FunDoc – Automated <u>Fun</u>ction <u>Doc</u>umentation

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Automotive Tools

<u>Vision</u>

Automate the function documentation process!

FunDoc - Automated <u>Fun</u>ction <u>Doc</u>umentation
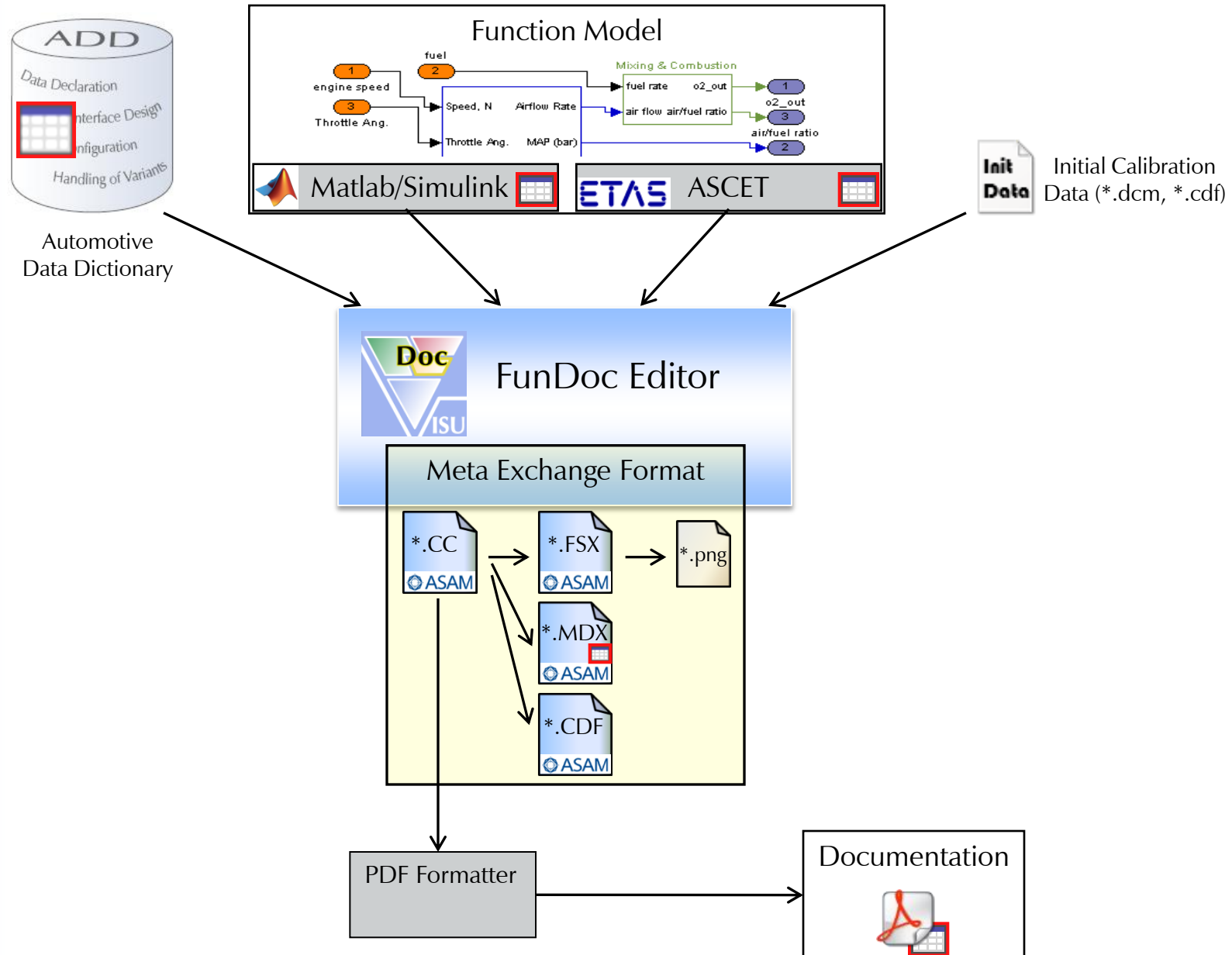## Key Features

Key Features:

1. Automated generation of function documentation
   - ✓ Functionality to handle updated function/simulation <u>models</u>
   - ✓ Functionality to handle updated function/simulation <u>interfaces</u>

2. Meta Exchange Formats
   - ✓ Using well accepted ASAM standards (MDX, FSX, CDF, CC)
   - ✓ Independent from documentation formatter

3. Independent from modeling/simulation tool
   - ✓ The current version supports both Matlab/Simulink and Ascet models

4. Modular concept
   - ✓ Suitable for one single function
   - ✓ Suitable for a set of functions (or even all functions)

5. Viewer/Editor with extended features
   - ✓ Preview & partial documentation
   - ✓ Smart viewing:
     - ➢ Which labels are used in which diagram?
     - ➢ Cross-references
     - ➢ Technical terms
     - ➢ Etc.

FunDoc - Automated <u>Fun</u>ction <u>Doc</u>umentation
Data Flow

Automotive Tools

ADD
Data Declaration
Interface Design
Configuration
Handling of Variants

Automotive
Data Dictionary

Function Model

fuel

1
engine speed
2

3
Throttle Ang.

Speed, N   Airflow Rate

Throttle Ang.   MAP (bar)

Mixing & Combustion

fuel rate   o2_out

air flow air/fuel ratio

o2_out
1

3
air/fuel ratio

2

Matlab/Simulink

ETAS   ASCET

Init Data   Initial Calibration Data (*.dcm, *.cdf)

Doc **VISU**   FunDoc Editor

Meta Exchange Format

*.CC
◎ASAM

*.FSX
◎ASAM

*.png

*.MDX
◎ASAM

*.CDF
◎ASAM

PDF Formatter

Documentation

FunDoc - Automated <u>Fun</u>ction <u>Doc</u>umentation Demo

Tool demonstration

How to automatically generate a function documentation?
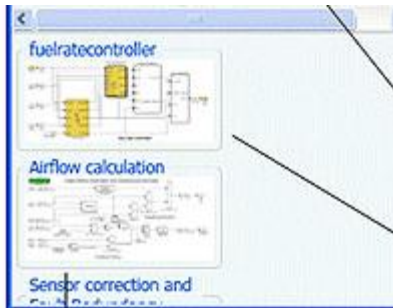
- Create a <u>single function</u> documentation (from Matlab/Simulink)

- <u>Update</u> a documentation

- Create a <u>library/project</u> documentation

FunDoc - Automated <u>Fun</u>ction <u>Doc</u>umentation Editor

Highlights:

1. Model Diff

2. Documentation status: New, Removed, Changed, Unchanged

3. Preview & Partial documentation

4. Context sensitive label access and technical terms

5. Cross reference lists & **Visual Model Viewer**

6. Data Explorer

Thank you for your attention!