E-Mail Authentication Implementation and Testing

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- Who is Equifax
  - Founded in the 1800s as a company that gathered and published information about the paying habits of retail store customers
  - Today, the leading provider of data services and information for consumer-initiated transactions
  - Hosts the largest and most comprehensive network of automated consumer credit information in the U.S. and Canada
  - Over 300,000 customers use us to evaluate risk, protect against identity fraud, and market products and services

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Why was Equifax Interested in E-mail Authentication?

- Equifax is concerned about the future of e-mail, as its usefulness may be declining due to spam
- Equifax has a great interest in the financial sector, and we feel that “phishing” is a real concern for us and our largest customers
- Equifax is a technology company, with strong expertise in identity protection and verification (one of the earliest reputation services)
- Delivery of e-mail to our consumers is of vital importance to our business

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What sort of Implementation will Help the Phishing Problem?

- Phishing is easy because e-mail was designed with no authentication in mind
- Although the era of trust on the Internet is long gone, the mind's first instinct is to trust what the e-mail message tells you!

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What sort of Implementation will Help the Spam Problem?

- Spam is also driven by the ability to send e-mail without authentication
- Widespread adoption by e-mail providers ***and*** sending domains would be required to have a chance at a measurable effect on spam
- This will also provide a useful ***enforcement*** tool for agencies fighting spam

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Methods of Combating Spam

- Until widespread implementation by e-mail providers, unless unauthenticated e-mail is rejected out of hand, authentication is not enough to help spam
- If only authenticated e-mail is allowed to the inbox, useful decisions about e-mail can be put in the hands of the end user
  - Meaningful user-maintained white lists
  - Meaningful user-maintained black lists
  - Automatic folder management
- Privacy concerns should not be minimized

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A Word about User Maintained White Lists

- If users only allow e-mail from senders from whom they expect to receive communication, this will greatly reduce the spam problem
- This is a fundamental change to the way people use e-mail today, as e-mail is open
- More similar to the way people use instant messenger, which is growing at an incredible pace
- Instead of describing it as a more restrictive e-mail, express it as an enhancement to instant messenger and users may be more willing to accept it
- Alternative may be to actually enhance instant messenger (which already has sender authentication), and leave e-mail for bulk (1st class vs. 3rd class postal)

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Methods of Combating Spam

- Reputation services are an important adjunct to sender authentication
- Users will need help in deciding from whom they want to receive commercial e-mail. Reputation services are the best tool
- Some users will rely on their e-mail provider to make the decision for them, possibly because authentication isn't widely implemented or because the authenticated identity of the sender isn't enough to render a decision. E-mail provider use of reputation services can help

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Equifax Begins Trying to Implement Authentication

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Equifax Begins Trying to Implement Authentication

- We began following CallerID
- Started looking at DomainKeys
- SPF immediately becomes the frontrunner for us:
  - Easy implementation
  - Wide Internet community acceptance
  - ***AOL makes statement – required for white list!***
- ***Although SPF is not a solution to spam or phishing problem on its own, implementation becomes necessary to ensure delivery of our transactional and marketing messages***
- Mass confusion surrounding the various proposals: issues include intellectual property, privacy, obstinateness

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Problems with Implementation

- Once we got past the problem of which method(s) to test, numerous implementation issues arose
  - Equifax acts as a transactional mailer, a marketing mailer, and in some cases as an e-mail service provider
  - Which SPF records to publish is not straightforward, especially with PRA requirements looming
  - For e-mail service providers, it is particularly confusing: Who is the responsible address? Who should be on the envelope?
  - As it is right now, SPF1 technical implementation is quite easy and went smoothly

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Implementation / Testing Results

- All transactional and marketing domains now have SPF1 records published
- Gmail successfully recognizes our SPF records
- No recognizable improvement in deliverability or ISP relationships can be attributed to our SPF publishing
- A subscription to a reputation service for our outbound mail was employed, with mixed results
- We could not find an SPF plug-in to Lotus Domino for our corporate e-mail

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Summary

- Implementation of our chosen e-mail authentication method was easy to perform on the sending side, but no benefits will be appreciated until wide scale adoption takes place

- Our selection of the chosen method was not based upon scientific merit, but had to be based upon our business-critical needs (which was based upon the opinion of the largest e-mail providers)

- The current state of flux and confusion surrounding the major proposals are such that it would not be prudent to spend a lot of money to implement

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