



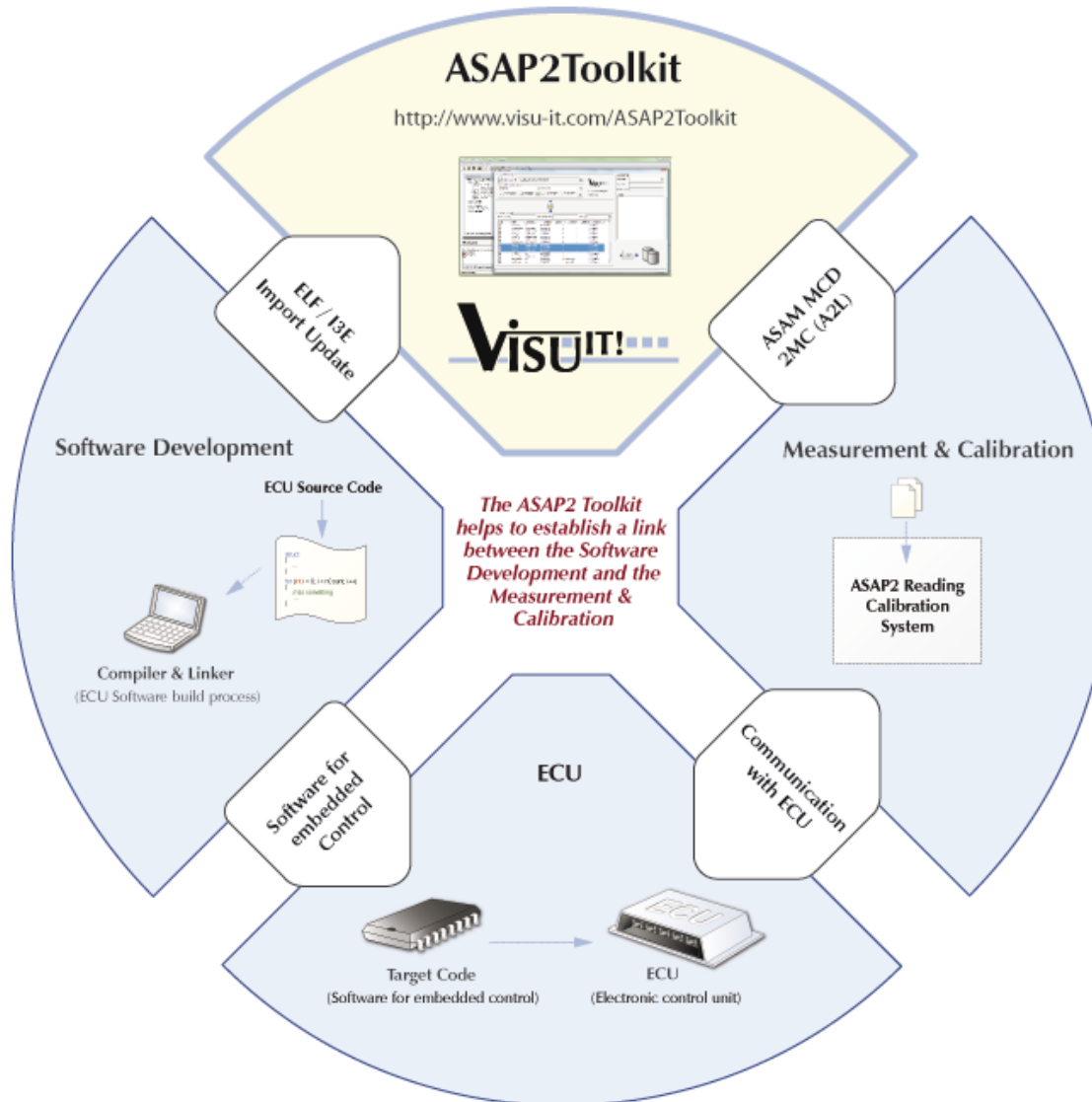
## **ASAP2 Toolkit – Getting Started**

Visu-IT!, Oct 2019

# ASAP2Toolkit – Getting Started

## Overview

ECU variables from the **source code** can be transferred into **ASAM MCD 2MC (\*.a2l)** files used from measurement and calibration systems like INCA



# ASAP2Toolkit – Getting Started

## Use Cases

The ASAP2Toolkit supports the following main use cases:

- **UseCase ①: Read ELF/I3E File & generate A2L**
- **UseCase ②: Read A2L & generate A2L**
- **UseCase ③: Edit data in “ASAP2Edit” & generate A2L**



### Note:

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

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## UseCase ①: Read ELF/I3E File & generate A2L

### Field 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](#)

# ASAP2Toolkit – Getting Started

## UseCase ②: Read A2L & generate A2L

### Field 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](#)

# ASAP2Toolkit – Getting Started

## UseCase ③: Edit data in “ASAP2Edit” & generate A2L

### Field 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:

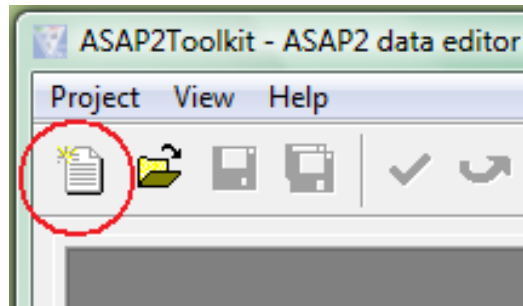
1. [Create a new project](#)
2. [Edit data declarations](#)
3. [Update the addresses](#)
4. [Create final ASAP2 file](#)

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## How to: Create a new project

### Steps:

1. Start the “ASAP2Toolkit” application
2. Click on the “Create new project” button



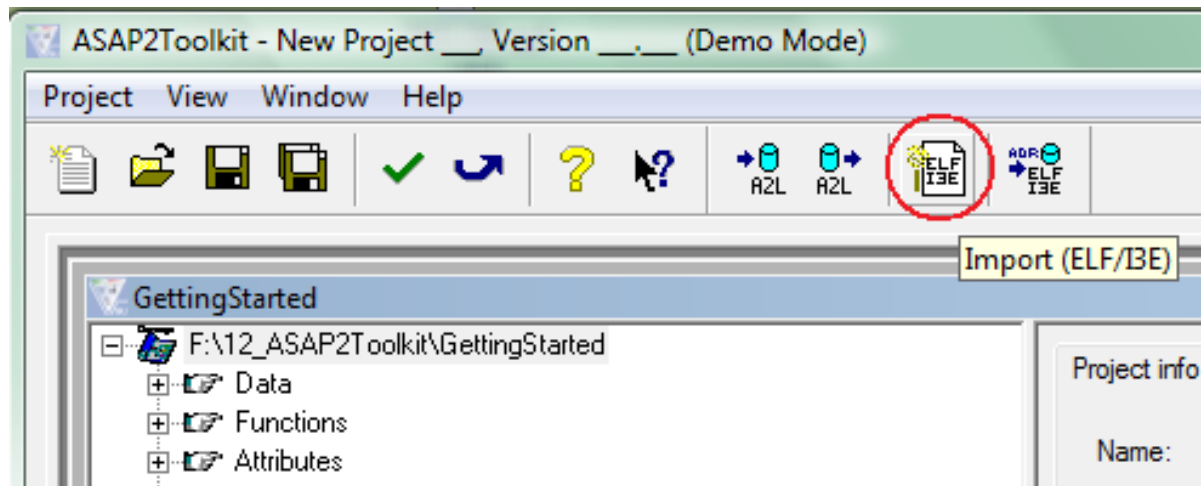
3. Enter the project name and the database directory

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## How to: Import an ELF/I3E File (Part 1|3)

### Steps:

1. Click on the “ELF/I3E File Wizard” button



2. The following wizard appears (see next slide)



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## How to: Import an ELF/I3E File (Part 2|3)

**Import and Locator Files Settings**

(1) ELF / I3E - File:  (2)

Available MEMORY\_LAYOUT in the ASAP2Toolkit (3)

ROM:  RAM:

from  to   from  to

(4)

**Labels in Locator File**

Search pattern:  Hide / Skip Labels:  Type:

Type	Name	Data Type (...)	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
CALL	curve_emb...	int	0x1000096C	4	struct { xSize ...	0	t_user.c
CALL	map_embe...	int	0x100009A0	4	struct { xSize ...	0	t_user.c

(6)

**Overall settings**

Conversion:

Phys Unit:

Format String:  (7)

**Function**

- [-] mainFunction
  - [ ] subFunction1
  - [ ] subFunction2
- [+] misc

(8)

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# ASAP2Toolkit – Getting Started

## How to: 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

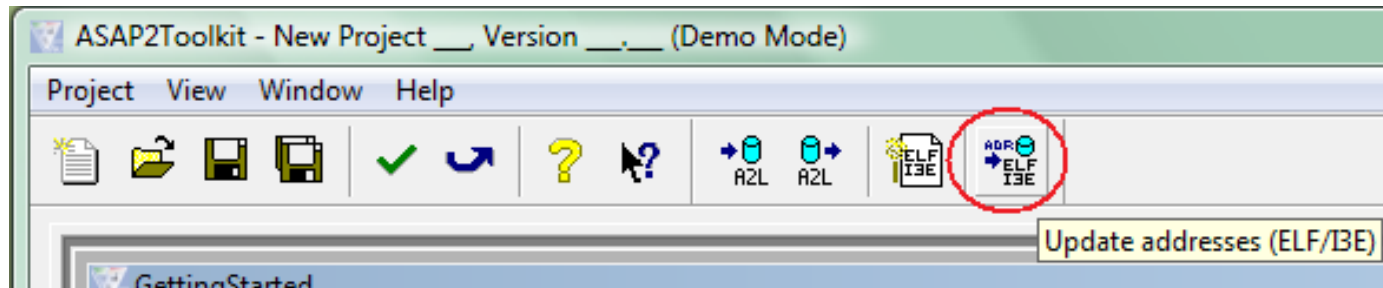
Redo step 5 – 8 until all requested definitions are imported.

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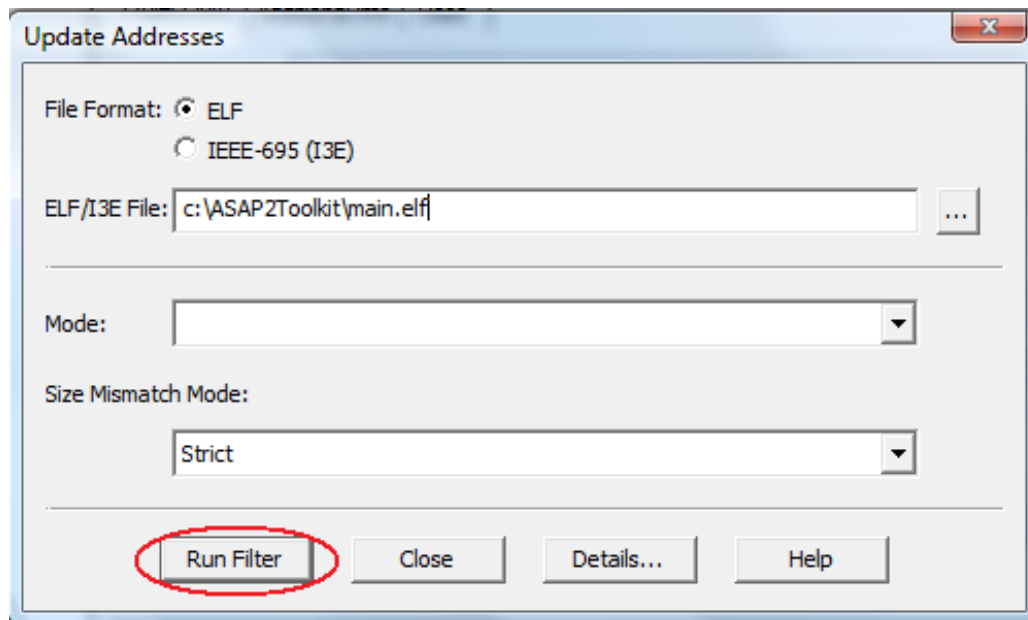
## How to: Update the addresses

### Steps:

1. Click on the “Update addresses” button



2. Select your address file and start the import

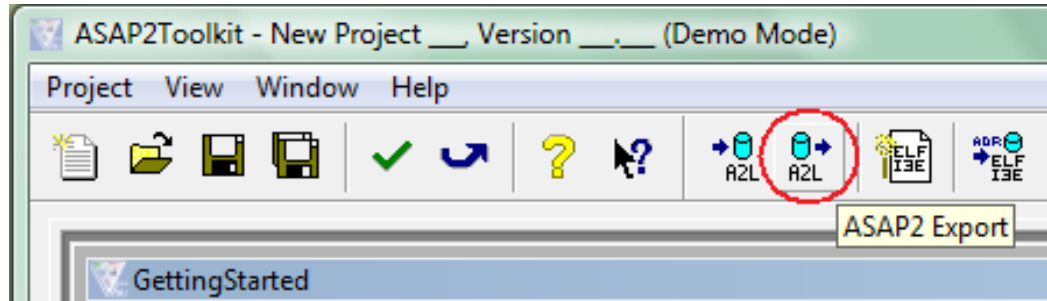


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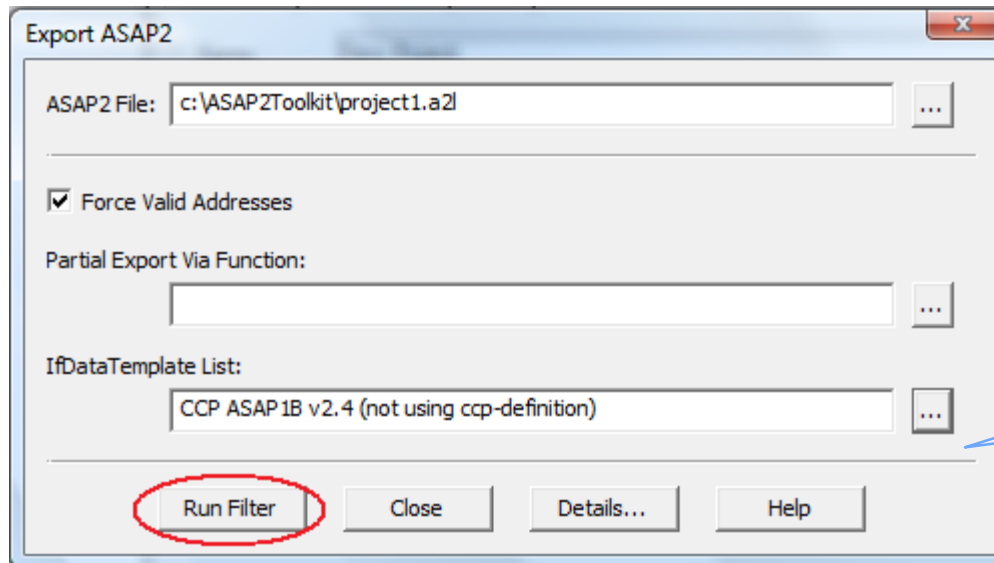
## How to: Create the final A2L file

### Steps:

1. Click on the “ASAP2 Export” button



2. Specify the ASAP2 output file and start the export



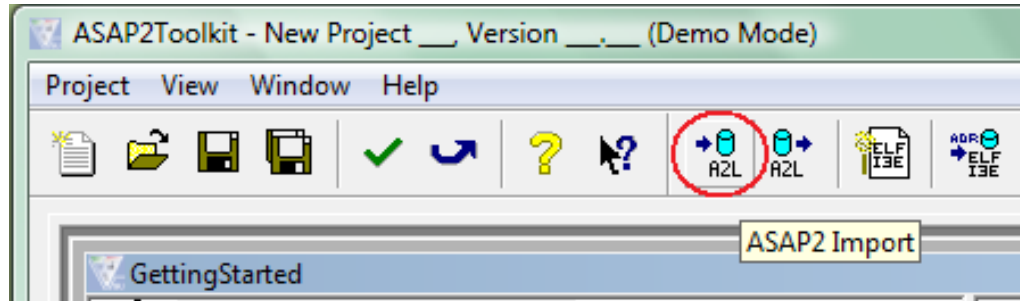
select the wanted access protocol (IF\_DATA)

# ASAP2Toolkit – Getting Started

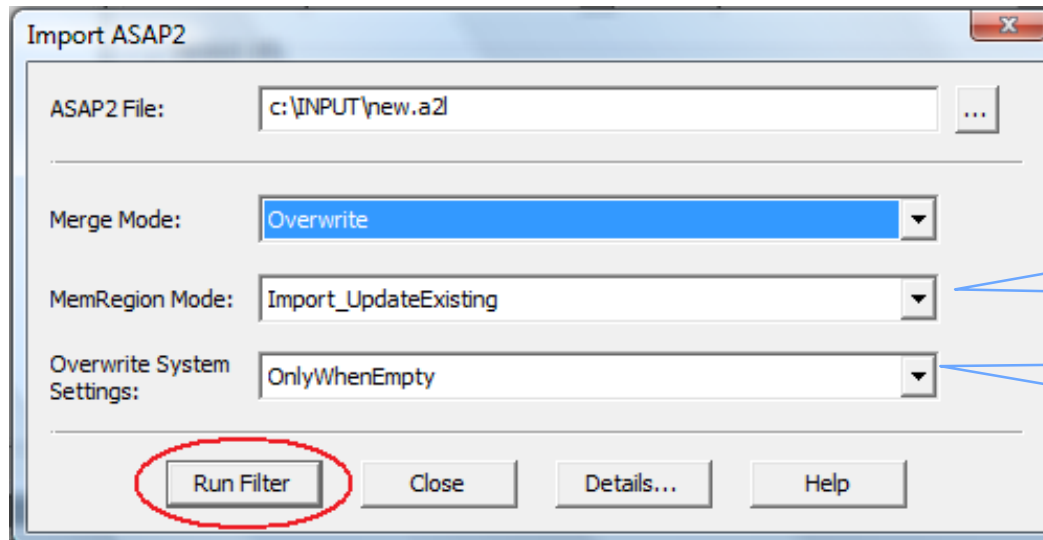
## How to: Import an ASAP2 file

### 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

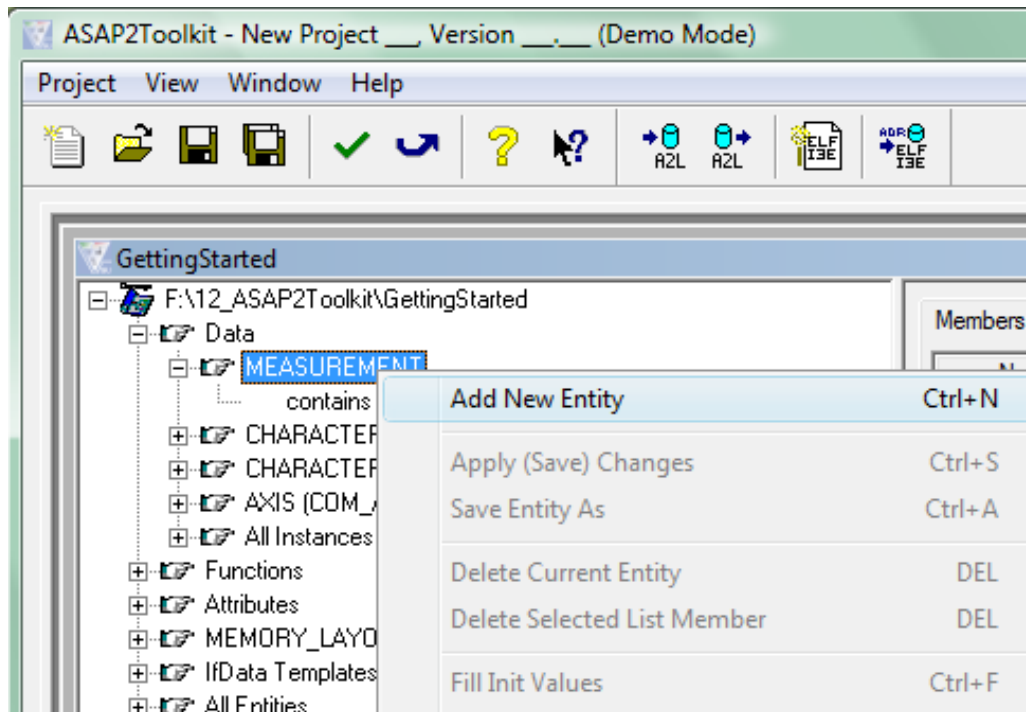
choose whether to overwrite system settings or not

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## How to: Edit data declarations (Part 1|2)

### Steps:

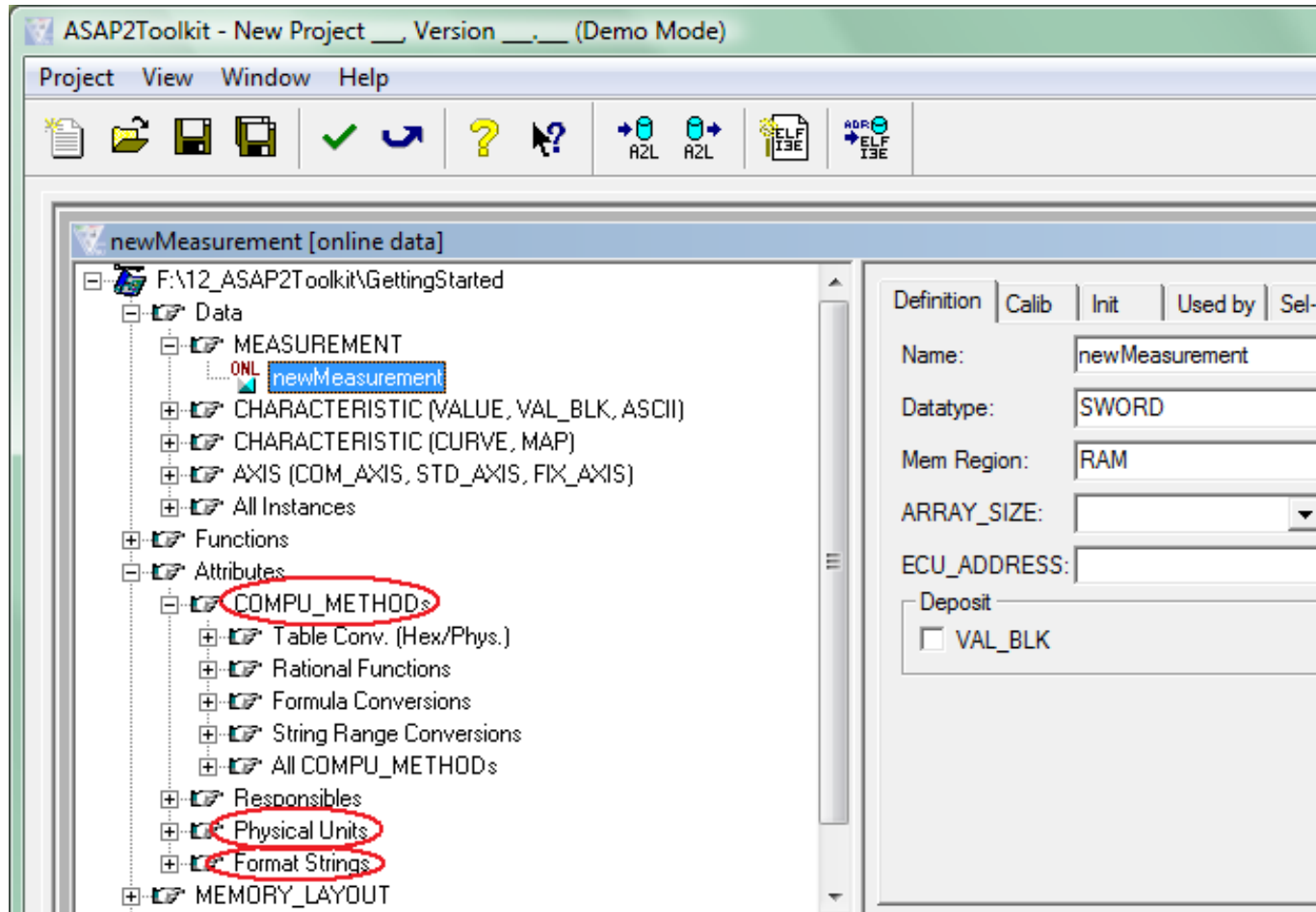
1. Start the “ASAP2Toolkit” application
2. E.g. create a new MEASUREMENT definition  
Go to the tree node “MEASUREMENT” and choose “Add New Entity “ via the context menu (right mouse click)



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## How to: Edit data declarations (Part 2|2)

3. Enter the attributes of the MEASUREMENT object



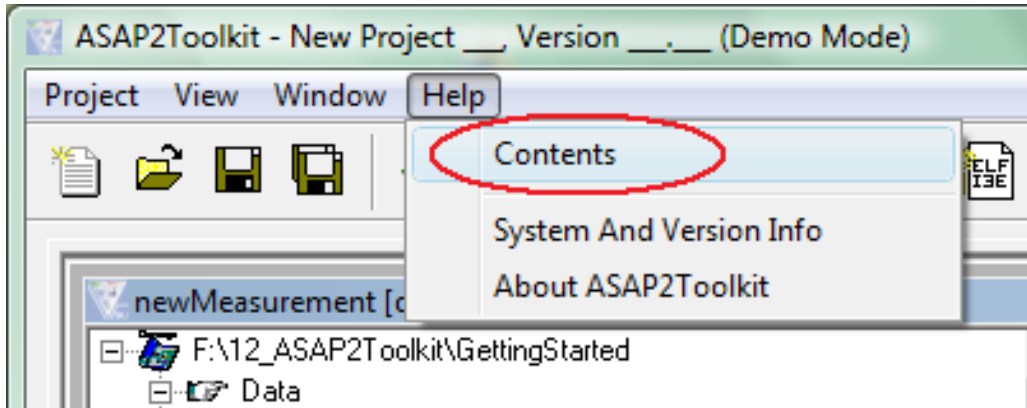
4. At the property page “Calib” you can specify attributes like “Conversion”, “Unit” and “Format”.
5. You can create further definitions (e.g. Conversions, etc.) in the same way as you created the MEASUREMENT definition -> go to the corresponding tree node and launch “Add New Entity” via the context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

# ASAP2Toolkit – Getting Started

Get further information



Please find further detailed information in the “ASAP2Toolkit Online Help”



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

#### Hotline

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#### Product page

Internet:  
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