



MAENAD



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Revision chart and history log

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1 Introduction

This deliverable provides a description of the presentation material that is developed within the MAENAD project and provides references to this material.

The Project presentation material includes:

- Newsletters
- Concept presentations that describe the various conceptual parts of the EAST-ADL language
- Public project deliverables
- The EAST-ADL Wiki
- White-paper on EAST-ADL
- Published papers
- The www.maenad.eu web site, providing the above material as well as more information about the MAENAD project.

Before describing the actual presentation material, let us take a brief look at how dissemination activities are being organized and monitored within the MAENAD project:

The presentation material is closely related to the dissemination actions that take place in the project. Dissemination activities are monitored in the global action list Excel document, which includes four sheets dedicated to dissemination:

Newsletters: Includes planning of newsletters, including timing and responsible persons per section

Publication ideas: Includes publications under development, or topics that could lead to publications.

Disseminations: Performed dissemination activities, e.g. papers, presentations.

Dissemination venues: Identified venues where we should submit publications.

2 Presentation material

In this section, an overview of the project presentation material is given.

2.1 Newsletters

During the predecessor projects, ATESSST, and ATESSST2, an e-mail list (sig-adl) was set up, and during ATESSST2, 8 newsletters were distributed. Based on feedback from the development and reception of these newsletters, the following conclusions were made:

- The newsletters should avoid pictures, since they have a tendency to get trapped by anti-virus programs.
- The newsletters should be short and concise, and encourage further reading.
- We need results to publish newsletters, but to avoid that all newsletters are sent out at the end of the project, when all results are finished, they should be synchronized with project milestones and deliverables, as partial results will be available then.

Based on these conclusions the newsletters are planned as follows:

- After each milestone a newsletter is produced, based on results from this milestone. This includes deliverables that are released in this milestone.
- A draft of the newsletter should be available at the Milestone meeting, and the newsletter released when all deliverables are finished.
- The intention is to synchronize the newsletter issues with the related project Timmo-2-use (ITEA2).

So far, three newsletters have been published, they are available on the maenad.eu website "News Page".

- Information on project start, press release (sent 2010-12-01)
- Initial phase: Requirements and needs, EAST-ADL language refinement (2010-02-04)
- Demonstrators, New language concepts in discussion, methodology (2011-05-06)

2.2 Concept presentations

So called concept presentations were initiated in the ATESSST2 project. They consist of a number of PowerPoint presentations, of various EAST-ADL concepts. The purpose is to provide an easily accessible overview and introduction to EAST-ADL. The concept presentations holds also, east-adl implementations, where the purpose of the implementations is to set up the east-adl meta model with tools used in projects of the market today. These presentations are continuously maintained and updated throughout the MAENAD project; one major revision was made just before Milestone 4, where some presentations also were added. The following presentations are currently available:

- Overview and Structure
- The relation between EAST-ADL and AUTOSAR
- The Behavior support of EAST-ADL
- The tools and meta-modeling aspects and support of EAST-ADL
- The Methodology of EAST-ADL
- The Variability support of EAST-ADL
- The Requirements support of EAST-ADL

- FEV Analysis
- Timing Analysis
- ASIL decomposition
- Dependability analysis
- Optimization
- Behavior: External tools for behavior
- Behavior: Native behavior
- Behavior: Simulation
- MetaEdit+ implementation of EAST-ADL
- SystemWeaver implementation of EAST-ADL

The following concept presentations are planned:

- MAENAD Modeling Workbench
- MAENAD Analysis Workbench
- ARTOP implementation of EAST-ADL
- Case study overviews: Range and mode control, regenerative braking, propulsion

2.3 Project deliverables

In the description of work, the public deliverables in Table 1 are defined. The intention is to publish these deliverables on the www.maenad.eu web site, as they are released. This includes deliverable D4.1.1, which is the EAST-ADL language specification.

Table 1. List of public deliverables

Del. no.	Deliverable name	Delivery (proj. month)
D2.1.1	Engineering Scenarios and Requirements for FEV	12
D2.2.1	Design Methodology	16, 26, 36
D3.1.1	Language Concepts Supporting Engineering Scenarios	6, 15, 24
D3.2.1	Analysis and Synthesis Concepts Supporting Engineering Scenarios	9, 18, 27
D4.1.1	EAST-ADL Language Specification	9, 21, 33
D4.2.1	EAST-ADL profile for MARTE	12, 36
D4.3.1	EAST-ADL XML Schema	9, 21, 33
D5.1.1	MAENAD Modelling Workbench	12, 36
D5.2.1	MEANAD Analysis Workbench	9, 24, 30
D5.3.1	Tool adaptations for EAST-ADL	12, 24, 30
D6.1.1	Preliminary Case study Definition and metrics	6
D6.1.3	Case study analysis and safety assessment	12, 24, 34
D7.1.1	Project presentation material	12, 24, 36
D7.2.2	Standardization plan and activities	6, 36

2.4 White paper of EAST-ADL

During the ATESSST2 project, a gap was identified for stakeholders interested in EAST-ADL at a more detailed level than the concept presentations (compare section 2.2), but without having to go through the language specification (compare section 2.3). A solution in terms of a *white paper* has been proposed within MAENAD, a document that describes e.g. the general benefits of using of EAST-ADL, why the language is designed the way it is, and how the different language extensions work.

The white paper will be assembled by parts of the EAST-ADL wiki (see next section). A first release is scheduled to be available during year 2 of the project.

2.5 The EAST-ADL Wiki

The EAST-ADL wiki (see Figure 1) will be used to collect more detailed information compared to what is available in the concept presentations, and explain various aspects of the language. Using the wiki-technology, it will be fast to update information and link to various sources. The wiki is currently only available to the MAENAD project members, but could be made public when it is mature enough.

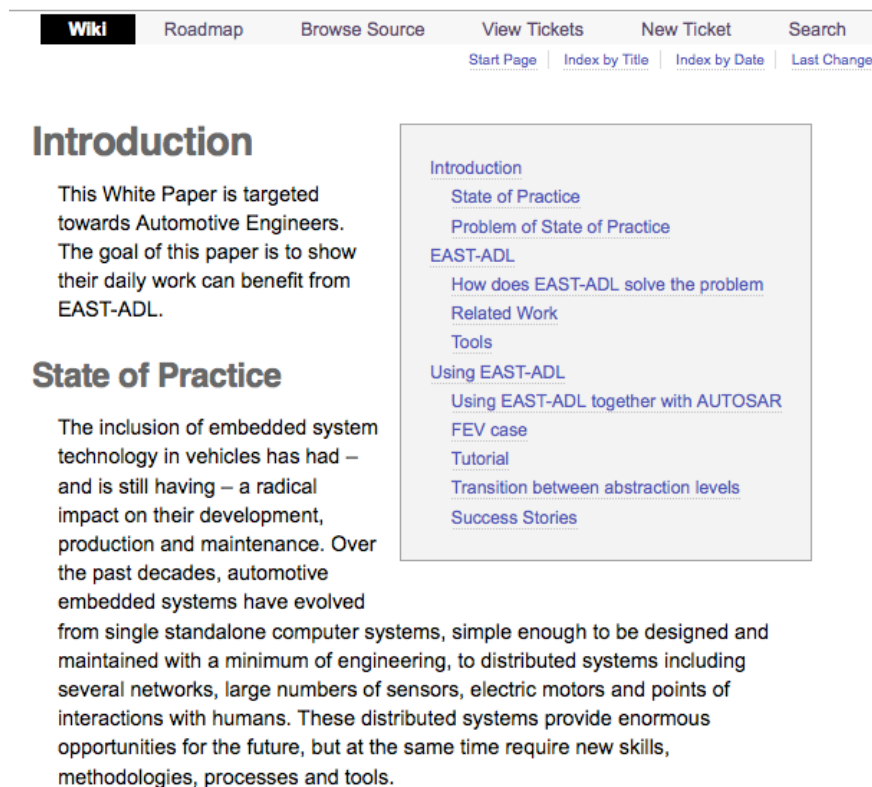


Figure 1: The EAST-ADL Wiki

2.6 The MAENAD web-site

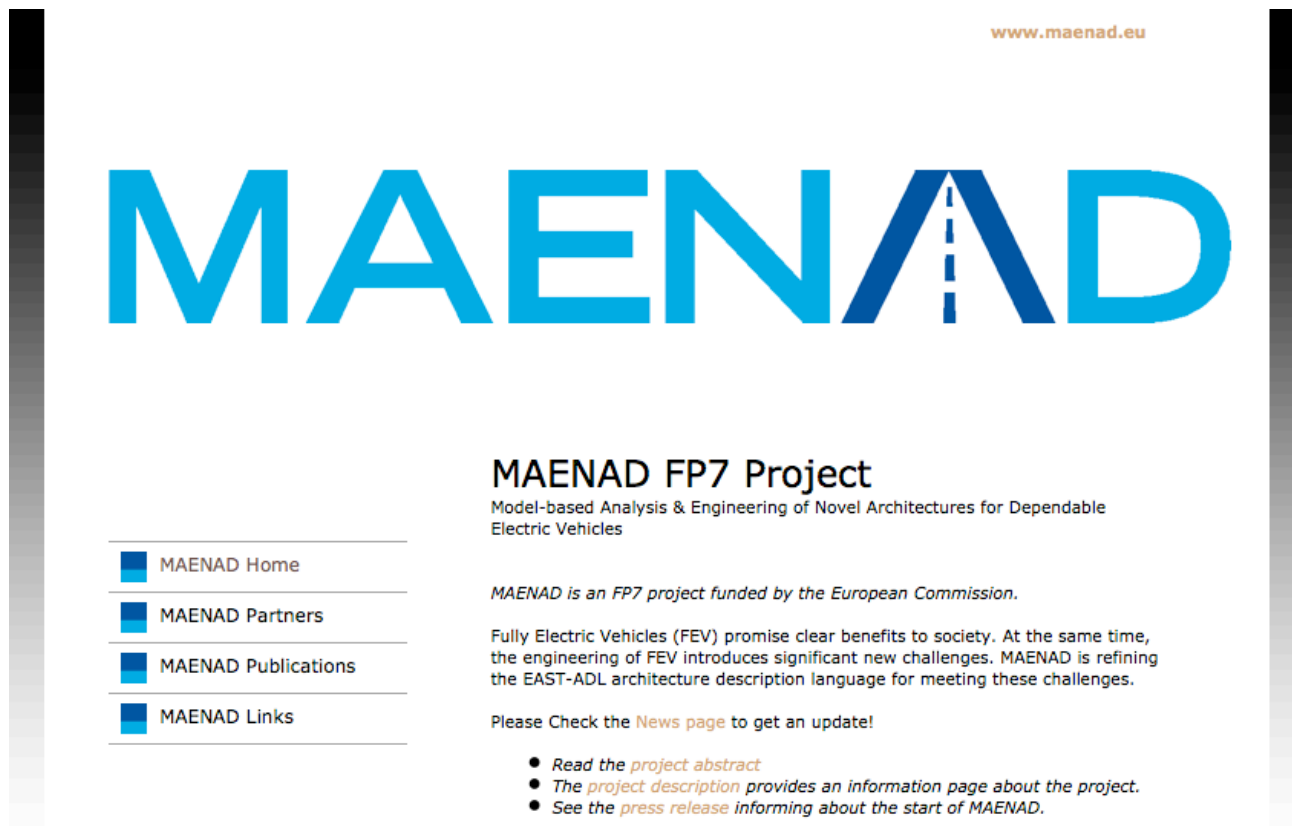


Figure 2: The maenad.eu website

The www.maenad.eu website was opened shortly after the project start, and contains information about the project. The objective is to have all the public dissemination material described in this deliverable available here.

2.7 Publications

Main results from the project will be disseminated through scientific publications. The goal is to produce 5 collaborative journal papers, 15 collaborative conference papers within the project.

In section 2.7.1 to 2.7.5 are the publications that until now have been issued:

2.7.1 Journal papers

Chen, DeJiu; Johansson, Rolf; Lönn, Henrik; Blom, Hans; Walker, Martin; Papadopoulos, Yiannis; Torchiaro, Sandra; Tagliabo, Fulvio; Sandberg, Anders: Integrated Safety and Architecture Modeling for Automotive Embedded Systems. A special issue of the journal e&i – elektrotechnik und informationstechnik, Springer, on the topic automotive embedded systems

Papadopoulos Y., Walker M., Parker D., Rude E., Hamann R., Uhlig A., Grätz U., Lien R. (2011) Engineering Failure Analysis & Design Optimisation with HiP-HOPS, Journal of Engineering Failure Analysis, 18 (2): 590-608, Elsevier Science, ISSN: 1350-6307

Papadopoulos Y., Walker M., Parker D., Rude E., Hamann R., Uhlig A., Grätz U., Lien R. (2011) Engineering Failure Analysis & Design Optimisation with HiP-HOPS, Journal of Engineering Failure Analysis, 18 (2): 590-608, Elsevier Science, ISSN: 1350-6307

Adachi M., Papadopoulos Y., Sharvia S., Parker D., Tohdo T. (2011) An approach to optimization of fault tolerant architectures using HiP-HOPS, Software Practice and Experience, 41: n/a DOI: 10.1002/spe.1044, 36 pages, Wiley .

2.7.2 Conference papers

Tagliabo, Fulvio; Torchiaro, Sandra; Lönn, Henrik; Johansson, Rolf; Chen, De-Jiu; Papadopoulos, Yiannis; Walker, Martin; Sandberg, Anders: Modelling Support for the Automotive Functional Safety Standard, Sixth International Conference on Dependability and Computer Systems DepCoS-RELCOMEX June 27- July 1 2011

Qureshi, Tahir Naseer; Chen, DeJiu; Lönn, Henrik ; Törngren, Martin: From EAST-ADL to AUTOSAR Software Architecture: A Mapping Scheme, the 5th European Conference on Software Architecture (ECSA 2011), Essen, Germany, 13-16 September 2011.

Papadopoulos, Yiannis; Walker, Martin; Lönn, Henrik: Automatic allocation of system safety requirements to components of a system architecture using HiP-HOPS, Model Based Safety Assessment Workshop, Toulouse France 14-17/03/2011

Sharvia S., Papadopoulos Y. (2011), Integrated Application of Compositional and Behavioural Safety Analysis, IEEE Dependable Computing Systems (DEPCOS'11), Advances in Intelligent and Soft Computing, AISC 97: 179-192, DOI: 10.1007, ISBN 978-3-642-21393-9, Springer.

Mahmud N., Walker M., Papadopoulos Y. (2011) Compositional synthesis of Temporal Fault Trees from State Machines, 6th Annual IEEE Conference Availability, Reliability and Security (ARES 2011), DYADEM workshop, Vienna, Austria, DOI 10.1109/ARES.2011.89, p.p. 429-435, ISBN: 978-0-7695-4485-4, IEEE publications

Sharvia S., Papadopoulos Y. (2011), IACoB-SA: an Approach towards Integrated Safety Assessment, 7th Annual IEEE Conference on Automation Science and Engineering (CASE 2011), Trieste, Italy, proceedings in electronic volume with ISBN 978-1-4577-1732-1/11/, IEEE publications

Papadopoulos Y., Adachi M., Sharvia S., Parker D., Tohdo T., Walker M. (2011) Optimization of fault tolerance using model transformations, 7th International Conference On Computer Science & Information Systems, Athens, June 2011, 10 pages, to be published as book chapter.

Nggada S.H., Parker D. J., Papadopoulos Y. (2010) Dynamic Effect of Perfect Preventive Maintenance on System Reliability and Cost Using HiP-HOPS, IFAC-MCPL 2010, 5th Conference On Management And Control Of Production And Logistics, September 2010, Coimbra – Portugal, published in ifac-papersonline.net.

Eric Armengaud, Markus Zoier, Andreas Baumgart, Matthias Biehl, DeJiu Chen, Gerhard Griessnig, Christian Hein, Tom Ritter, Ramin T. Kolagari Model-based Toolchain for the Efficient Development of Safety-Relevant Automotive Embedded Systems SAE 2011 World Congress & Exhibition, April 2011, Detroit, USA

Qureshi Tahir Naseer, Chen, De-Jiu, Persson Magnus and Törngren Martin, Towards the Integration of EAST-ADL and UPPAAL for Formal Verification of Embedded System Architectures, in Worskhop on ime Analysis and Model-Based Design, from Functional Models to Distributed Deployments (TiMoBD). Taipei, Taiwan, October 9, 2011.

2.7.3 Book chapters

Nggada, S., Parker, D., Papadopoulos, Y., (2010) Extending HiP-HOPS with Capabilities of Planning Preventative Maintenance, Strategic Advantage of Computing Information Systems in Enterprise Management, (eds) Sarrafzadeh and Petratos, pp. 231-245, ISBN: 978-960-6672-93-4

Sharvia S., Papadopoulos Y. (2010), Integrating Compositional Safety Analysis and Formal Verification, Strategic Advantage of Computing Information Systems in Enterprise Management, (eds) Sarrafzadeh and Petratos, pp. 181-201, ISBN: 978-960-6672-93-4

2.7.4 Dissertations

Matthias Biehl, Licentiate thesis, November 2010. Supporting Model Evolution in Model-Driven Development of Automotive Embedded Systems. ISBN 978-91-7415-723-9, KTH - Royal Institute of Technology, Stockholm, Sweden.

2.7.5 Presentations

Lönn, Henrik: Supporting the Engineering of Electrical Vehicle Systems, Electric Vehicle ICT-Infrastructure, Berlin March 23 2011

Lönn, Henrik: Timing Modelling and Analysis in an Automotive Context, DaNES Timing Analysis Workshop, Copenhagen February 2011

Lönn, Henrik, European Green Cars Initiative “Portfolio of European Green Cars Projects” Workshop, Workshop Poster and the Brochure presented, 31 May 2011

3 Summary

There are various artifacts channels for project dissemination, and dissemination of EAST-ADL identified, targeted at slightly different audiences, e.g.: academic (Publications), industry managers (Concept presentations, White paper), Engineers, EAST-ADL tool developers (specifications, EAXML schema), other projects (Newsletters, website) We believe these all are relevant, but they might be adjusted throughout the project, based on feedback.

The concept presentation material is reviewed internally in the project. The general idea is that new project members, not too familiar with EAST-ADL should review the presentations, to find things that need improvement. External reviewers are also considered for reviewing the concept presentations; this could also be seen as a dissemination activity itself.