WNYLC Fair Hearing Online Resource Center

Client Introduction:

The WNY Law Company is a group of advocates that represent people who apply for food stamps, Medicaid or cash assistance in New York State. The advocates mostly work for non-profit organizations and represent clients without charge. The clients, are quite poor and for the most part, cannot afford to pay for representation at hearings.

Current Situation:

The OTDA has finally put the fair hearings online, and there are now 203,000 cases, which increase by about 10,000 cases a month.

The OTDA will only keep the hearings online for three years, and will start deleting older hearings in October 2013; but the WNYLC will keep all of the hearings on one of their servers because the older hearings are still useful to advocates.

Online resource currently at: http://onlineresources.wnylc.net/FairHearingResources/default.asp

The process:

- A person applies for one or more benefits - food stamps, cash assistance, Medicaid, or for a miscellaneous benefit like rent assistance.

- If the application is successful, there is no hearing and the person receives the benefit.

- If the person is denied, they have a limited time in which to appeal. Most people never appeal, and there is then no hearing.

- If the person is denied and appeals, a hearing is held before an Administrative Law Judge, and a fair hearing decision is issued. Those are the hearings that are placed in the database. The names are redacted, and a unique fair hearing number identifies the hearing.

- There is no other appeal if the person loses. If the person has the resources, or if they can find free representation, they can go to court to challenge the hearing decision.

Problem Statement:

Most of the hearings are worthless to users and advocates because they often contain just a general discussion of the rules for obtaining benefits, and a brief conclusion indicating that the person who applied was not eligible. So a general search of the hearings may take hours to yield a useful hearing.

Objective:

We need to devise techniques to identify useful hearings and note them, and a way to search the large database as well.

It would also be preferred for the advocates to comment on hearings that are particularly helpful.

Our initial requirement gathering yielded the following list:
- Full text search to be introduced
- Search based on fair hearings number, keywords
- Search tag-clouds
- Levels of access 1,2,3
- Refine Registration process
- Email Broadcasts/Subscriptions
- Filter out non-working emails

Some advanced requirements:
- Add restricted sections for different areas of the law
- Discussion forum for level 2 users
- Digest by categories (MA, PA, etc) created by advocates for general advice

Since the WNYLC has an existing interface for fair hearings, the following can be done to improve it further:
- Minimize search page like Google
- search results go with 10/page and customizable
- advanced search options

The WNYLC already has the required hardware (Windows and Linux servers, and basic underlying software), so no other hardware or resources will be required.

The waterfall model seems to be the best software model that we can use, as it is a sequential design process that can be phased into Conception, Initiation, Analysis, Design, Construction, Testing, Production/Implementation and Maintenance phases.

We will be exploiting the advantages of Map-Reduce technology to parse and index huge collection of textual data. We will also use data-intensive computing techniques to perform clustering of data to form groups of related hearings and categorize them as positive/negative.

We will take into account the security of the database by implementing cryptographic techniques. Apart from the security threats, we will create replicated data centers as instruments of disaster recovery.

We do not require and additional hardware. The required hardware and data centers are already in place.

Some of the challenges in processing enormous data revolve around improving efficiency, quick retrieval mechanism, security, replication and concurrency. We will make use of distributed database with robust security to address most of the challenges faced in handling huge data.