multi-party communications common to many online transactions and 2) the paper-based communication channel upon which many transactions rely and/or default.

Current multi-party transactions are secured using ad-hoc authentication mechanisms indigenous to the individual entities involved. These ad-hoc mechanisms thwart transitive security properties required for today's complex online transactions. Multi-party authentication schemes, or well accepted means of transitive proof of identification and authentication schemes, would be helpful in facilitating complex online transactions.

Our clients have realized synergistic benefits from using a hybrid approach in communicating with their customers (end-users). Examples of current use of the paper channel to augment the security of important electronic transactions include the resetting of PINs of bank cards, voter registration and balloting, etc. Mail-based communications have unique security attributes which can complement the security of the electronic channel. The paper channel has an economic structure and traceability which could discourage wide-spread attempts to perpetrate fraud. The inclusion of paper channels into authentication standards will enhance the reach and applicability of usable authentication mechanisms for the web and reflect the reality of the hybrid world in which we transact.

We are interested in exploring the feasibility and usefulness of standards that extend web-based authentication into the multi-party hybrid world of today's electronic commerce.