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# *ProSpec*, A Case Study – "A Success Story at Thomson IP Management"

This is how I became a Change Agent during my 10 years as Data Conversion Specialist at ***Thomson IP Management*** (formerly ***Master Data Center***).

**STATUS QUO**: When I first started as a Programmer at Master Data Center, they used antiquated technology to perform data conversions - COBOL and DOS. This was the programming standard at that time, so that is how I learned to do data conversions. I soon saw, however, that the conversion process as-is was inefficient and required some modernization. For instance, translation tables were given to us in Word Perfect For DOS, which had to be manually converted into COBOL tables. Programmers had to start from scratch and create the COBOL tables each time they were modified.

**CHANGE AGENT**: When I talked to management about this situation, they agreed that the processes could use improvement and told me I could build and implement whatever system and tools I needed. To this end, I built a Spec-Writing System in MicroSoft Access called ***ProSpec***. It solved many of the inefficiencies present in the "old methods" and provided for future changes as the company upgraded to newer technologies.

**REPORTING**: The first and most obvious benefit of ***ProSpec*** was that it provided a consistent technical specification to the client. In addition, details could easily be updated within ***ProSpec*** to produce an updated Specification. By producing the Specification directly from the Access database, there was a consistent look-and-feel to the report that did not change from conversion to conversion, as was the case "before".

**TIME SAVINGS**: After the Programmers and Projects Managers had become accustomed to ***ProSpec***, it became obvious by comparison that a lot of time was being saved by using the new System. In one case, a conversion that would have taken 2 months was accomplished in 2 weeks.

**STANDARDIZATION**: One standard that I implemented in the system was to require that all conversions come into ***ProSpec*** in only a few possible file formats. The ***ProSpec*** functions could, for instance, convert a pipe-delimited file directly into an Access table by clicking a single button. Also, an Access table could as easily be exported back to a pipe-delimited format.

**CODE GENERATOR**: One of the most "amazing" features of ***ProSpec*** was that it could generate a conversion program directly from the Specification or sections of code from one line in the Spec. This saved Programmers a lot of time, as it was simple to generate a single line and import it into the conversion program.

**TABLE LOOKUPS**: Another feature was the ability to automatically generate and populate Lookup Tables directly from the input data. For instance, it was common to have a table to convert STATE-NAME into STATE-CODE or COUNTRY-NAME into COUNTRY-CODE. Once completed, these Lookup Tables were exported into a file format that could be used directly by the conversion program. The "old" method was to hard-code the Lookup Table and manually make changes as needed. In the "new" system, a Lookup Table could be updated, exported and the conversion program could be re-run within a few minutes.

**PLANNING FOR THE FUTURE**: The original ***ProSpec*** was written with COBOL and DOS in mind. However, when the company's software was upgraded to use SQL Server, I updated ***ProSpec*** to export SQL Scripts instead of COBOL Code. These SQL scripts imported the input data directly into the SQL tables. One benefit was that each step in the conversion process could be tested individually. Then, once the scripts were fully tested, the entire script could be re-run from the beginning to ensure a "fresh" conversion.

**SUMMARY**: I consider this a success story because I was able to improve the data conversion process during my time there. There were many ups and downs during the 10 years, but the high point is that I got to use my creativity and see my new system was being used every day for the improvement of the company. It was interesting to develop the user interfaces, forms, reports and database structures that were used behind-the-scenes. Also, I had quite a bit of freedom in designing the Best Practices and putting them into place for the system.