II. Discussion

The system will consist of several modules that together perform the functions required. These modules include a web facing user portal and a native widows administration application both of which manipulate server side data. The user programs will be written on the Microsoft Windows .NET framework with the web portal being a ASP.NET system and the administration application beings a Windows form implemented using C#. All the data will be persisted on in a SQL database.

The decision to use the before mentioned technologies is largely based on the maintainability of the system that they will allow us to produce. As a result of being implemented largely in Microsoft Access the current PRIDE system has become difficult to maintain and creating a clean implementation using modern tools will address this issue. Along with building the system build in a better foundation we will address the issue of maintainability by improving on the administrative functions available to the user. This is where the most noticeable change will be in the system with greatly improved administrative tools. More information will be tracked and then be presentable in automatically generated reports to help administrators make informed decisions for the better of the PRIDE program.

The reimplementation of the general users web portal should on the surface appear as no mere than a re-skinning of the existing system on a web platform. All the functions and forms will remain and allow city employees to follow the same process when creating nominations in the system. Changing as little as possible here is an intentional design decision to minimize any potential learning curve in transitioning to the new system. The nomination forms in their current state are very simple and understood by those who use them so we have agreed that changing them is unnecessary. As a result of the user portal being on a web facing server the users should expect greatly improved performance with response to load times and data request latency. People outside of the city faculties should expect the process of submitting a nomination to be very fast and straight forward which hopefully leads to more people using the system.

All pertinent employee and nomination data will be stored on a SQL server which will be accessible to all of the clients simultaneously. An important function of the database is to be easily unpalatable whenever HR provides the PRIDE administrators with new employee information. This can simply be achieved with a conversion script which is obviously easier to use but also ensures that the employee data on the PRIDE server accurately mirrors that which HR provides. The SQL data schema follows a hierarchical design style where records tend to contain data as pointers to other records in cases where there is data that is common amount sets of records. Such an approach makes it simple to change the data as it exists in a single location.

To bring everything together the administration tool will allow those whom need to perform reporting and maintenance activities more easily than the current system. The intent of this tool is to allow the administrators to interface with the data is a simpler way. They need not access the database directly but rather use forms and automatic functions to complete tasks. The current solution is to manipulate data in a manual way through Microsoft Access which over time as a result of human error tends to introduce unwanted artifacts into the data set and is generally less user friendly than an automatic tool. Data that is manipulated using the administration application can be verified before it is allowed to reach the server which improves the quality of the data. The city has requested several new reports to assist in better managerial decisions and they will be added along with all of the current functions.

These systems together will improve the experience for both the general city employee and the people who oversee the system. With maintainability an ease of use at the core the new system will be of great help to the PRIDE program. The idea of a web and administration tool connecting to a SQL database is hardly unheard of but proper implementation of shut a system will put the PRIDE program is a much better place moving forward.

III. Resources

The time and effort contributed by each member of the group. Our UTD faculty member and the City of Allen PRIDE committee.

IV. Key Roles

TBD