
MAENAD

**Grant Agreement 260057**

# Model-based Analysis & Engineering of Novel Architectures for Dependable Electric Vehicles

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## Revision chart and history log

| Version | Date | Reason |
|---|---|---|
| 1.0 | 2011-08-31 | First intermediate release |
| 2.0 | 2012-08-31 | Second intermediate release |
| 3.0 prel | 2014-02-18 | Final M42 release for review |
| 3.0 | 2014-02-25 | Final M42 release |

## Table of contents

# 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
- IGI Encyclopedia article
- 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.
- Poster, presenting MAENAD
- Wikipedia article on EAST-ADL

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, ATESST, and ATESST2, an e-mail list (sig-adl) was set up, and during ATESST2, 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.

So far, nine newsletters have been published, they are available on the maenad.eu website “News Page”.

1. Information on project start, press release (sent 2010-12-01)
2. Initial phase: Requirements and needs, EAST-ADL language refinement (2010-02-04)
3. Demonstrators, New language concepts in discussion, methodology (2011-05-06)
4. Language and profile update, methodology, engineering scenarios, modeling platform update, enhancement of Language Support for Analysis, V&V (2011-10-24)
5. Language and profile update, EATOP, Analysis and synthesis algorithms for fully electric vehicles, Methodology (2012-04-02)
6. Information about public workshop, LinkedIn group, Language and profile update, case studies and tool support. (2012-10-02)
7. Language and profile update, Analysis concepts, Methodology (2013-04-08)
8. Milestone 8 update (2013-10-01)
9. Open Workshop coverage (2013-11-22)

## 2.2 Concept presentations

MAENAD has published a set of so called concept presentations, covering various EAST-ADL concepts at different level of detail. The purpose is to provide an easily accessible overview and introduction to EAST-ADL. The concept presentations holds also describes EAST-ADL tooling results from the MAENAD project, regarding modeling, synthesis and analysis. The following presentations are currently available:

Introduction

- 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

Examples

- Range and mode control
- Regenerative braking
- Propulsion

Analysis Support

- FEV Analysis
- Timing Analysis
- ASIL decomposition
- Dependability analysis
- Optimization
- Behavior: External tools for behavior
- Behavior: Native behavior
- Behavior: Simulation

Tools

- EATOP Tooling
- MAENAD Modeling Workbench
- MAENAD Analysis Workbench
- MetaEdit+ implementation of EAST-ADL
- SystemWeaver implementation of EAST-ADL

## 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 |
|---|---|
| D2.1.1 | Engineering Scenarios and Requirements for FEV |
| D2.2.1 | Design Methodology |
| D3.1.1 | Language Concepts Supporting Engineering Scenarios |
| D3.2.1 | Analysis and Synthesis Concepts Supporting Engineering Scenarios |
| D4.1.1 | EAST-ADL Language Specification |
| D4.2.1 | EAST-ADL profile for MARTE |
| D4.3.1 | EAST-ADL XML Schema |
| D5.1.1 | MAENAD Modelling Workbench |
| D5.2.1 | MEANAD Analysis Workbench |
| D5.3.1 | Tool adaptations for EAST-ADL |
| D6.1.1 | Preliminary Case study Definition and metrics |
| D6.1.2 | Case study Definition and metrics |
| D6.1.3 | Case study analysis and safety assessment |
| D7.1.1 | Project presentation material |
| D7.2.2 | Standardization plan and activities |

## 2.4 White paper of EAST-ADL

During the ATESST2 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* was 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, in a condensed publication. The target size of the paper was approximately 50 pages.

The white paper was developed, partly based on gathering of available material such as the IGI Encyclopedia article (described in the next section), but also new material. It has been internally reviewed by new partners in MAENAD, and also updated based on feedback from external users.

The white paper was released during the last MANEAD year, and is available from the maenad.eu web site.

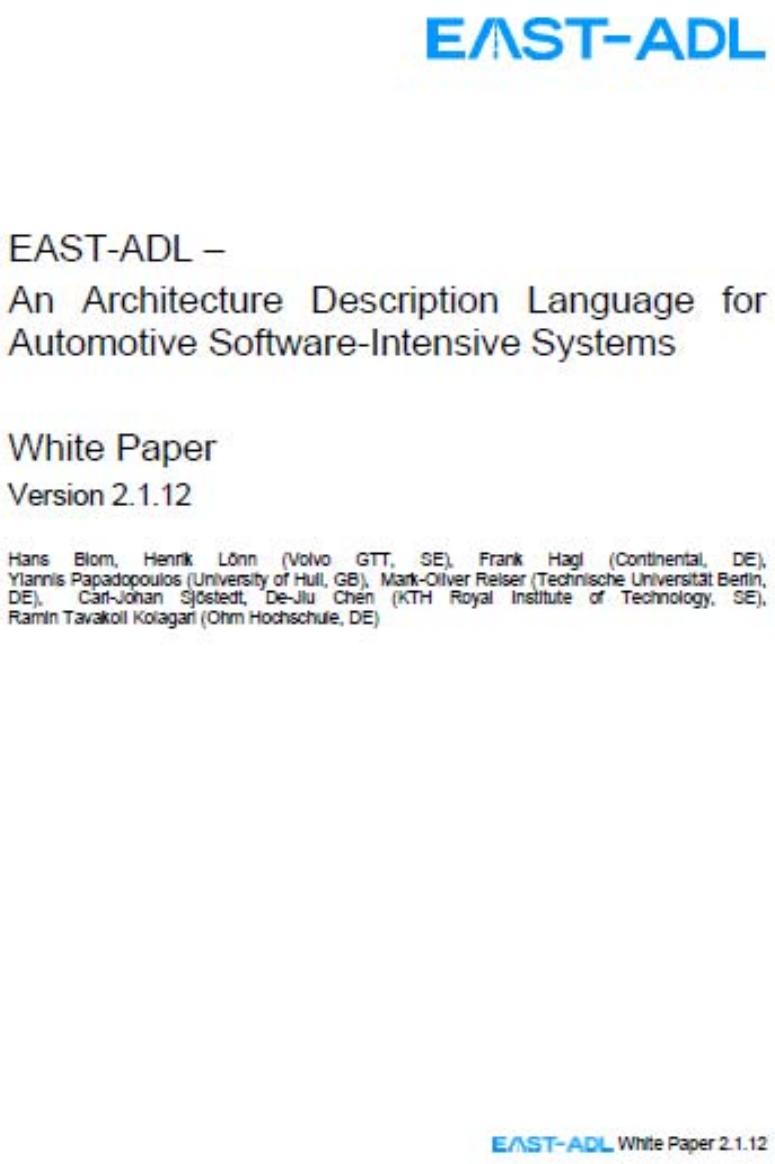



**Figure 1: The EAST-ADL white paper**

## 2.5 The IGI Encyclopedia Article

IGI Global is a publisher of journals, books, encyclopedias, and teaching cases on information science and IT management. MAENAD got invited to write an article about EAST-ADL. This is a 13-page document describing EAST-ADL in overview, background, modeling concepts (Functional Abstraction, Timing Modeling, Requirements Modeling, Functional Safety Modeling, Variability Modeling and Behavior Constraint Modelingg), methodology and related concepts. The article was prepared in April 2012, and updated based on feedback August 2012.

## 2.6 The MAENAD web-site

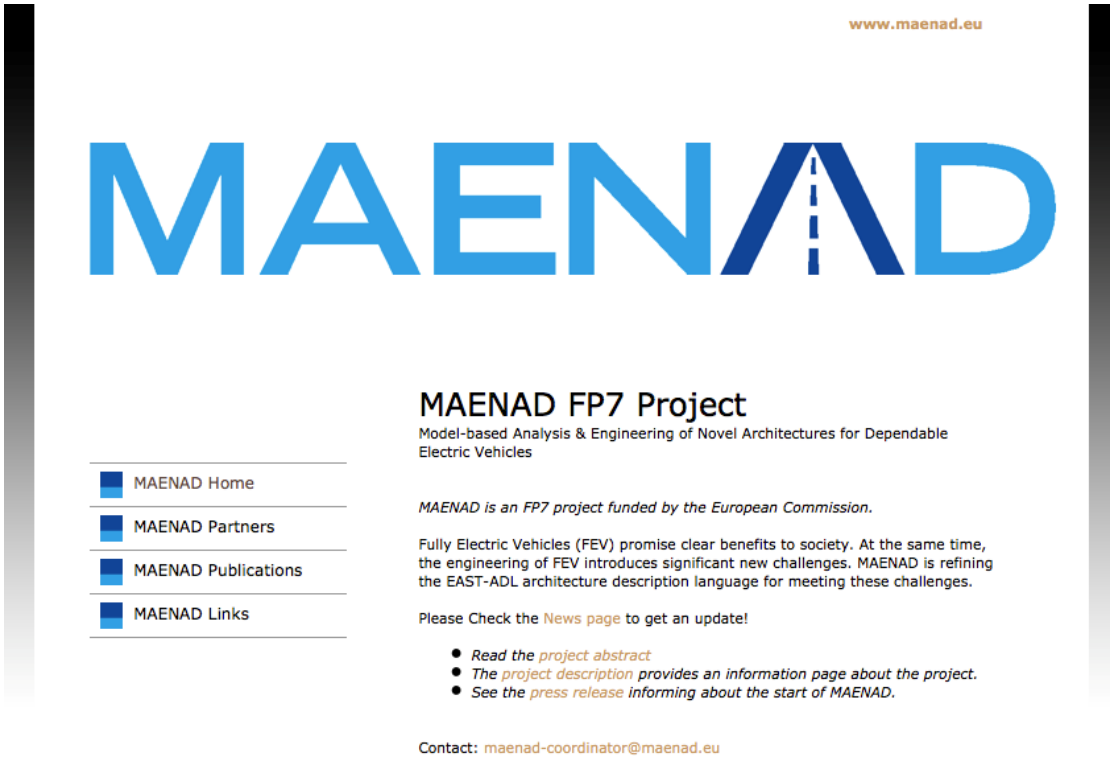



**Figure 2: The maenad.eu website**

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.

According to web site statistics from the site provider, there is an increasing interest in the project, with around 50 visits per day, see Figure 1.

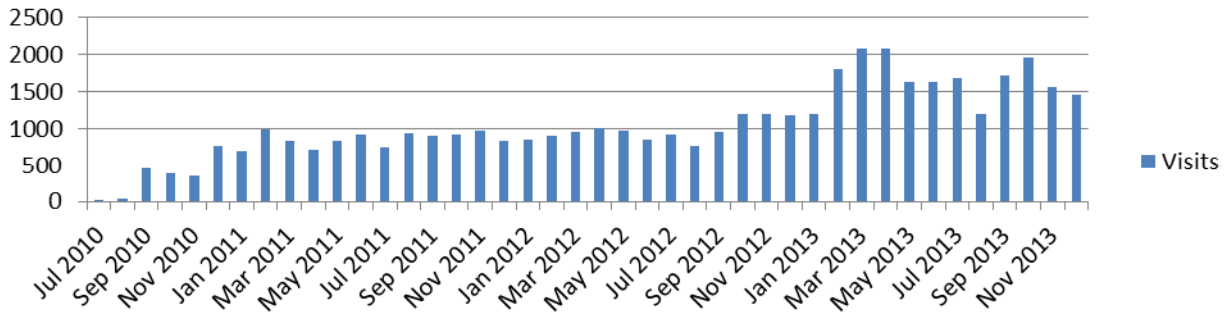


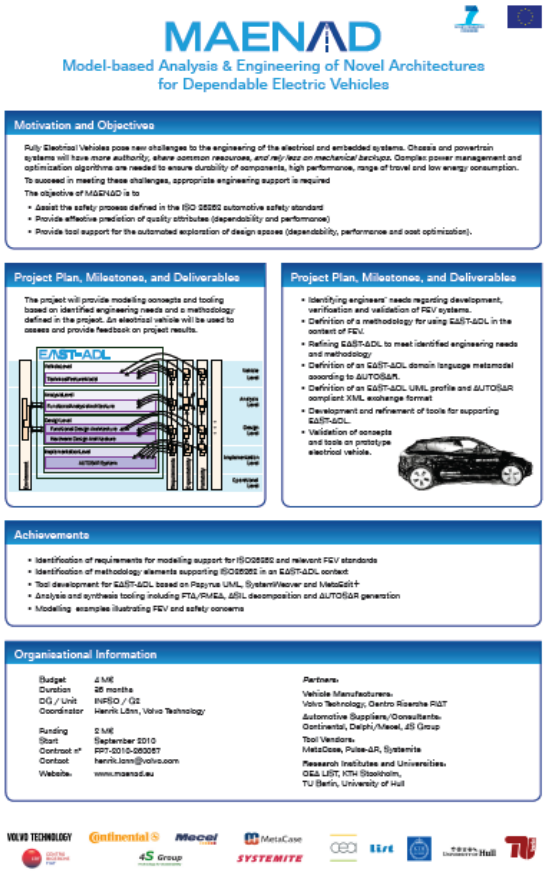

**Figure 1. Web site statistics: True visits[1] per month**

[1] Visits is the number of individual visitors of the site. Whenever a request is made to the server from a given visitor, the amount of time since a previous visit by the same visitor is recorded. Only if this time difference is greater than 30 minutes, it is considered a new Visit.

## 2.7 Poster

A poster has been developed and shown in various contexts relevant for MAENAD. The first occasion was at the TIMMO-2-USE workshop.

The first poster shows project administrative information and overall project approach. The second poster goes more into technical details through a basic EAST-ADL model with relevant concepts.



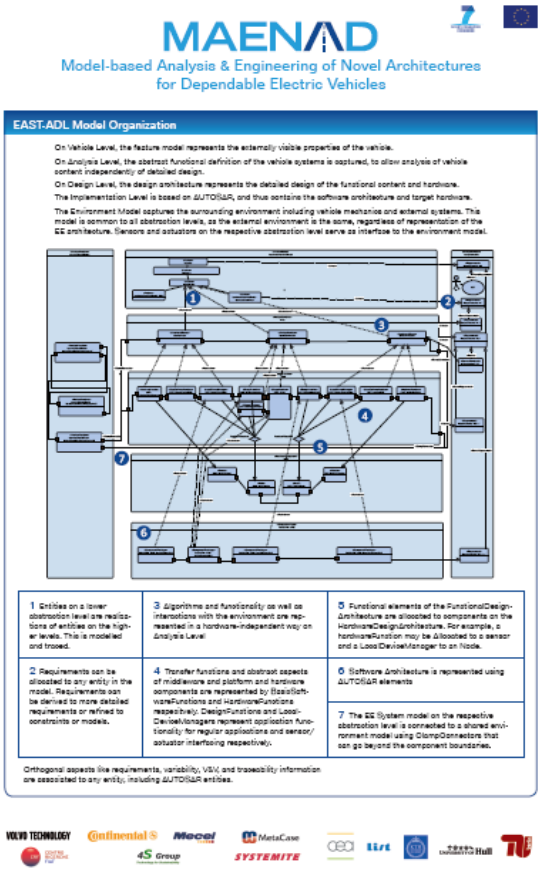




**Figure 3. MAENAD Posters**

## 2.8 Wikipedia article on EAST-ADL

Although Wikipedia is not considered to be a very reliable source, many people use Wikipedia as a first place to get an overview of a subject and find references to further reading. Hence, it is important to keep this information correct. A general update on the Wikipedia article of EAST-ADL was made, including information about MAENAD. The article was reviewed within MAENAD before being published. The page is available at:

http://en.wikipedia.org/wiki/EAST-ADL

For a snapshot, see Figure 4.

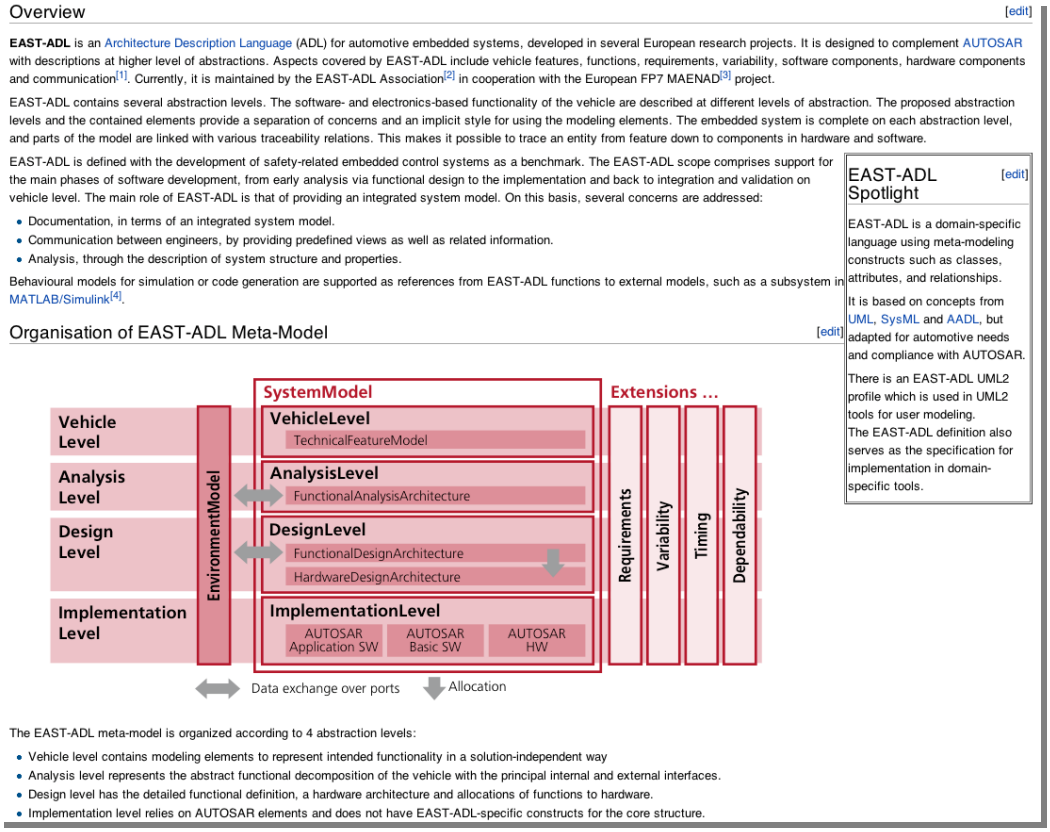



**Figure 4: The EAST-ADL Article on Wikipedia snapshot**

## 2.9 Workshops

MAENAD has exchanged in Web-based workshops with other projects to discuss and harmonize concepts. Examples includes timing discussions with TIMMO-2-USE and methodology and safety discussions with SAFE, where MAENAD concepts were dissiminated and TIMMO-2-USE and SAFE feedback was collected.

An open workshop was held in Berlin in September 2012 together with the projects AMALTHEA, TIMMO-2-USE and SAFE. The goal of the workshop was to present results and plans from the projects to an interested audience. The projects explained the challenges addressed and the solutions provided in the areas of methodology, representation and tooling.

**Figure 5. Plenary and walk-around sessions from the AMST Workshop 2012.**

Another open workshop was arranged in November 2013 together with EAST-ADL Association, Hosted by Volvo GTT/ATR in Gothenburg. The purpose was to describe EAST-ADL, show concrete examples of its usage along with various tools that support EAST-ADL and assist, automate and rationalise part of the system design process. The workshop also discussed and shared experiences on industrial deployment of EAST-ADL and development of automotive systems.Three formats were included, a set of plenary presentations, a walk-around session with tool demos and a panel discussion.

## 2.10 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.

Below are the publications that until now have been issued.

### 2.10.1 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. e&i – elektrotechnik und informationstechnik, Volume 128, Number 6, Automotive Embedded Systems. Springer Wien, 2011. DOI 10.1007/s00502-011-0007-7.

Papadopoulos Y., Walker M., Parker D., Rüde 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

N.Mahmud, Walker M., Papadopoulos Y. (2012), Compositional synthesis of Temporal Fault Trees from State Machines, ACM SiGMETRICS Performance Evaluation Review, 39 (4):79-88. 2012. ISSN:0163-5999

DeJiu Chen, Lei Feng, Tahir Naseer Qureshi, Henrik Lönn , Frank Hagl. An Architectural Approach to the Analysis, Verification and Validation of Software Intensive Embedded Systems. Journal: Computing, Springer. 2013. DOI: 10.1007/s00607-013-0314-4

Walker M., Reiser M-O., Tucci-Piergiovanni S., Papadopoulos Y., Lönn H., Mraidha C., Parker D., Chen D., Servat D.: Automatic Optimisation of System Architectures using EAST-ADL Journal of Systems and Software, Elsevier. 2013. DOI: 10.1016/j.jss.2013.04.001.

L. Azevedo, D. Parker M. Walker Y. Papadopoulos, R.E Araújo, Assisted Assignment of Automotive Safety Requirements, IEEE Software. Issue: 99. 2013. DOI 10.1109/MS.2013.118

### 2.10.2 Conference papers

Margot Bittner, Mark-Oliver Reiser, Helko Glathe, Matthias Weber: Manufacturer-Supplier Requirements Synchronization Using Exchange Containers and Multi-Level Systems. In: Proceedings of the 18th IEEE International Requirements Engineering Conference (RE 2010), 2010.

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 andBehavioural 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.

Parker D., Walker M., Azevedo L., Papadopoulos Y., Araujo R. (2013) *Automatic Decomposition and Allocation of Safety Integrity Levels using a Penalty-based Genetic Algorithm.* Proceedings of the 26th International Conference on Industrial, Engineering, and other Applications of Applied Intelligent Systems (IEA/AIE 2012): Special session on Decision Support for Safety-Related Systems. 17-21st June, Amsterdam, The Netherlands.

Qureshi Tahir Naseer, Chen, De-Jiu and Törngren Martin, A timed automata-based method to analyze EAST-ADL timing constraint specifications, 8th European Conference on Modelling Foundations and Applications, ECMFA 2012;Kgs. Lyngby; 2 July 2012 through 5 July 2012

Oscar Ljungkrantz, Henrik Lönn, Hans Blom, Cecilia Ekelin and Daniel Karlsson: Modelling of Safety-Related Timing Constraints for Automotive Embedded Systems. ASCoMS – Workshop on Architecting Safety in Collaborative Mobile Systems, Safecomp 2012

Carl Bergenhem, Rolf Johansson and Henrik Lönn: A novel modelling pattern for establishing failure models and assisting architectural exploration in an automotive context, ASCoMS – Workshop on Architecting Safety in Collaborative Mobile Systems, Safecomp 2012

Juha-Pekka Tolvanen, Steven Kelly: "Domain-Specific Modeling Languages for Embedded Systems Development", in: Proceedings of MeCoES - Metamodeling and code generation for embedded systems, workshop at Embedded Systems Week, 7 Oct 2012, University of Paderborn, 2012

Andreas Abele, Henrik Lönn, Mark-Oliver Reiser, Matthias Weber, and Helko Glathe: "EPM: a prototype tool for variability management in component hierarchies", in: "Proceedings of the 16th International Software Product Line Conference" (SPLC '12), Vol. 2. ACM, New York, NY, USA, pp. 246-249, 2012.

Ernest Wozniak, Chokri Mraidha, Sebastien Gerard, "Guided Task Model Construction for Automotive Systems based on Time Budgets" Work-in-Progress at 17th Internation Conference Emerging Technology and Factory Automation (ETFA), September 17-21, Cracovie, Poland

Asma Mehiaoui, Sara Tucci Piergiovanni, Jean-Philippe Babau, Laurent Lemarchand: "Optimizing the Deployment of Distributed Real-Time Embedded Applications". In Proceedings of the 18th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications, pages 400-403, August 20 - 22, 2012, Seoul, Korea

Ernest Edifor, Martin Walker, Neil Gordon: Quantification of Priority-OR Gates in Temporal Fault Trees, Frank Ortmeier, Peter Daniel (Eds.): Computer Safety, Reliability, and Security - 31st International Conference, SAFECOMP 2012, LNC 7612:99-110, ISBN 978-3-642-33677-5

Amer Dheedan & Yiannis Papadopoulos, Multi-Agent Safety Monitoring System, 8th International Conference On Computer Science & Information Systems, Athens, June 2011, 9 pages, to be published as book chapter.

Z Mian, L Bottaci, Y Papadopoulos, M Biehl: System Dependability Modelling and Analysis Using AADL and HiP-HOPS, IFAC Symposium on Information Control Problems in Manufacturing, Bucharest, 14 (1), 1647-1652, ISSN: 1474-6670, ISBN: 978-3-902661-98-2, 2012.

S. Voget, Safe development by adaptation of standardized safety concepts in AUTOSAR 4.0, ERTS 2012

S. Voget, Collaboration in Automotive - The Eclipse Automotive Industry Working Group, ERTS 2012

S. Voget, Definition of a standard for model based safety development and analysis compliant to ISO26262, Safetronic 2013

Chen D., Lönn H., Mraidha C., Papadopoulos Y., Reiser M.-O., Servat D., Azevedo L. S., Tucci-Piergiovanni S., Walker M. Automatic Optimisation of System Architectures using EAST-ADL. Proceedings of Workshop ASCoMS (Architecting Safety in Collaborative Mobile Systems) of the 32nd International Conference on Computer Safety, Reliability and Security - SAFECOMP 2013 , France. 25 September, 2013

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Edifor E., Walker M., Gordon N. (2013) *Introducing Temporal Behaviour in Binary Decision Diagrams*. 4th IFAC Workshop on Dependable Control of Discrete Systems (DCDS'13), York, UK, 4-6th September 2013. pp 7-12. doi: 10.3182/20130904-3-UK-4041.00019

Nggada, S. H., Papadopoulos, Y., Parker, D. J. (2013) Combined Optimisation of System Architecture and Maintenance. 4th IFAC Workshop on Dependable Control of Discrete Systems (DCDS'13), York, UK, 4-6th September 2013. 4:1 (25-30). doi: 10.3182/20130904-3-UK-4041.00019, ISBN: 978-3-902823-49-6, ISSN: 1474-6670

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Edifor E., Walker M., Gordon N. (2013) *Quantitative Analysis of Simultaneous-AND Gates.* 8th International Conference on Dependability and Complex Systems (DePCoS-RELCOMEX'13), Brunow, Poland, 9-13th Sept 2013.

Azevedo L., Parker D., Walker M., Papadopoulos Y., Araujo R. (2013) Automatic Decomposition of Safety Integrity Levels: Optimisation by Tabu Search. 2nd Workshop on Critical Automotive applications: Robustness & Safety (CARS), at the 32nd International Conference on Computer Safety, Reliability, and Security (SAFECOMP'13), Toulouse, France, 2013.

Azevedo L., Parker D., Walker M., Papadopoulos Y., Araujo R. (2013) *Automatic Decomposition of Safety Integrity Levels: Optimisation by Tabu Search*. 2nd Workshop on Critical Automotive applications: Robustness & Safety (CARS), at the 32nd International Conference on Computer Safety, Reliability, and Security (SAFECOMP'13), Toulouse, France, 2013.

### 2.10.3 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

Tahir Naseer Qureshi, De-Jiu Chen, Martin Törngren: On Integrating EAST-ADL and UPPAAL for Embedded System Architecture Verification Book chapter Embedded Systems Development. From Functional Models to Implementations. ISBN 978-1-4614-3878-6 Series: Embedded Systems. Springer

Hans Blom, Henrik Lönn, Frank Hagl, Yiannis Papadopoulos, Mark-Oliver Reiser, Carl-Johan Sjöstedt, De-Jiu Chen, Fulvio Tagliabò, Sandra Torchiaro, Sara Tucci and Ramin Tavakoli Kolagari: *EAST-ADL: An Architecture Description Language for Automotive Software-Intensive Systems*; in: Mohamed Khalgui, Olfa Mosbahi and Antonio Valentini (Eds.): *Embedded Computing Systems: Applications, Optimization, and Advanced Design*, IGI Global Publishing, 2013. DOI: 10.4018/978-1-4666-3922-5.ch023.

David Parker, Martin Walker, Yiannis Papadopoulos. (2013) Model-Based Functional Safety Analysis and Architecture Optimisation. *Embedded Computing Systems: Applications, Optimization, and Advanced Design*, (eds) Khalgui M., Mosbahi O., Valentini A. Information Science Reference, Chapter 4, pp. 79-92, DOI: 10.4018/978-1-4666-3922-5, ISBN13: 9781466639225, IGI Global, USA

Sara Tucci-Piergiovanni, DeJiu Chen, Chokri Mraidha, Henrik Lönn, Nidhal Mahmud, Mark-Oliver Reiser, Ramin Tavakoli Kolagari, Nataliya Yakymets, Renato Librino, Sandra Torchiaro, Agnes Lanusse: *Model-based Analysis & Engineering of Automotive Architectures with EASTADL*.In: Alessandra Bagnato, Leandro Soares Indrusiak, Imran Rafiq Quadri, and Matteo G. Rossi (Eds): irpesd 2014 : Industry and Research Perspectives on Embedded System Design. IGI Global Publishing, 2014 (to appear). DOI: 10.4018/978-1-4666-3922-5.ch023.

### 2.10.4 Dissertations

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

Nidhal Mahmud: Dynamic Model-based Safety Analysis: From State Machines to Temporal Fault Trees, Ph.D. Thesis, Dept. Comput. Sci.,Univ. of Hull, UK, Oct. 2012.

Tahir Naseer Qureshi: Enhancing Model-Based Development of Embedded Systems: Modeling, Simulation and Model-Transformation in an Automotive Context, PhD thesis, KTH - Royal Institute of Technology, Stockholm, Sweden, ISBN 978-91-7501-465-4, November 2012.

### 2.10.5 Presentations

Lönn, Henrik: Supporting the Engineering of Electrical Vehicle Systems, Electric Vehicle ICT-Infrastructure, Berlin, 23rd March 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, 31th May 2011

Yiannis Papadopoulos, EAST-ADL and HIP-HOPS: Model-based design and evaluation, Seminar, Flemish Mechatronics institute, Leuven, December 2011

Lönn Henrik and Rolf Johansson: Supporting ISO26262 with EAST-ADL, SAFE project Seminar, February 2012

Lönn, Henrik: Support for ISO 26262 in the EAST-ADL/AUTOSAR context. BeSafe Seminar, Gothenburg, May 2012

Lönn, Henrik: Support for ISO 26262 in the EAST-ADL/AUTOSAR context, IQPC Conference Experiences with ISO 26262, 2012

DeJiu Chen, Dagstuhl Seminar 12272: Architecture-Driven Semantic Analysis of Embedded Systems, July. 2012

Lönn, Henrik: MAENAD Project status for EUCAR Integrated Safety Board, 17th Sept 2012

Henrik Lönn: Model-based Analysis & Engineering of Novel Architectures for Dependable Electric Vehicles, 3rd European Green Cars Initiative Clustering Event, July 2012

Lönn, Henrik: Models Meeting Automotive Design Challenges, ECMFA, July 2012

Ernest Wozniak: MAENAD: Model-based Analysis & Engineering of Novel Architectures for Dependable Electric Vehicles, First Workshop on European Industrial & Academic Collaborations on Real Time and Embedded Systems Modeling and Analysis (EIAC-RTESMA), 'July 2012

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Yiannis Papadopoulos, EAST-ADL and HIP-HOPS: Model-based design and evaluation, Seminar, ITI GmbH office, Dresden, January 2012

Renato Librino: La sicurezza funzionale dei sistemi "off the shelf" (SEooC) secondo l'ISO 26262 e le metodologie di sviluppo per l'integrazione tra OEM e componentisti realizzate in MAENAD con CRF, Volvo e Continental; National Instruments Automotive Forum 2012, Turin (Italy), June 6th 2012.

Oscar Ljungkrantz: Support for ISO26262 in EAST-ADL/AUTOSAR context, IQPC Conference "Experiences with ISO 26262", Nov 2012

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Henrik Lönn: ISO2626 and Collaborative Environment: Models as Enabler, presentation at Elektronik i Fordon, Göteborg, Sweden, 2013

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Henrik Lönn, Mark-Oliver Reiser: "Variability in a System Modelling Context: The EAST-ADL Approach", presentation on AutomotiveVariant Con 2013, Berlin, Nov. 28, 2013.


**Figure 6. Mark-Oliver Reiser co-presenting at the Automotive Variantcon 2013 (we.CONECT)**

**Figure 7. DeJiu Chen participating the Dagstuhl Seminar 12272 on Architecture-Driven Semantic Analysis of Embedded Systems (http://www.dagstuhl.de/de/programm/kalender/semhp/?semnr=12272)**

## 3 Summary

There are various artifacts channels for project dissemination, and dissemination of EAST-ADL and related technology solutions 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, workshops) or general public (IGI Encyclopedia, Wikipedia,). We believe these all are relevant in regard to the overall objectives of MAENAD.