Submission Zero: Project Proposal

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The researchers have noticed an opportunity within a certain cargo handling company that operates in the private sector. The company offers a plethora of services ranging from warehouse storage and management to transportation, as such, there are many variables to manage, most important of which are employee performance and equipment. Currently the company is using a paper based record system to log employee activity and equipment usage but the system isn't managed well (due to the fact that the employees responsible find the task boring and unimportant) and as such the data within it isn't consistent (low quality).

To combat this problem the researchers are postulating a relational database management system (RDBMS). The proposed system will manage equipment accountability (monitor equipment use, damages, etc.) and also record and manage employee performance (monitor their effective work hours). This will be achieved by using RFID tags as well as creating an application that uses a unique identifier for each employee to monitor their activities. All of the data collected will then be stored in the database, where algorithms will manipulate it and report the relevant information to the managing technicians as well as through the app used by the employees.

To implement such a system the researchers plan to collect the existing data the company has on the employees and equipment, and store it in a relational database. The researchers will then create an application that will require employees to create an account, which will be used to individualize each employee. Next, RFID tags will be placed on the equipment through which the onboard sensor information will be relayed to the database. Lastly, algorithms will be devised to monitor equipment use time, equipment condition before and after use and active work hours of employees (how much work is actually done in the 8-hour work day). In cases where work

done is not hands-on but rather digitally, the researchers will implement hooks to the database within the devices.

The overall aims of this system are, firstly, to provide clear and effective communication of information to the managing executives of the company so they can better understand who/what aspects of their workforce is costing them the most money. Secondly, to improve the company's record keeping by employing a more consistent and less error-prone system of data gathering and storage.

The researchers' affiliation with this company is through one of the members being related to a currently contracted employee.