

OOONEIDA Annual Report 2007

Members Report

2007 was a banner year for OOONEIDA with significant progress achieved across a wide range of activities.

O3neida Europe Asbl was founded as the fully-independent European node of OOONEIDA.

O3neida Europe joined several other OOONEIDA members and other European-based entities to submit the MEDEIA project to the European Commission under the Framework 7 R&D program. The project was approved, funding negotiated and MEDEIA is now up and running.

An Internet-based collaboration platform was developed and put into place by OOONEIDA for the operation of the Compliance Profiles Working Group whose membership base was expanded.

The Beta testing of new industrial products was also expanded to more test sites and a collaboration platform for results sharing and discussions will be established by March 2008 for this group. OOONEIDA industrial partners and academics are encouraged to contact Allan Martel to become part of this testing program.

INDIN '07 was a great success with a strong OOONEIDA presence in conference tracks and presentations. The Industrial Day, sponsored generously by Siemens, was also very successful and provided industry and academia attendees with much food for thought.

OOONEIDA continued to expand its scope in response to member interest to include Energy Management, Internet Delivery of Health Services, and Building Automation.

Several new books are in the final editing stages as part of the ISA / OOONEIDA series on industrial automation. There should be about eight books in the series published by the end of 2008.

OOONEIDA has begun to examine standards harmonisation and will bring forth a proposal in 2008 regarding the IEC 61131 and IEC 1499 standards.

OOONEIDA also continues its networking activities and its participation in projects such as Smart Assembly (USA).

Antonio Valentini
CEO OOONEIDA

1. O3neida Europe Asbl Node Establishment

Consistent with the network-building priority for OOONEIDA, a European node was established in 2007. **O3neida Europe Asbl** is a fully independent not-for-profit association incorporated under the laws of Belgium.

O3neida Europe has its own Board of Directors and sets its own policies and operating procedures. Antonio Valentini is the President of O3neida Europe Asbl. Allan Martel is Vice President, Operations and Luca Ferrarini is Vice President, Technology. O3neida Europe Asbl is also responsible for its own financial affairs, including banking, accounting, etc.

With the establishment of O3neida Europe, OOONEIDA Inc. the not-for-profit Canadian company has shifted its focus somewhat to concentrate on North American network building and to lay the foundations for the establishment in the future of O3neida Asia.

OOONEIDA Inc. and O3neida Europe Asbl coordinate their activities closely and both organisations have agreed to full reciprocity with respect to memberships. This means that any member of one organisation is automatically accepted as a full member in the other organisation.

This structure means that both organisations have a common membership base and that information sharing and collaboration potential will be enhanced.

An O3neida Europe Web Page is under development now and should be available by the end of March, 2008.

2. MEDEIA

O3neida Europe Asbl is a partner in the European Commission MEDEIA project funded within the 7th Framework Program. The O3neida Europe role centres on developing user requirements analysis and use cases as well as on project results dissemination.

The focus of the MEDEIA project is on “automation objects” or “automation components” as the basis for developing a model-based embedded systems design environment. The MEDEIA project’s objective is a radical improvement in productivity for the development of embedded control systems within the industrial automation sector.

The project goal of reducing system design time by 25% will be achieved through the systematic development of the following elements:

1. A formal framework for model-driven component-based development of embedded control
2. An easily - understandable modelling method designed for use by domain experts
3. An integrated modelling of diagnostics
4. The integrated simulation and verification of systems design
5. An automatic, embedded, and platform specific code-generation for the deployment of control software to heterogeneous automation hardware
6. A series of proof-of-concept demonstrations on real-world applications by project partners in the application domain of robotics, manufacturing, power generation and automatic packaging.

The following figures show the flexible design flow of the MEDEIA approach and the main design element Automation Components (ACs).

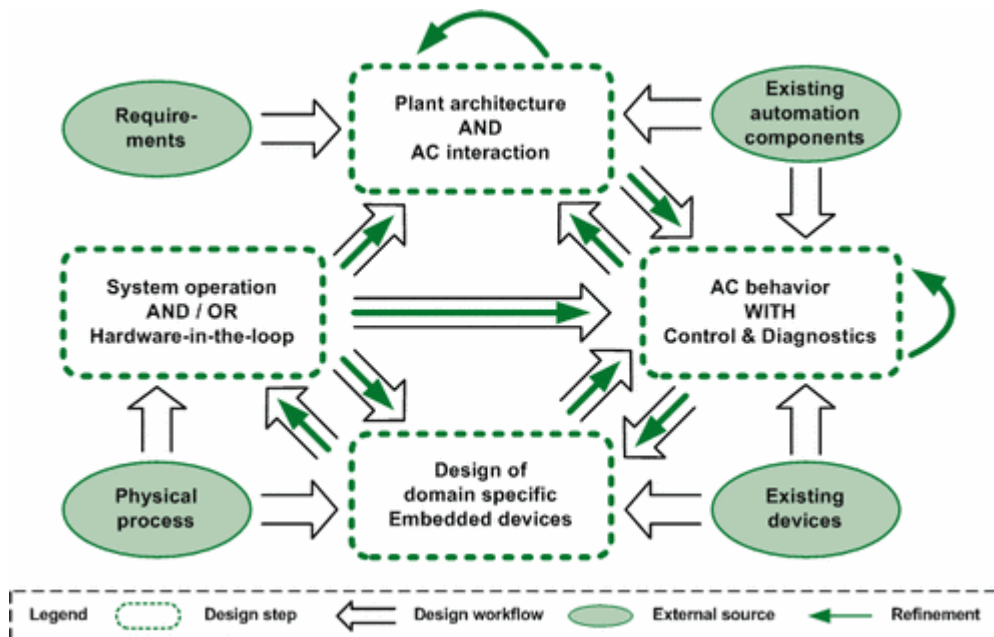
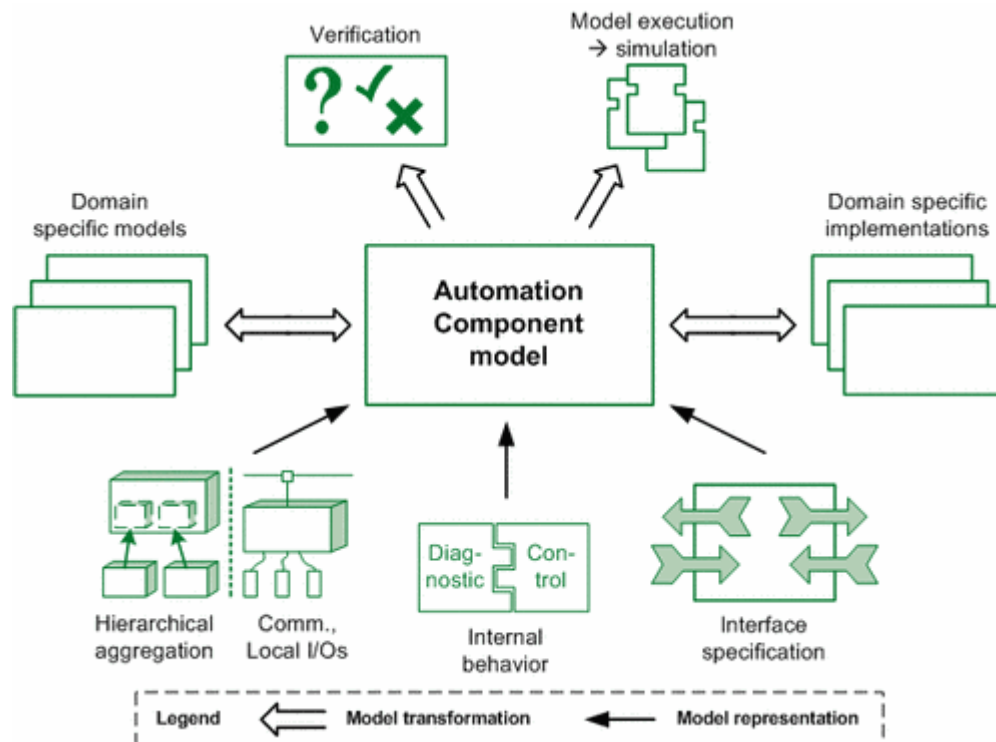


Figure: Flexible design flow



For more information on MEDEIA, please see www.medeia.eu.

3. Compliance Profiles WG

A new collaboration platform has been established for the Compliance Profiles Working Group. In early 2008 Allan Martel will assume an operational support role for this group ensuring that the work tasks of the group are defined and allocated among sub groups with milestones and deadlines developed on a consensus basis. The first of these sub groups will be the development around the requirement to plan and deliver the "Special Session" track and papers for the Indin '08 conference.

4. OOONEIDA Members Products Beta Testing Program

The Products Beta Testing Group has been expanded and a new collaboration platform will be in place for their use in early 2008. The current product under testing is the latest version of the ICS Triple IsaGRAF product. It is important to note that product testing within OOONEIDA is not a form of sales support offered preferentially to any OOONEIDA member company. Rather, the Beta testing Program is a research activity done among academic partners interested in further developments of a standard and the development of open and standard compliant products to enhance the automation sector. More specifically, OOONEIDA is prepared to support any product or services vendor who is a member of OOONEIDA in a similar manner.

5. INDIN '07 Industrial Day

The INDIN '07 conference was a great success with excellent presentations and an interesting and informative Industrial Day. OOONEIDA wishes to thank conference organisers and, particularly, SIEMENS Corporation for their outstanding support of the Industrial Day.

The Industrial Day at the INDIN 2007 Conference was held Friday July 27, 2007 at the SIEMENS facility in Vienna Austria. The facility selected for the event limited registration to 120 participants.

Interest in the Industrial Day was unexpectedly high meaning the registrations were closed off when the 120 limit was reached and meaning that several interested INDIN registered attendees were unable to participate.

Nonetheless, more than half of the INDIN conference attendees also attended the Industrial Day. Additionally, several industry members not registered for the INDIN Conference itself, registered for and attended the Industrial Day, and industry was very well represented among Industrial Day attendees.

The Industrial Day discussions were rather wide ranging but centred on upcoming trends in industrial automation.

The morning session was devoted to SIEMENS including their overview of current and future automation trends and a tour of their facility. After an overview of SIEMENS operations world wide, SIEMENS presented their new Digital Factory Product emphasising its openness and adaptability in the hands of end users. Finally, Mr. Renner presented what could be described as a pragmatist's view from "outside the automation box" of various issues facing firms attempting to improve productivity performance through various interconnected means, including industrial automation.

The afternoon session was organised and hosted by OOONEIDA and consisted of two keynote presentations and a moderated general discussion.

Ms. G. Popovic of the European Commission delivered the first keynote address. This presentation discussed the structure of the FP6 and FP7 delivery mechanisms and invited attendees to make submissions to open and scheduled calls for financial support related to R&D projects.

Mr. A. Martel of OOONEIDA presented a developing R&D project on Smart Assembly originating in the USA and led by several US - based multi-national end user firms including Boeing, GM, Ford, Proctor & Gamble, and non US – based firms such as OOONEIDA, Rolls Royce and Siemens. This R&D project is seeking international collaboration links and OOONEIDA is responsible for developing these linkages.

The moderated discussion session gave the opportunity for several industrial attendees to comment on their vision of the critical issues facing industry in the automation context.

Participants in this session included SIEMENS, Rockwell Automation, Robert Bosch Ltd., Mitsubishi Electric, Emerson Electric, ICS Triplex, EDF, Yokagawa Electric Corporation, Schneider Electric, PROFACTOR, and several smaller European-based firms.

There was significant interaction among audience members with respect to the theme of how to calibrate university research with reference to real industry requirements.

There were also detailed discussions relating to the challenges of developing and then gaining broad industrial acceptance for new automation development standards such as IEC 61499. The convergence of standards as an interdisciplinary challenge relating to the entire product life cycle was also discussed in detail.

Finally, with reference to a stimulating presentation by Mr. Renner of SIEMENS, there were detailed discussions of how the Industrial Day at INDIN 2008 might be structured to address some of the key issues raised.

OOONEIDA agreed to take on a coordinating role to enable the continuation of the discussions relating to these three areas between now and INDIN '08.

6. New Fields of Interest

New fields of interest for OOONEIDA include: energy management as a sign of our productive collaboration with EDF; health service over the internet protocol as a result of our collaboration within the HOIP organization; building automation, as a natural expansion of our automation interests.

7. New books in ISA OOONEIDA series

Five new books are currently in the editing process for inclusion within the ISA / OOONEIDA series on Industrial Automation. The books include:

- i. ANIPLA Conference Proceedings
- ii. Real Time Execution Environment for Control Applications
- iii. Agile and Adaptive Holonic Architectures for Manufacturing Control
- iv. Domain Ontologies for reasoning Machines in Factory Automation
- v. Safety Profiles for Real-Time Ethernet-based Industrial Automation Networks

OOONEIDA expects to publish as many as eight new titles in the series in 2008. Books will be published as either eBooks (shorter volumes) or in traditional styles.

8. Standards Harmonisation Initiative

OOONEIDA participated in a week long IEC 61499 Technical Working Group Meeting in January 2007 along with Technical Group members and Elco van der Wal Managing Director of PLC Open.

The meeting reviewed over one hundred issues raised by PLC Open members related to the IEC 61499 standard. Each question was considered carefully and responded to in a fulsome manner.

Subsequent to this meeting OOONEIDA began consideration of further efforts that might be possible regarding better harmonisation of standards as between the IEC 61311 and IEC 61499 standards.

A small, informal working group of OOONEIDA members has been formed with a mandate to develop a plan for action to be presented to the OOONEIDA Board of Directors for their review in early 2008. One important part of the plan to be developed includes consultations with OOONEIDA member firms who are also PLC open members to solicit their advice as to how best to proceed with this activity.

9. Smart Assembly

OOONEIDA continues its role regarding dissemination and international liaison for the Smart Assembly project in the USA. Recently, an automotive sector case study was prepared under the leadership of GM. This presentation was delivered to the Smart Assembly team at the ARC conference in February 2008.

Discussions are now under way with Boeing to develop an aerospace sector test case.

10. Networking

OOONEIDA continues its extensive networking activities in North America, Europe and Asia. These activities are designed to extend the reach of the networks and to enrich the existing relationships.