First 50 years of Survo:
from a statistical program to an interactive environment for data processing

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CARME 2011 | Rennes, France | February 8–11, 2011
Outline of the presentation

Only **four slides** will follow – **very briefly:**

- **What is Survo?**
- **Highlights of Survo**
- **Vision of future: Muste**
- **Demonstration with Survo and Muste**

(+ selected references from www.survo.fi/publications)

More details in our Abstract and on the website of **Survo:**
www.survo.fi/english

The **point** of my presentation is the **demonstration.**
Before that, some facts about **Survo** and **Muste**...
What is Survo?

**Survo** is an interactive computing environment for creative processing of text and numerical data.

Author: **Seppo Mustonen**, Prof. of Statistics, Univ of Helsinki

Various generations of **Survo** during its first **50 years**:

- Initial experiments in 1962
- SURVO 66 (Elliott 803, autocode)
- SURVO 76 (Wang 2200, Basic language)
- **Editorial interface 1979–**
- SURVO 84 (Wang PC, Basic language)
- SURVO 84C (IBM PC, DOS, C language)
- SURVO 98 (IBM PC 386+, 32 bit extended DOS, C language)
- **SURVO MM** *(Windows platforms, Win32 API, C language)*

Development of **SURVO MM** will continue by S.Mustonen et al.
Highlights of Survo

During its various generations of development, Survo has become a general computing environment with several unique functions.

- Easy way of **documenting** and **repeating** the steps of work: **editorial interface** (working with a text editor – since 1979) *(cf. concept of ”compendium” by Robert Gentleman, 2004)*
- Handy tools for working with **tables** and **matrices**
- Fast and efficient methods for analysing **large data sets**
- High-quality **visualisation** using PostScript graphics
- Multiple methods for various **computations** and **calculations**

For animated demos describing some of the highlights, see [www.survo.fi/demos](http://www.survo.fi/demos)
Vision of future: Muste

Muste is an open-source project initiated by Reijo Sund (2009):
- Integrate Survo with R project for statistical computing
- In a way, the aim is to combine ”the best of both worlds”
- The project is fully supported by S.Mustonen: no need to start from SCRATCH (use ready C code!)
- Technically implemented as one large R package
- Multiple platforms of R offer multiple possibilities

Muste will offer several potential benefits:
- Many unique ideas of Survo more widely available
- Functions of Survo accessible for R users
- Functions of R accessible for Survo users
- Interesting prospects for research and development
Demonstration with Survo and Muste

For the rest of my 17 minutes I would like to demonstrate:

1. **Examples of working with Survo**
   - making small calculations, *e.g.*, $2+3=?$
   - processing tables, *very interactively*
   - visualising statistical data, *by CA and MCA*
   - working with matrices, *with the interpreter*

2. **Preliminary views of Muste**
   - editorial interface in **R**: *how does it look like?*
   - co-operation with **R**: *possibilities? challenges?*
Selected references from www.survo.fi/publications


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