

Spam Filter Exercise (Week 2)

Here is a brief cut at the business goals and corresponding architectural design goals (in addition to the functionality described in the original requirements. I understand that this does not deal with all of the real business issues but it should contain enough information to guide a rough decomposition of the architecture (sufficient for feasibility, risk and cost estimation).

Again, I don't expect you to know what to do with all of these goals this early in the course. The point of the exercise is simply to get you to think through the issues. For example, it is fine to develop an architecture base solely on the functional requirements. However, you should write down the design issues that occur to you whether you have an idea how to address them in the architecture or not.

I will provide a thread for discussion. We will do a walkthrough of a couple of your designs next class period.

Product development criteria relating to business goals:

- 1) Ability to detect and block spam better than competing products.
- 2) Consistency with internet standards and protocols
- 3) Ability to apply a variety of spam filtering criteria and update filtering capabilities in a timely manner (i.e., fast enough to be effective, faster than competitors)
- 4) Ability to apply filtering criteria based on information outside of a particular message (i.e., use context information not gathered from the message itself).
- 5) Ability to easily change/update filtering criteria and distribute those changes to the customers
- 6) Interoperability with a variety of mail client programs (e.g., Eudora, Outlook).
- 7) Ability to work in a variety of mail client configurations including server-based, PDA, or laptop. Special emphasis on ability to move into the wireless, handheld device market.
- 8) Time to market: better to get an effective subset of capability out early than miss the market window. However, the use must perceive the first version of the product as quite effective.

Architectural design goals: these follow pretty directly from the business goals.

- 1) Ability to look at and use information from multiple email messages. First, for a single user, then for multiple users on a server.
- 2) Ease of changing or adding filtering algorithms
- 3) Ease of distributing changes to filtering on the fly.
- 4) Interoperability with common mail programs
- 5) Platform independence or configurability to multiple platforms. This may require reduced capability on some platforms.
- 6) Ability to get a usable product to market reasonably quickly. It must be effective enough to make a very noticeable difference in the quantity of spam received but can add bells and whistles later.