This database is a direct descendant of the database I built while in Estonia (which, unfortunately, I no longer have). After returning from Estonia and finishing my time as an intelligence analyst, I was selected to move to a different unit and become a program manager for intelligence collection. However, before starting the program manager position, I served as the interim executive officer of the unit for almost two months.

The executive officer’s primary duties involve overseeing the maintenance, services, and inventory of the unit’s equipment. This was a significant increase in the amount of equipment that I was responsible for: from two vehicles in my intelligence section to close to 100 vehicles, plus radios, computers, electronic testing equipment, etc. Each week the executive officer receives a stack of paper maintenance reports for each piece of equipment that the unit owns, passes them out to the teams responsible for each piece of equipment, and then ensures that the teams conduct the proper maintenance procedures. The executive officer then collects the completed maintenance reports, verifies they have been filled out correctly, and submits them to the maintenance unit to request appropriate action for equipment with faults/deficiencies.

Needless to say, this is a very time-intensive process with a lot of room for error since the majority of the work is done analog. I also quickly realized that It was difficult to maintain a up-to-date picture of the maintenance history for each piece of equipment - after a fault is fixed for a piece of equipment, the fault is removed from the maintenance unit’s system. To keep track of historical faults the executive officer must either keep stacks of the paper maintenance reports or make scans of the reports and click through numerous PDFs.

In addition to managing maintenance, the executive officer must oversee monthly inventories of equipment and ensure that the teams keep accountability of their equipment by documenting when the equipment is loaned outside of the organization. The only standardized procedures to manage these activities are (or were at the time I was in the role) to use paper forms.

I recognized that I would benefit from using a database system to keep track of all this information - it would be more accurate, standardized, and would allow me to provide better insights to my commander about the status of his/her equipment. Additionally, having a centralized database that I could hand off to the next executive officer would make organizational transitions smoother and increase continuity (a common problem in military units where there is frequently little time to do a transition with your replacement, leading to a start-from-scratch , leading to a start-from-scratch mentality and wasting time re-learning things that the previous person knew).

Unfortunately, by the time I had completed this database my short tenure as interim executive officer was over and my successor chose not to rely on it. But I believe this would have made a big difference if I had stayed in the executive officer position.

\*\*Note: Only a sample of the full equipment list is stored in this database in order to be able to fit the file into GitHub’s repository. The original database with all data, tables, and reports was over 100Mb\*\*