

BTech Project Summary

Improvements to tools and processes in the creation of Information Tools Ltd (ITL) databases

Introduction

The ADL language is the primary language of the data set-up team of the ITL Company. ADL program is the only program that can create the ITL inverse formatted databases for end-users.

Motivation

The Language has some issues:

- Difficult for machine generated parsers to parse
- Training process of ADL language to new staff is hard
- Some detailed issues with the language design itself

Since the ADL program is a fundamental part of the Information Tools business model, ITL seeks to develop better, more industry standard ways in which the setup task could be done. Through this ITL hopes to improve not only the ADL program itself, but also the production task in which they process data and build databases for customer analysis.

Implementation

- ADL language Documentation (in BNF format)
- Testing program (All written using C# as programming language)
 1. XML to X-Files converter: Gains better understanding of X-files structure
 2. XML to ADL converter: integrated into the main application in later stage
 3. New data file parser attempt: tested availability of alternative way of processing data. Proved ADL has great advantage in processing speed.
- Main application:
ADL_CS Editor, a visual ADL editor that consists of almost all the features in the original ADL language. User generate and edit XML formatted ADL script files in this editor. Use the XML to ADL converter to obtain the ADL file in traditional ADL language syntax, then run the traditional ADL file against data file using ADL program.

Conclusion

Formalized and regulated the traditional ADL language by formatting it in XML file. Properties are divided into two levels: file level and axis level. They are listed separately in fixed order. Easy to view or modify. Even the XML file generated by the editor gives a clear indication of the file structure.

The new set of applications could not meet all the requirements. Some of the ADL unusual or complex functions were not built into the application due to various limitations. Some of the functions are included but not dealt with in details.

This project explored the possibilities of alternative ways of building the ITL branded database (x-files), and provided a good knowledge base for further improvement projects