

# CASE STUDIES

## Aspose.Cells Case Study



Gjensidige Insurance Denmark

Using Aspose.Cells to write data from SAS to Excel.

Bjarke Felbo, 24th of August 2012

## About Gjensidige Insurance

Gjensidige Insurance is a multinational insurance company, which primarily is located in Scandinavia. The team of Analysis Denmark consists of 12 members, who examine and manipulate huge amounts of data. This data is turned into easily understandable graphs and sheets using Excel sheets or other similar tools. Many leaders throughout the company then examine this material and use it to better lead the company in the right direction.

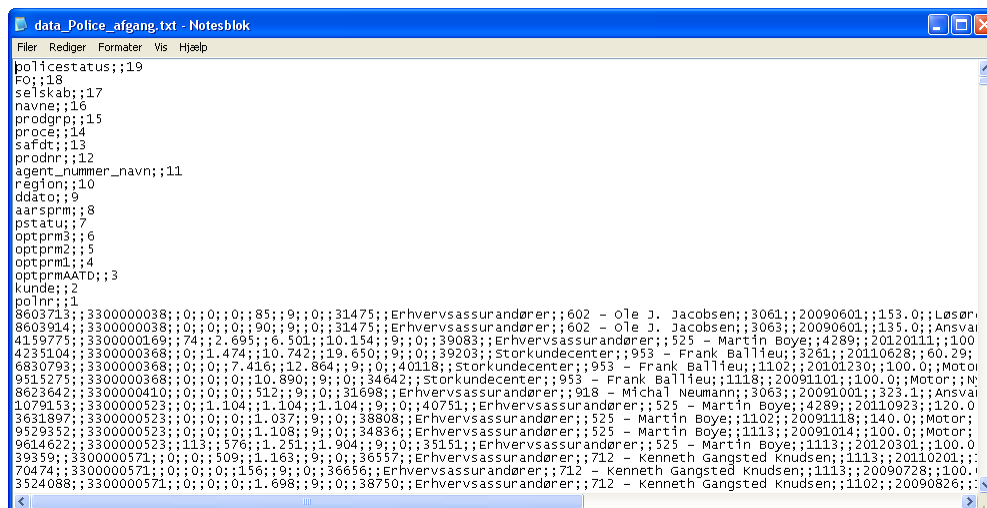
## Problem

We are using a SAS server for processing our SAS applications and we needed it to output our data to Excel in a more advanced way than the SAS software allowed us to do. Furthermore, we needed it to be able to do so efficiently and without errors. We were a bit puzzled by which solution would be the best, but a simple C# application and a flat data file (.txt) seemed to work out quite well.

## Solution

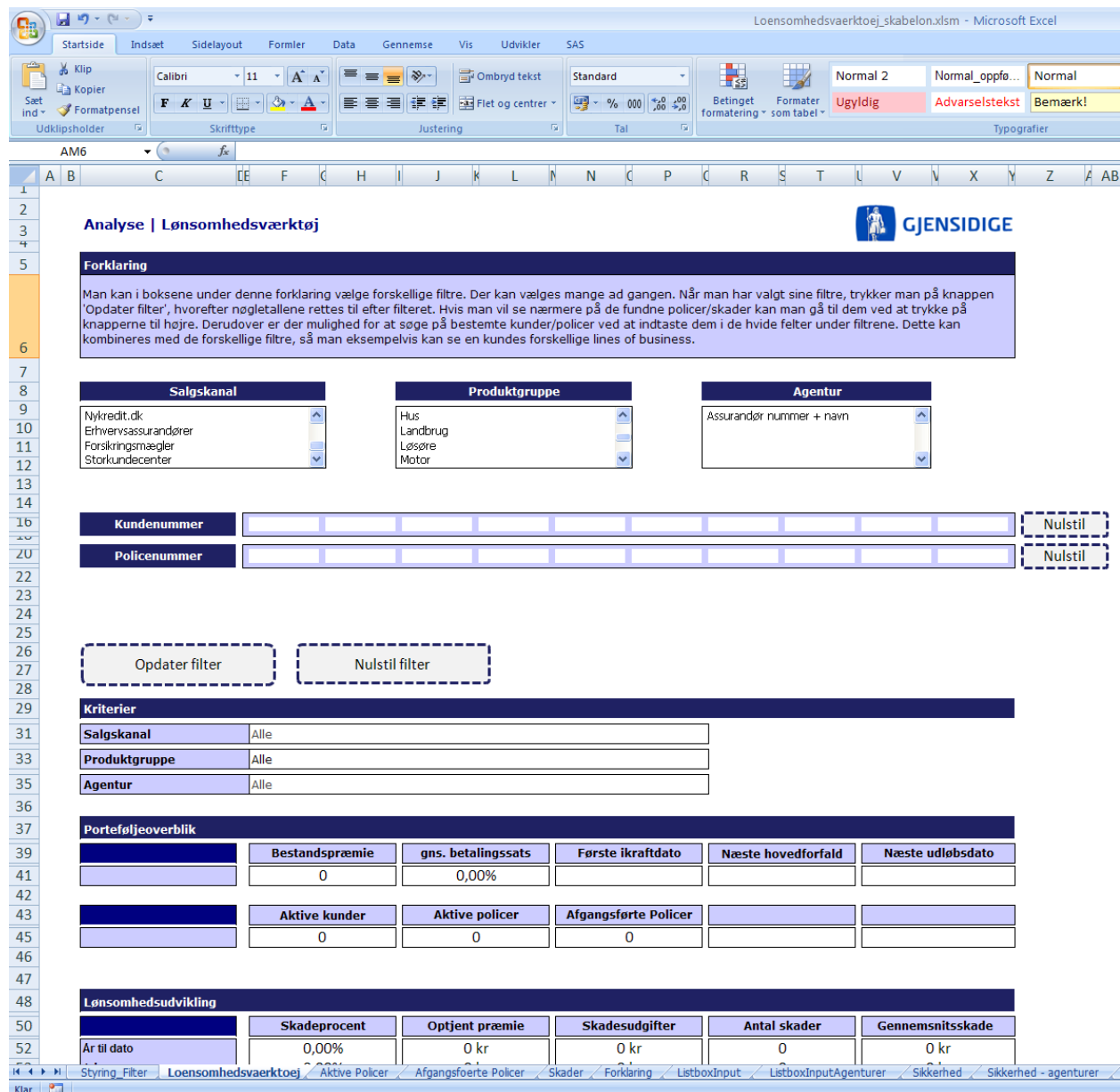
We chose Aspose.Cells as it seemed as a professional product that simply worked without any issues. The input is SAS data that is written to a flat .txt file by SAS, which is then read by our C# .NET application.

Below is an example of such a text file:



```
data_Police_afgang.txt - Notesblok
Filer Rediger Formater Vis Hjælp
policestatus;19
Fo;18
selskab;17
navne;16
prodgrp;15
proce;14
safdt;13
prodnr;12
agentnummer_navn;11
region;10
ddato;9
aarspr;8
pstatu;7
optprmi;6
optprmi;5
optprmi;4
optprmiAATD;3
kunde;2
polnr;1
8603711; 3300000038; 0; 0; 0; 85; 9; 0; 31475; Erhvervsassurandører; 602 - Ole J. Jacobsen; 3061; 20090601; 153.0; Leser
8603914; 3300000038; 0; 0; 0; 90; 9; 0; 31475; Erhvervsassurandører; 602 - Ole J. Jacobsen; 3063; 20090601; 135.0; Ansvai
4159775; 3300000169; 74; 2.695; 6.501; 10.154; 9; 0; 39083; Erhvervsassurandører; 525 - Martin Boye; 4289; 20120111; 100
4235104; 3300000368; 0; 1.474; 10.742; 19.650; 9; 0; 39203; Storkundecenter; 953 - Frank Ballieu; 3261; 20110628; 60.29;
6830793; 3300000368; 0; 0; 7.416; 12.864; 9; 0; 40118; Storkundecenter; 953 - Frank Ballieu; 1102; 20101230; 100.0; Motor
9515275; 3300000368; 0; 0; 0; 10.890; 9; 0; 34642; Storkundecenter; 953 - Frank Ballieu; 1118; 20091101; 100.0; Motor; N
8623642; 3300000410; 0; 0; 0; 512; 9; 0; 31698; Erhvervsassurandører; 918 - Michal Neumann; 3063; 20091001; 323.1; Ansvai
1079153; 3300000523; 0; 1.104; 1.104; 1.104; 9; 0; 40751; Erhvervsassurandører; 525 - Martin Boye; 4289; 20110923; 120.0
3631897; 3300000523; 0; 0; 0; 1.037; 9; 0; 38808; Erhvervsassurandører; 525 - Martin Boye; 1102; 20091118; 140.0; Motor;
9529352; 3300000523; 0; 0; 0; 1.108; 9; 0; 34836; Erhvervsassurandører; 525 - Martin Boye; 1113; 20091014; 100.0; Motor;
9614622; 3300000523; 113; 578; 1.251; 1.904; 9; 0; 35151; Erhvervsassurandører; 525 - Martin Boye; 1113; 20120301; 100.0
39359; 3300000571; 0; 0; 0; 509; 1.163; 9; 0; 36957; Erhvervsassurandører; 712 - Kenneth Gangsted Knudsen; 1113; 20110201;
70474; 3300000571; 0; 0; 0; 156; 9; 0; 36656; Erhvervsassurandører; 712 - Kenneth Gangsted Knudsen; 1113; 20090728; 100.0
3524088; 3300000571; 0; 0; 0; 1.698; 9; 0; 38750; Erhvervsassurandører; 712 - Kenneth Gangsted Knudsen; 1102; 20090826; 100.0
```

This data is then inserted into an Excel template using our .NET application and Aspose.Cells. The issue concerning the right Excel solution for us was whether it could support our highly advanced Excel sheets with plenty of macros etc.



The screenshot shows an Excel spreadsheet titled 'Loensomhedsværktøj\_skabelon.xlsm - Microsoft Excel'. The interface is divided into several sections:

- Header:** 'Analyse | Lønsomhedsværktøj' and the GJENSIDIGE logo.
- Forklaring:** A text box explaining the tool's functionality, mentioning filters and data selection.
- Filters:** Three dropdown menus for 'Salgskanal' (Nykredit.dk, Erhvervsassurandører, Forsikringsmægler, Storkundecenter), 'Produktgruppe' (Hus, Landbrug, Løsgøre, Motor), and 'Agentur' (Assurandør nummer + navn).
- Input Fields:** Two rows of input fields for 'Kundenummer' and 'Policenummer', each with a 'Nulstil' (Reset) button.
- Buttons:** 'Opdater filter' (Update filter) and 'Nulstil filter' (Reset filter) buttons.
- Kriterier:** A section with three dropdown menus for 'Salgskanal', 'Produktgruppe', and 'Agentur', all set to 'Alle'.
- Porteføljeoverblik:** A table showing portfolio overview with columns for 'Bestandspræmie', 'gns. betalingsssats', 'Første ikraftdato', 'Næste hovedforfald', and 'Næste udløbsdato'.
- Lønsomhedsudvikling:** A table showing profitability development with columns for 'Skadeprocent', 'Optjent præmie', 'Skadesudgifter', 'Antal skader', and 'Gennemsnitsskade'.

The bottom of the spreadsheet shows a row of tabs: 'Styring\_Filter', 'Loensomhedsværktøj', 'Aktive Policer', 'Afgangsførte Policer', 'Skader', 'Forklaring', 'ListboxInput', 'ListboxInputAgenturer', 'Sikkerhed', and 'Sikkerhed - agenturer'.

Figure 1: An example of one of our filtering solutions in Excel that we needed Aspose.Cells to handle.

We also needed it to not cause any issues with our SAS applications if any errors were encountered. Another important criterion was the ability to handle Excel sheets with a high amount of data without using a great deal of the server's memory. Instead of having the usual approach of opening an entire Excel workbook, insert data into all worksheets and then save it, we chose to insert data into only one worksheet at a time. While this made performance worse, it helped prevent errors. After all, stability is the most important criteria for us.

## Experience

**Finding a solution:** When we first contacted Aspose we had been using Bytescout Spreadsheet SDK for 10 months. However, its performance was not good enough for us seeing as the output of a large Excel file could almost cause our server to halt. When using Bytescout Spreadsheet SDK with one of our larger outputs with more than 100.000 rows and 20 columns the memory usage would climb until the program crashed at around 1,5-2 gigabytes of allocated memory. After the switch to Aspose.Cells the memory for writing the same amount of data would climb steadily to around 700 megabytes at which point it would stop.

**Implementation:** The transition from Bytescout Spreadsheet SDK to Aspose.Cells was extremely easy and took less than a day. There were no substantial challenges with using Aspose.Cells. We were worried concerning our large amounts of data, macros and formatting, but Aspose.Cells handled all of those without any issues at all.

**Outcome:** The outcome is that we are now able to let our server handle all of our needs concerning the output of data from SAS to Excel and we have yet to encounter any errors while using Aspose.Cells.

## Next Steps

We do not currently have any plans to take our solution further. However, we are thinking of ways to use Aspose's products in order to directly output our data into other kinds of files such as PDF documents.

## Summary

Aspose.Cells easily handled even large Excel sheets that would end up and did so extremely fast. Additionally, it handled all of our macros without any issues at all. We would therefore definitely recommend Aspose seeing as their product has handled all of our needs seamlessly without any real effort from our side.