Release notes µ-ARGUS version 5.1.1 build 1

Peter-Paul de Wolf and Anco hundepool
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1 Introduction

µ-ARGUS is a software package that has been developed by Statistics Netherlands. The aim of µ-ARGUS is to protect microdata to safeguard the privacy of the underlying respondents. Although Statistics Netherlands (Anco Hundepool and Peter-Paul de Wolf) is the main developer, contributions have been made by Josep Domingo-Ferrer (Universitat Rovira i Virgili). Also without the financial support by Eurostat and the EU via various projects µ -ARGUS would not have been possible. The need to extent the development team and the retirement of Anco Hundepool have led to the decision to make µ-ARGUS an Open Source project.

We expect that in this way the future of µ-ARGUS is secured in the Open Source community also after the retirement of Anco. Also the financial European support is only to be expected when µ -ARGUS is Open Source. Eurostat has initiated the project to support this transition. As a side effect we also want to make µ -ARGUS platform independent. This version of µ -ARGUS will run on the familiar Windows platform, but also on LINUX.

The 5.1.0 version of µ -ARGUS is the outcome of this project, and is described in this document.

2 Structure

The aim of the project was to rewrite µ-ARGUS and make it an Open Source project. The old version of µ-ARGUS is based on a Visual Basic user interface and C/C++ dlls for the computational hard parts.

In the new version of µ-ARGUS, in principle the structure remained the same, but we had to replace the Windows dependent Visual Studio (VB and C++) parts by Open solutions. So we have chosen Java for building the User interface and an Open C++ compiler for building the C++ libraries.

3 Functionality

When using this beta version of µ-ARGUS we assume that you are familiar with the old µ-ARGUS. The functionality of the new µ-ARGUS will be the same as the old µ-ARGUS.

4 The GUI

As this version has been built with Java, the look and feel will be a bit different, but the structure is the same as with the old µ-ARGUS. The only relevant difference between the two versions is how context sensitive help is implemented. In the old version, html help files were used, while in the new version, the pdf manual is used.

5 Installation

In this chapter, requirements and instructions for the installation of the pre-compiled binaries (both for Windows and for Linux) are described.

5.1 System requirements

To run µ-ARGUS you need to have Java 1.7 (or later) installed. Note that both jdk1.7.0 and jre7 are versions of Java 1.7.

This version is available as a Windows executable and as a Linux package. The Windows version was tested on Windows 7 (both on 32 bit and 64 OS versions), the Linux version was tested on Ubuntu 14.04 (also both on 32 bit and 64 bit OS versions). Please note that the precompiled binaries were built on a 32 bit machine; this means that a 32 bits installation of Java is needed when you want to use the precompiled binaries (for both the Windows and the Linux build). NB: It is possible to have a 32 bit and a 64 bit version of Java installed on the same machine.

To use the functionality of Synthetic Data, R statistics is required to be installed. The PATH environment variable should contain the path to the bin directory of R (when installing R with administrator rights, this will be set automatically). Also, the R package which is used for Synthetic data (hybridIPSO) needs to be installed. NB: The hybridIPSO R package that is shipped with µ-ARGUS was compiled using R 3.0, so in order to use this package, you need to have R 3.0 or higher installed. If you are using a 2.x version of R and you need support, please contact us.

The functionality to read from and write to SPSS files is only available when a licensed copy of SPSS is installed (version 21 or higher). Note that the functionality has been tested with SPSS 22.

5.2 Installation and configuration instructions

To install and configure µ-ARGUS, please follow these steps:

- Unzip the µ-ARGUS installation zip package into a directory where you have read, write and execute permission.
- If you want to use the SPSS functionality, you may have to manually edit the MuArgusOS.sh (for Linux):
    - If the installation folder of your SPSS is different from */opt/IBM/SPSS/Statistics/bin*, you should change this text in the last line of the MuArgusOS.sh file to the SPSS installation path on your system.
- To run µ-ARGUS, execute the MuArgus.exe file (on Windows) or the MuArgusOS.sh file (on Linux, using bash).

NB: Experienced users may know that the old µ-ARGUS stores user settings in the registry. The new µ -ARGUS also stores these settings, but the values are not copied from the previous (old) µ-ARGUS-installation.

5.3 License information

Apart from SPSS, which is optional for the use of µ-ARGUS, no commercial licenses are needed when using µ-ARGUS. For an overview of the Open Source licenses of components that are used by µ-ARGUS, see the *license_info.txt* file.

6 Known issues

The following issues of the 5.1.0 version of µ-ARGUS are currently known:

- When using SPSS input file, the labels of the codes from codelist files used by global recoding are not written to the SPSS file with protected data.

7 Feedback

Any feedback on this Open Source version is highly appreciated. Please send your remarks to the general mailbox argus@cbs.nl or to Peter-Paul de Wolf at pp.dewolf@cbs.nl

We are especially interested in

- Bug reports
- Workarounds for bugs/strange behavior
- Wishes for future development

Your feedback will be used to improve the Open Source version of µ-ARGUS. It may lead either to bug-fixes in the next release or your remarks will be added to a "wish-list", containing suggestions for improvements after the end of the current project, when the software is released to the Open Source community.

Whenever reporting bugs, please provide a working example, so we can more easily try to replay your issue.

Note that we will try to update the casc-website (http://neon.vb.cbs.nl/casc/mu.htm) with your feedback, so others can profit from your remarks as well (especially the workarounds).

8 Version history

The following changes have been made with respect to µ-ARGUS 5.1.0:

- Availability of SPSS is now detected runtime

The following changes have been made with respect to µ-ARGUS 5.0.1 (beta):

- Support for SPSS functionality in Linux version has been added;
- The viewer for (context sensitive) help has been changed, and now also works in the Linux version;
- Support for Synthetic Data using an R script has been added
- The format of metadata files generated from SPSS files has been changed to the way it was in the old µ-ARGUS

The following bugs in the µ-ARGUS 5.0.1 (beta) version have been fixed

- Improper sizing of some windows in the Linux version;
- Error reading float variables in the Linux version;

- Wrong filename is shown when opening then Open Microdata window after using SPSS functionality;
- Error in reading SPSS metadata-file generated with the old Argus;
- Under certain conditions a “SetTable” error in Calculate Tables;
- Problem with Missing values having smaller length;
- Calculate tables crashed when using many tables (approximately 25000 or more tables);
- Problems with display of codes in main or PRAM window after using global recoding;
- Problems with ordinal data when using Modify Numerical Variables