



ASAP2 Toolkit – Getting started

2022

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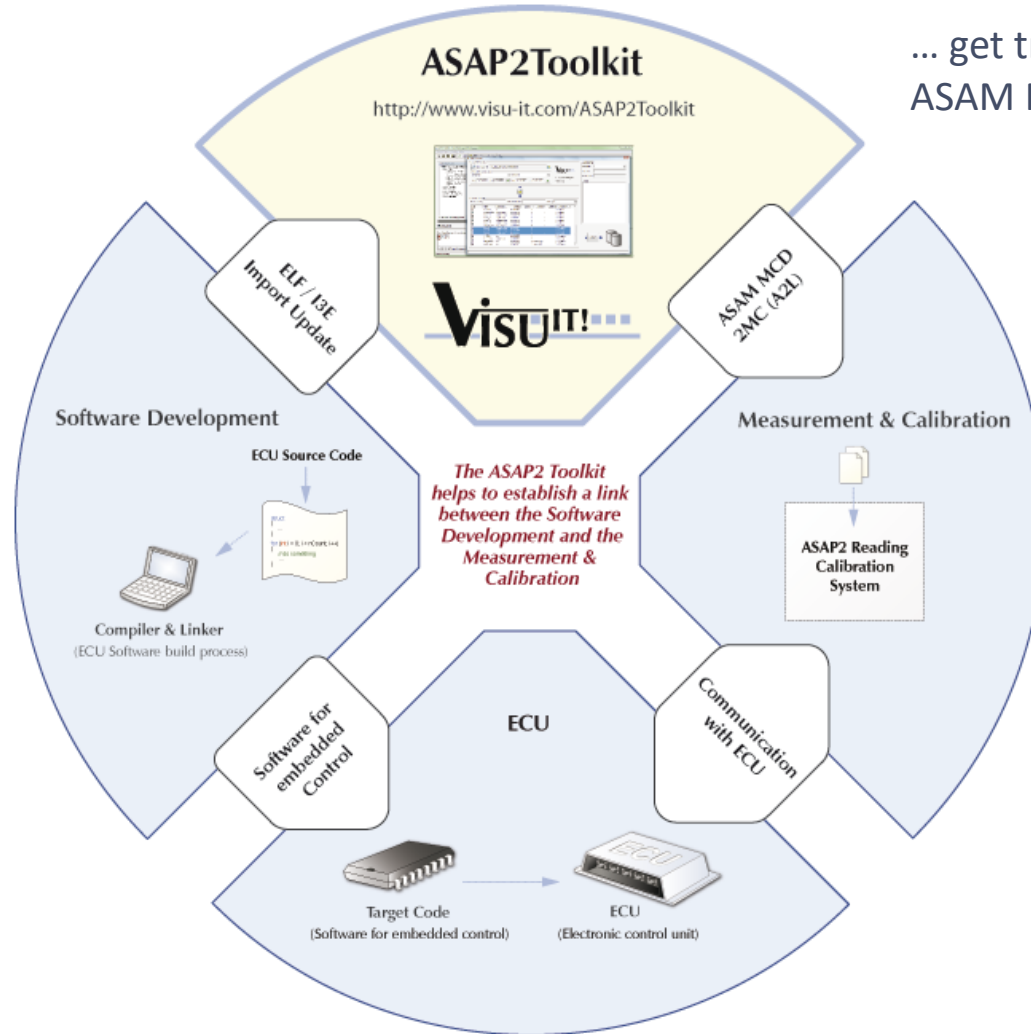


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ASAP2 Toolkit – Getting started

Overview

ECU variables from the source code...



... get transferred into ASAM MCD 2MC (*.a2l) ...

... and get used by calibration systems like INCA

ASAP2 Toolkit – Getting started

Use cases

The ASAP2Toolkit supports the following main use cases:

- ✓ Use case 1: Read ELF/I3E File & generate A2L
- ✓ Use case 2: Read A2L & generate A2L
- ✓ Use case 3: Edit data in “ASAP2Edit” & generate A2L

Note:

- Of course, the use cases can be combined and mixed according to customer needs
- Further use cases like „Integration of A2L files“ are not within the scope of this document



**Use case 1:
Read ELF/I3E File & generate A2L**

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Read ELF/I3E File & generate A2L

A2LField of application:

If no further information/documentation of the data definitions – except the source code – is available.

Procedure:

Compile the source code in 'debug' mode and “convert” the resulting ELF/I3E file with the ASAP2Toolkit into an ASAP2 file

Steps:

1. [Create a new project](#)
2. [Import ELF/I3E File](#)
3. [Update the addresses](#)
4. [Create final ASAP2 file](#)



Use case 2:
Read A2L & generate A2L

ASAP2 Toolkit – Getting started

Read A2L & generate A2L

A2LField of application:

Use the “Read A2L” functionality when an (older or previous) ASAP2 file already exists.

Procedure:

Import the ASAP2 file and extend/modify/update its data declarations. Automatically update the physical addresses of the definitions.

Steps:

1. [Create a new project](#)
2. [Import ASAP2 file](#) (maybe more than one)
3. [Update the addresses](#)
4. [Create final ASAP2 file](#)

Use case 3:
Edit data in “ASAP2Edit” & generate A2L

ASAP2 Toolkit – Getting started

Edit data in “ASAP2Edit” & generate A2L

A2LField of application:

Enter additional data declarations. Modify/change existing data declarations. Change system settings, etc.

Procedure:

Start “ASAP2Edit” and browse the definitions you want to modify. Create new definitions.

Steps:

1. [Create a new project](#)
2. [Edit data declarations](#)
3. [Update the addresses](#)
4. [Create final ASAP2 file](#)



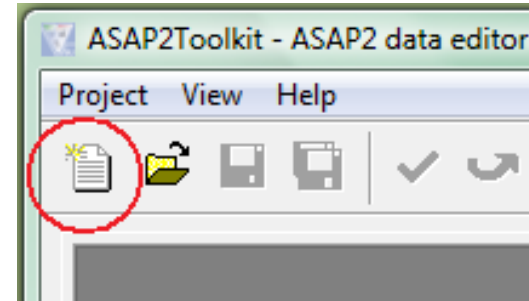
How to...

ASAP2 Toolkit – How to...

Create a new project

Steps:

1. Start the “ASAP2Toolkit” application
2. Click on the “Create new project” button
3. Enter the project name and the database directory

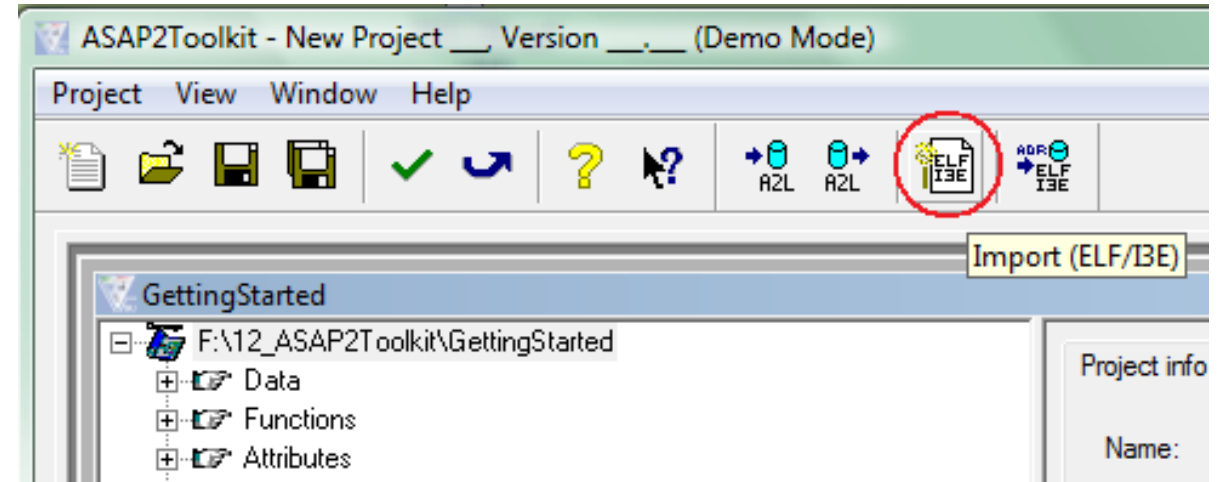


ASAP2 Toolkit – How to...

Import an ELF/I3E File (Part 1 | 3)

Steps:

Click on the “ELF/I3E File Wizard” button:



ASAP2 Toolkit – How to...

Import an ELF/I3E File (Part 2 | 3)

The ELF/I3E wizard appears

The screenshot shows the 'ELF / I3E - Wizard' dialog box. It is divided into several sections:

- Import and Locator Files Settings:** Contains a file path field (1) and a folder selection icon (2). Below it are memory layout settings for ROM and RAM with address ranges and checkmarks.
- Overall settings:** Includes dropdowns for Conversion, Phys Unit, and Format String.
- Function:** A tree view showing a hierarchy of functions: mainFunction, subFunction1, subFunction2, and misc.
- Labels in Locator File:** Includes search pattern, hide/skip labels, and type filters.
- Table:** A table listing memory labels with columns for Type, Name, DataType, Address, Size of DT, Dimension, Overall size, and Compilation path.
- Bottom:** An 'Import' button (8) and a graphic of two cylinders.

Type	Name	DataType (...)	Address	Size of DT	Dimension	Overall size	Compilation...
PAR	cal_beg_ad...	long unsign...	0x10010BB0	4	-	0	t_user.c
PAR	nr_cal_area	unsigned int	0x10010BC4	4	-	0	t_user.c
PAR	cal_chk	unsigned int	0x10010BB4	4	-	0	t_user.c
PAR	cal_end_ad...	long unsign...	0x10010BC0	4	-	0	t_user.c
PAR	cal_end_ad...	long unsign...	0x10010BB8	4	-	0	t_user.c
PAR	cal_end_ad...	long unsign...	0x10010BBC	4	-	0	t_user.c
PAR	cal_beg_ad...	long unsign...	0x10010BA8	4	-	0	t_user.c
PAR	cal_beg_ad...	long unsign...	0x10010BAC	4	-	0	t_user.c
PAR	param2	unsigned char	0x10010BE4	1	-	0	t_user.c
PAR	param3	unsigned char	0x10010BE5	1	-	0	t_user.c
PAR	param5	signed char	0x10010BE6	1	-	0	t_user.c
PAR	V_GEAR	int	0x10010BE0	4	-	0	t_user.c
CAL	curve_emb...	int	0x1000096C	4	struct { xSize ...	0	t_user.c
CAL	map_embe...	int	0x100009A0	4	struct { xSize ...	0	t_user.c

Import an ELF/I3E File (Part 3|3)

The “ELF/I3E File Wizard” steps:

- 1) Specify Configuration settings (optional)
- 2) Select the ELF/I3E file you want to import
- 3) Enter ROM/RAM memory settings of your project
(strongly recommended in order to be able to distinguish between MEASUREMENT and CHARACTERISTIC data)
- 4) Start the import (parse the ELF/I3E file)
- 5) Filter the detected labels in the ELF/I3E file (define the display criteria, order definitions, etc.)
- 6) Select the definitions you want to import
- 7) Specify default settings for the imported definitions
- 8) Import the selected definitions into the ASAP2 editor

Redo step 5 – 8 until all requested definitions are imported.

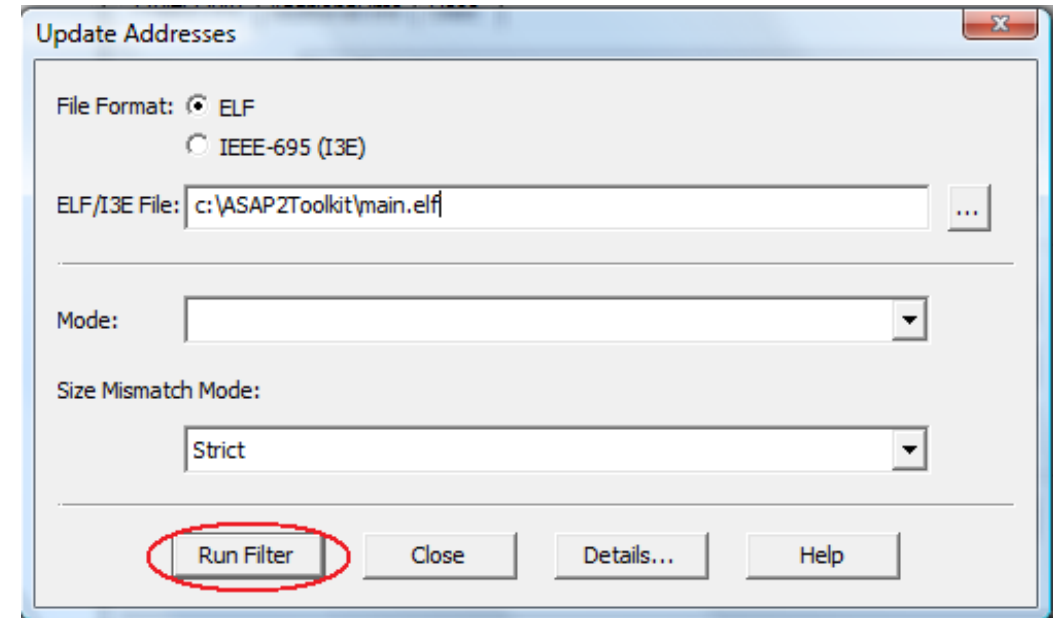
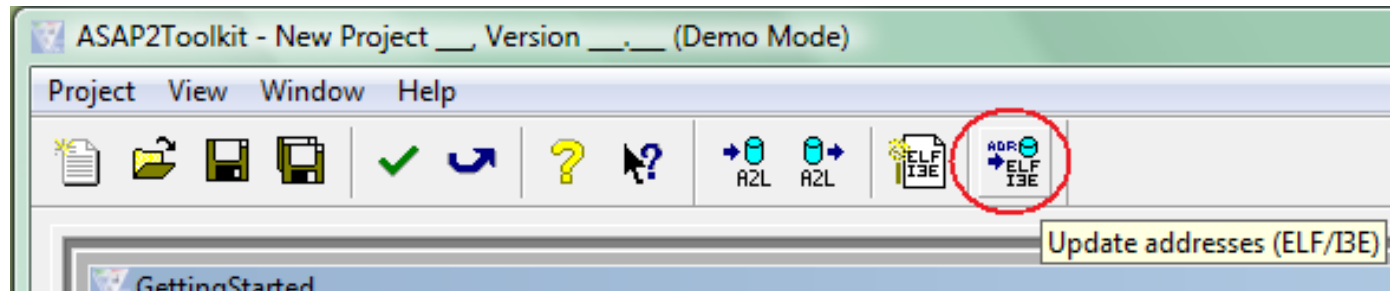
ASAP2 Toolkit – How to...

Update the addresses

Steps:

1. Click on the “Update addresses” button

2. Select your address file and start the import

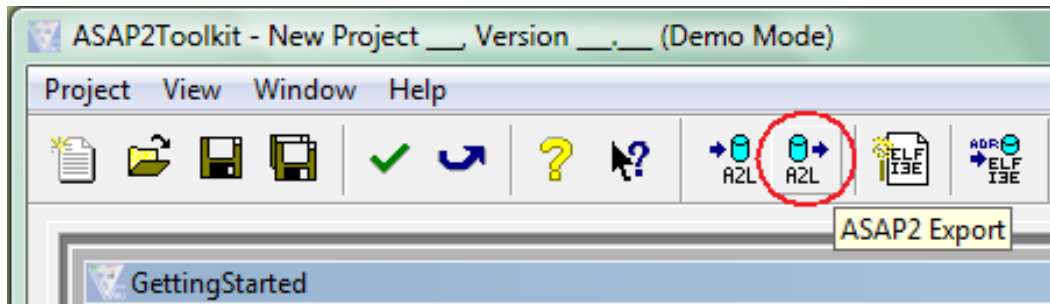


ASAP2 Toolkit – How to...

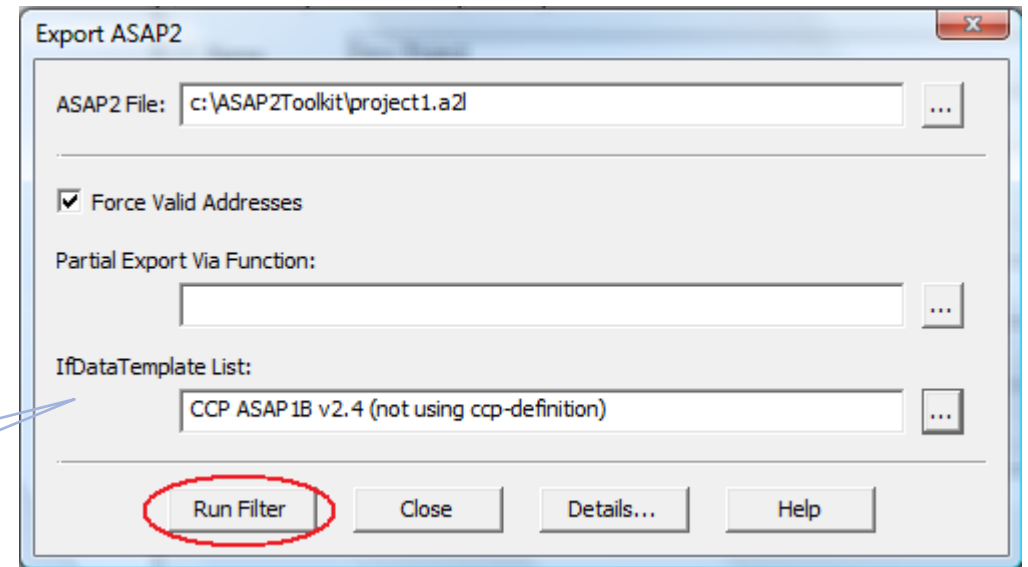
Create the final A2L file

Steps:

1. Click on the “ASAP2 Export” button



2. Specify the ASAP2 output file and start the export



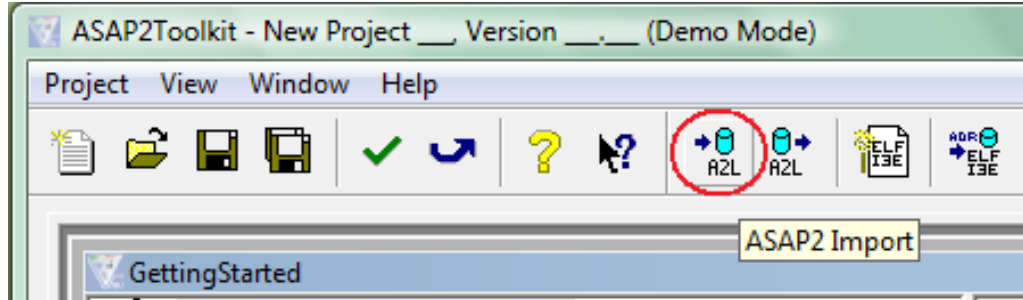
select the wanted access protocol (IF_DATA)

ASAP2 Toolkit – How to...

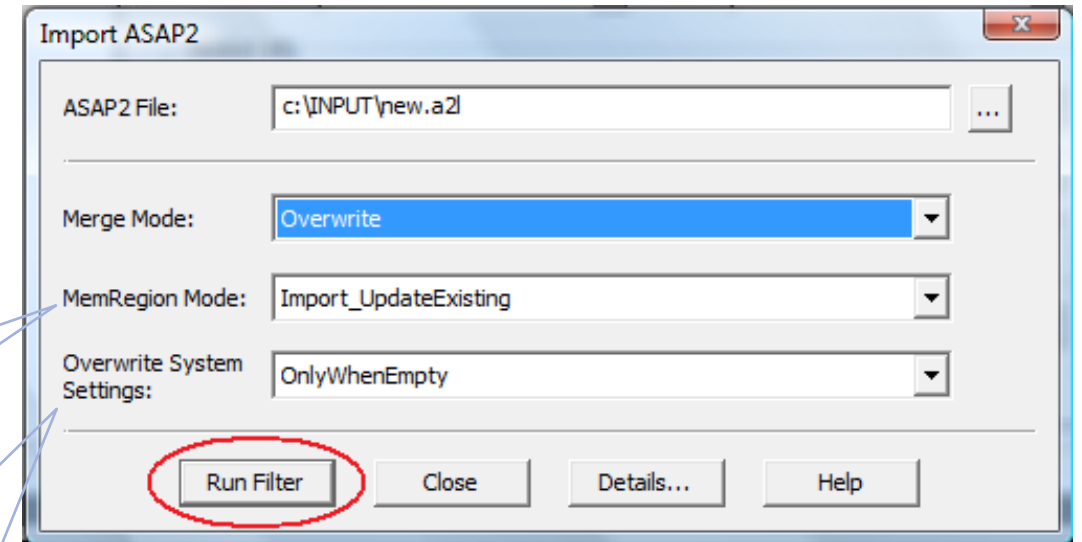
Import an ASAP2 file

Steps:

1. Click on the “ASAP2 Import” button



2. Select the ASAP2 file which has to be imported and start the import



choose whether to also import the memory layout settings or not

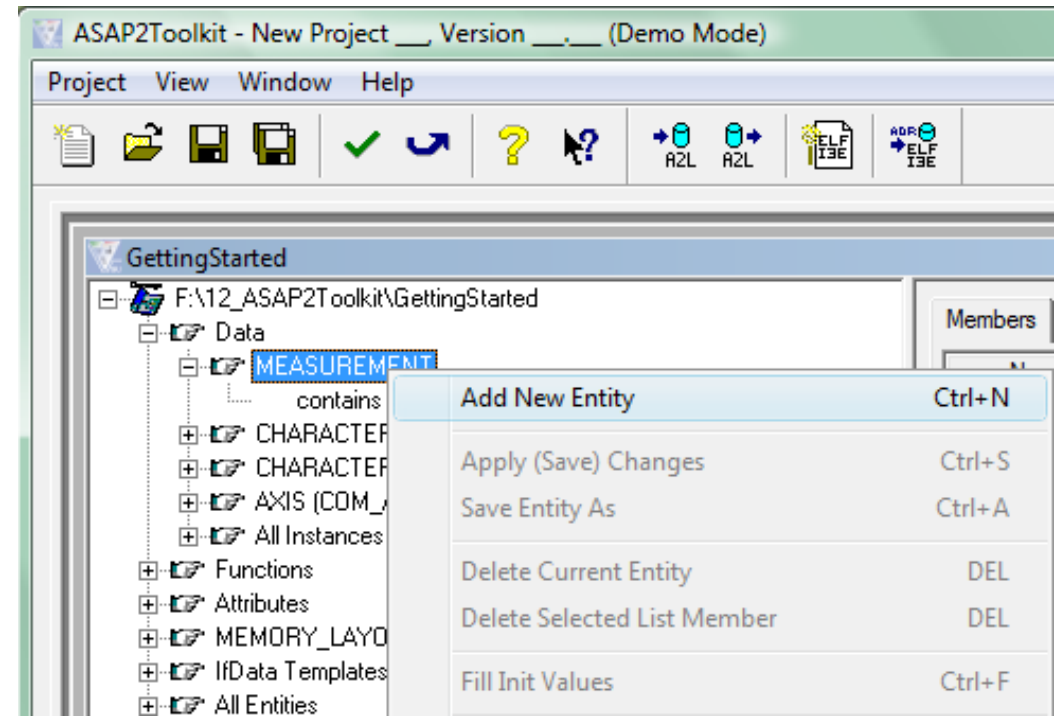
choose whether to overwrite system settings or not

ASAP2 Toolkit – How to...

Edit data declarations (Part 1 | 3)

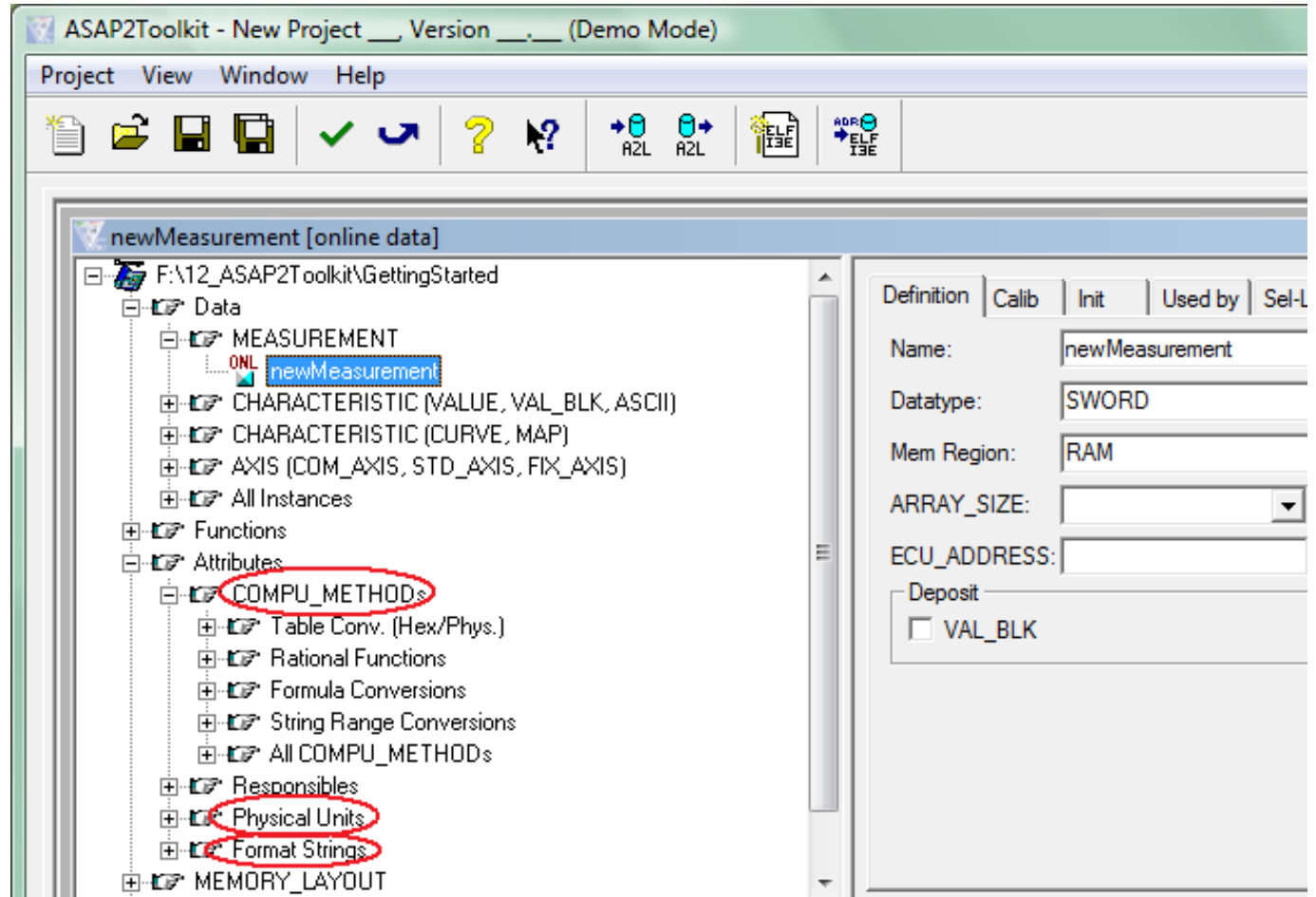
Steps:

1. Start the “ASAP2Toolkit” application
2. E.g. create a new MEASUREMENT definition
Go to the tree node “MEASUREMENT” and choose “Add New Entity” via the context menu (right mouse click)



Edit data declarations (Part 2|3)

3. Enter the attributes of the MEASUREMENT object



Edit data declarations (Part 3 | 3)

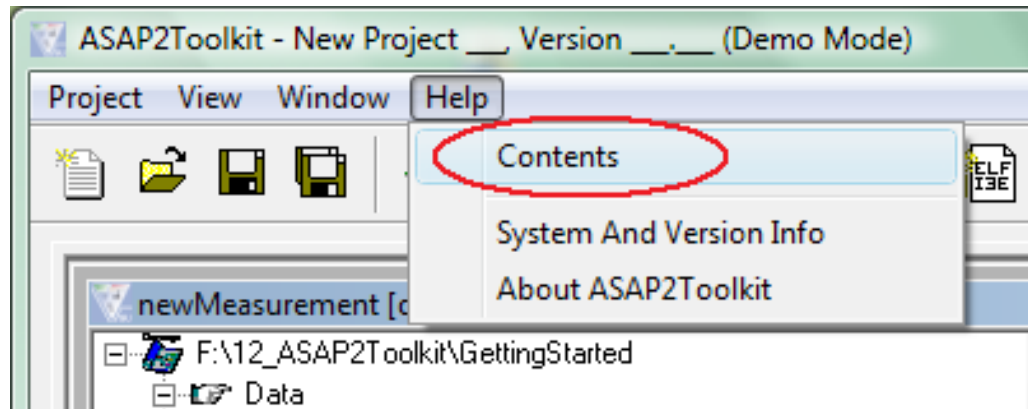
4. At the property page “Calib” you can specify attributes like “Conversion”, “Unit” and “Format”.
5. You can create further definitions (e.g. Conversions, etc.) in the same way as you created the MEASUREMENT definition -> go to the corresponding tree node and launch “Add New Entity” via the context menu

ASAP2 Toolkit – Further information



ASAP2Toolkit Online Help

... can be opened here:



... Or press F1

If you have any questions about the ASAP2Toolkit, please contact our Visu-IT! Hotline.

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Contact us to get further information:

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