Hi Prof. Martin,

I know you have already done some work with MySQL as part of the iSENSE project. Did you ever consider using PostgreSQL instead of MySQL? It offers a number of advantages over MySQL, particularly given the set of requirements in the iSENSE project. It uses standard SQL queries for everything, so there won't be issues with "learning something new" necessarily. Here is a website that details the differences between MySQL and PostgreSQL (and Oracle, not that it really matters in this case):


I know you are busy with your other projects, so I'll just list the main advantages.

1. PostgreSQL is licensed under a BSD-style software license. As I mentioned in class today, MySQL is licensed under the GPL for projects "consistent with the GPL". Although the iSENSE code will be GPL'd anyway, who knows what will happen in the future. The BSD license is much more permissive with regard to commercial projects (or any project not specifically licensed under the GPL).

2. PostgreSQL has a powerful user-defined data type system. It's far superior to MySQL's system, and I think it would provide lots of room for advanced features much further down in the development cycle. For example, custom data types for different classes of experiments.

3. PostgreSQL has its own really powerful stored procedures language (PL/PgSQL), along with the ability to write static methods in Java, C, C++, Python, etc. that are triggered when certain events occur. This is handy for data validation, dynamic updates, etc.

4. Language support -- All the major languages support PostgreSQL. Java is supported via a pure-Java (i.e., cross-platform) JDBC driver. Not really an advantage I guess since MySQL also has that type of support, but it's worth mentioning.

5. Reliability -- PostgreSQL is extremely good at maintaining data integrity across reads and writes. Although MySQL has improved in this area over time, PostgreSQL has really had it from the beginning. In cases where dropping rows could be a very, very bad thing (as is the case with scientific data collection), PostgreSQL is the better choice.

6. PostgreSQL is object-relational, unlike MySQL. This makes it easier and more logical to deal with objects in a database from within your programs.

7. PostgreSQL uses standard SQL queries. Advanced features that I have mentioned won't get in the way if we want to just make a quick "0.1 release" during this semester.

Things to consider anyway... let me know what you think!

-Will