

### H2020 FRAMEWORK PROGRAMME ICT-01-2014: Smart Cyber-Physical Systems

### **PROJECT NUMBER: 645496**



### Agile, eXtensible, fast I/O Module for the cyber-physical era

### **D2.2** – Report on AXIOM Events

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Name	Role	Date
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Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 1 of 59

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### **TABLE OF CONTENTS**

GI	JOSSA	ARY	5	
Ex	Executive summary			
1	Intro	oduction	7	
	1.1	Document structure	7	
	1.2	Relation to other deliverables	7	
	1.3	Tasks involved in this deliverable	7	
2	Diss	semination Strategy of Events	7	
	2.1	Scientific Events	8	
	2.1.	1 SmartCPS Concertation Event 2017	8	
	2.1.2	2 HiPEAC 2017	9	
	2.1.3	3 6th JLESC Workshop	12	
	2.1.4	4 Workshop on FPGAs for scientific simulation and data analytics	12	
	2.1.5	5 GStreamer Conference 2016	13	
	2.1.0	.6 12th International Workshop on OpenMP (IWOMP 2016)	14	
	2.1.7	7 10th International Parallel Tools Workshop (IPTW)	14	
	2.1.8	8 IWES 2016	15	
	2.1.9	9 FPL 2016	15	
	2.1.	10 Science Communication Event	15	
	2.1.	11 Conference at the Instituto de Computação Univ. Estadual de Campinas	16	
	2.1.	12 Conference at the Programa de Pos-graduação em Informatica	17	
	2.1.	13 Workshop do Projeto Capes/DGPU	17	
	2.1.	14 5th JLESC Workshop	17	
	2.1.	15 Advanced Computing and Cyber-Physical Systems 2016, Collaboration Workshop	18	
	2.1.	16 Advanced Computing and Cyber-Physical System Collaboration Workshop	18	
	2.1.	ACM International Conference on Computing Frontiers 2016	19	
	2.1.	18 Artemis Spring Event 2016	20	
	2.1.	19 DATE 2016	23	
	2.1.2	20 TAMS4CPS Theme 3 EU Workshop	24	
	2.1.2	21 REFORM – Workshop on FPGAs for scientific simulation and data analytics	24	
	2.1.2	22 HiPEAC 2016	25	
		ble number: <b>D2.2</b> ble name: <b>Report on AXIOM Events</b>		

File name: AXIOM\_D22-v15.docx Page 3 of 59

	2.1.23	IEEE/IFIP Embedded and Ubiquitous Computing 2015	29
	2.1.24	HPC Advisory Council	30
	2.1.25	Euromicro DSD/SEAA 2015	30
	2.1.26	Ada-Europe 2015 - De-CPS workshop	31
	2.1.27	SAMOS XV 2015	32
	2.1.28	RRI-ICT 2015	33
	2.1.29	IEEE MECO 2015	35
	2.1.30	CHI2015	35
	2.1.31	HiPEAC Computing Systems Week	36
	2.1.32	Beyond Self-Aware Embedded Computing	37
	2.1.33	HiPEAC 2015	38
2	.2 Indu	strial Events	40
	2.2.1	The Innovation Radar 2016	40
	2.2.2	Embedded World 2016	42
	2.2.3	Embedded World 2015	44
2	.3 Ope	n-Source and Maker Community Events	46
	2.3.1	Maker Faire Rome 2016	46
	2.3.2	Students vs ICT 2016	48
	2.3.3	Workshop: Build your own Supercomputer with OmpSs, UDOO and Arduino	49
	2.3.4	Make/Florence 2015	53
	2.3.5	Maker Faire Rome 2015	54
	2.3.6	Italian Interaction Design Day	56
3	Confirma	tion of DoA objectives	58
4	Conclusi	on	58
Ref	erences		59

### TABLE OF FIGURES

FIGURE 1. AXIOM FLYERS AT HIPEAC 2017	
FIGURE 2. A NETWORKING SESSION AT HIPEAC 2017.	
FIGURE 3. ATTENDING A PRESENTATION AT ARTEMIS SPRING EVENT 2016	23
FIGURE 4. EXPLORING THE CONNECTION BETWEEN EMBEDDED SYSTEMS AND CYBER-PHYSICAL SYSTEMS.	23
FIGURE 5. AXIOM DISSEMINATION MATERIALA AT HIPEAC 2016.	28
FIGURE 6. HIPEAC 2016.	29
FIGURE 7. CARLOS ALVAREZ (BSC) EXPLAINING THE PAPER.	
FIGURE 8. AN INTRODUCTION TO THE AXIOM PROJECT BY ANTONIO RIZZO (UNISI).	

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 4 of 59

Figure 9. An image from the talk, which was about examining the necessary step towards "aware" systems	37
FIGURE 10. POSTER PRESENTATION BY ROBERTO GIORGI.	39
FIGURE 11. AXIOM PROJECT ARTICLE ON THE HIPEAC INFO NEWSLETTER 41, PRESENTED DURING THE CONFERENCE	39
FIGURE 12. AXIOM-DEDICATED SPACE AT EMBEDDED WORLD 2016	44
Figure 13. AXIOM dissemination material at Embedded World 2015.	44
FIGURE 14. THE BANNER UP OF THE AXIOM PROJECT AT SECO/UDOO BOOTH AND EVIDENCE'S BOOTH	46
FIGURE 15. THE TWO DEMOS OF THE AXIOM PROJECT AT MAKER FAIRE ROME 2016	48
FIGURE 16. PROJECT COORDINATOR ROBERTO GIORGI PRESENTING THE WORKSHOP.	52
FIGURE 17. FRANCESCO MONTEFOSCHI (UNISI) PRESENTING THE WORKSHOP	52
FIGURE 18. PREPARING THE DEMOS FOR THE AXIOM PROJECT.	53
FIGURE 19. THE OFFICIAL BAG OF MAKE/FLORENCE 2016 AND THE AXIOM FLYER.	54
Figure 20. AXIOM at SECO/UDOO's booth at Maker Faire Rome 2015	55
FIGURE 21. AXIOM SCENARIOS PRESENTATION AT ITALIAN INTERACTION DESIGN DAY	57

### GLOSSARY

- H2020 Horizon 2020 Framework Programme
- WP Work Package
- CPS Cyber-physical system
- DoA Description of Action (acronym set by the European Commission)
- HPC High Performance Computing

## **Executive summary**

This document is meant to be a report of the events attended by the members of the AXIOM Project while representing the consortium, as well as events organized by the AXIOM Project as a consortium, or by its members.

Since the launch of the project, the AXIOM consortium has followed a multifaceted approach in order to increase the efficiency of its communication. Dissemination material, publications and events have been our communication tools. The tight interconnection between these tools has turned out to be the key element of our strategy.

For what concern the events, the efforts of the Consortium have embraced all the three areas that we chose as the three most interesting fields to target, i.e.: the industrial field, the Maker Movement and the scientific community.

Initiatives towards these targets have been put into place from the start.

## 1 Introduction

This deliverable describes the efforts put into place by the AXIOM Project for what regards events.

### 1.1 Document structure

The document is structured this way:

- 1. Glossary, Executive Summary and Introduction
- 2. Dissemination Strategy of Events
  - a. Scientific Events
  - b. Industrial Events
  - c. Open-source and Maker Community

For each event, we have drawn up a dedicated report, which includes quantifiable metrics on the event.

### 1.2 Relation to other deliverables

Our activity as WP2 is to disseminate the other deliverables.

### 1.3 Tasks involved in this deliverable

In order to realize this deliverable we have collaborated with all the members of the AXIOM Project. Such a collaboration has been important not only to keep every partner on the same page, but also to ensure the best possible outcome for the project.

The tasks accomplished by the AXIOM Project to make these events happen have been:

- Research;
- Paper Publications;
- Attending major conferences in regard to HPC and cyber-physical systems;
- Presentation of such papers at some of these conferences;
- Preparing dissemination material to expose for events in the maker / embedded / industrial open-source field;
- Preparing presentation and workshop for such events.

# 2 Dissemination Strategy of Events

The following section aims at being a data-driven report of the events in which the AXIOM Project has been disseminated.

For each event, we have done a dedicated report, which includes metrics on the event in order to quantify the outcome of our work, including information such as:

- the name of the event;
- the location of the event;
- the date of the event;
- a link to the event;

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 7 of 59

### Project: **AXIOM - Agile, eXtensible, fast I/O Module for the cyber-physical era** Grant Agreement Number: **645496**

Call: ICT-01-2014: Smart Cyber-Physical Systems

- the main activity pursued by AXIOM at the event;
- the number of people attending the event if reported;
- the number of people that we've managed to engage at the event;
- the topic of the event;
- resources and dissemination activities put into place for the event.

For each event, we have followed a strategy encompassing all media, including social media, the AXIOM blog and blogs of our partners. We have put efforts to shoot photos and videos during the event and immediately share them on social media, in order not only to create an online presence of the project, but also to drive people that were present at the event to visit our booth.

To highlight such a multifaceted strategy, that mixes online dissemination with physical presence at the most important events, we have done a thorough report.

The following report in fact includes not only the events we have attended or organized, but also the resources we have produced for the events, as well as the dissemination activities we have put into place to maximize the outcome.

### 2.1 Scientific Events

Speaking of the academic domain, we have participated at 19 conferences since the launch of the AXIOM Project. The AXIOM Project consortium and its members have given 34 presentations since the start of the project. All of them are available not only in this deliverable, but also on the AXIOM website at the following address: <u>http://www.axiom-project.eu/presentations/</u>

We have attended 16 workshops, organized 1 workshop, presented 7 posters and produced 1 model of flyer. Brochures, posters and business cards have been distributed at over 12 events.

There follows a list of the scientific events organized or attended by members of the AXIOM Project, ordered from the most recent attended to the least recent. Follows a dedicated report for each and any scientific event in the list above. There are several related publications [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12].

### 2.1.1 SmartCPS Concertation Event 2017

Name of the event: SmartCPS Concertation Event 2017.

Location of the event: Brussels, Belgium.

Date of the event: January 30, 2017.

Link to the event: <a href="http://www.road2cps.eu/brussels.html">http://www.road2cps.eu/brussels.html</a>

Main activity: Presentation held by Paolo Gai of the AXIOM Project.

Topic of the event: cyber-physical systems.

### Resources and dissemination activities:

• Presentation: <u>http://www.axiom-project.eu/wp-</u>

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 8 of 59

content/uploads/2017/01/170130\_AXIOM\_SmartCPS\_v4.pptx.pdf

- Blog post: <u>http://www.axiom-project.eu/2017/01/axiom-will-be-presented-at-smartcps/</u>
- Facebook: https://www.facebook.com/theaxiomproject/posts/642767335906785
- Linkedin: https://www.linkedin.com/groups/8294592/8294592-6224525594093191168
- Twitter: <u>https://twitter.com/axiom\_project/status/818758850165833729</u>

### 2.1.2 HiPEAC 2017

Name of the event: HiPEAC 2017

Location of the event: Stockholm, Sweden.

Date of the event: January 23-25, 2017.

Link to the event: https://www.hipeac.net/2017/stockholm/

**Main activity:** Presentation held by Project Coordinator Roberto Giorgi of the AXIOM Project. Also, about 50 flyers were distributed at the event.

People attending the event: 600 delegates.

People engaged at the event: around 50.

**Topic of the event:** computer architecture, programming models, compilers and operating systems for embedded and general-purpose systems.

### **Resources and dissemination activities:**

- Presentation: <u>http://www.axiom-project.eu/wp-content/uploads/2015/08/giorgi150120-axiom\_poster\_hipeac\_0902.pdf;</u>
- Twitter:
  - <u>https://twitter.com/axiom\_project/status/818509632155041794https://twitter.com/axiom\_project/status/818509632155041794</u>
  - https://twitter.com/axiom\_project/status/823567569194012673https://twitter.com/axi om\_project/status/823567569194012673
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- Facebook Album:

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Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 9 of 59

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File name: AXIOM\_D22-v15.docx Page 10 of 59

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- Blog post:
  - <u>http://www.axiom-project.eu/2017/01/axiom-at-hipeac-2017/http://www.axiom-project.eu/2017/01/axiom-at-hipeac-2017/</u>
  - <u>http://www.axiom-project.eu/2017/01/the-axiom-project-will-be-presented-at-the-hipeac-conference-2017/http://www.axiom-project.eu/2017/01/the-axiom-project-will-be-presented-at-the-hipeac-conference-2017/</u>
  - <u>http://www.axiom-project.eu/2017/01/the-axiom-project-will-be-presented-at-the-hipeac-conference-2017/</u>
  - <u>http://www.axiom-project.eu/2017/01/the-axiom-project-will-be-presented-at-the-hipeac-conference-2017/</u>



Figure 1. AXIOM flyers at HiPEAC 2017.

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM D22-v15.docx Page 11 of 59



Figure 2. A networking session at HiPEAC 2017.

### 2.1.3 6th JLESC Workshop

Name of the event: 6th JLESC Workshop.

Location of the event: RIKEN AICS, Japan.

Date of the event: November 30-December 2, 2016.

Link to the event: <a href="https://jlesc.github.io/events/6th-jlesc-workshop/">https://jlesc.github.io/events/6th-jlesc-workshop/</a>

Main activity: Presentation by Carlos Alvarez entitled "Performance of High level FPGA accelerators".

People attending the event: 161.

Topic of the event: programming models, field programmable gate array, HPC.

**Resources and dissemination activities:** 

• Twitter, by BSC: https://twitter.com/BSC\_CNS/status/614367621887193089

### 2.1.4 Workshop on FPGAs for scientific simulation and data analytics

Name of the event: Workshop on FPGAs for scientific simulation and data analytics.

Location of the event: Urbana-Champaign (IL, USA).

Date of the event: October 12-13, 2016.

Link to the event: http://www.ncsa.illinois.edu/Conferences/FPGA16/agenda.html

Main activity: Presentation by Xavier Martorell of the talk "OmpSs on FPGAs".

**People attending the event**: about 35.

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 12 of 59

### People engaged at the event: 25 presenters.

**Topic of the event**: Use of FPGAs for computing and acceleration and research on application exploitation on FPGAs.

### 2.1.5 GStreamer Conference 2016

Name of the event: GStreamer Conference 2016.

Location of the event: Berlin, Germany.

Date of the event: October 10-11, 2016.

#### Link to the event:

https://gstreamer.freedesktop.org/conference/2016/https://gstreamer.freedesktop.org/conference/2016/

**Main activity**: Presentation held by Nicola Bettin (VIMAR), Daniel Jimenez-Gonzalez (BSC), Xavier Martorell (BSC), Pierangelo Nichele (VIMAR), Alberto Pomella (VIMAR).

#### **People engaged at the event**: 40

Topic of the event: Gstreamer, an open source multimedia framework.

#### Resources and dissemination activities:

- Presentation: <u>https://gstreamer.freedesktop.org/data/events/gstreamer-</u> conference/2016/Nicola%20Bettin%20-%20Feature%20Detection%20Plugins%20Speedup%20by%20OmpSsFPGA.pdfhttps://gstrea mer.freedesktop.org/data/events/gstreamer-conference/2016/Nicola Bettin - Feature Detection Plugins Speedup by OmpSsFPGA.pdf
- Twitter:
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- Google Plus
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Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 13 of 59

- <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/Qq4cNLTz1Kdhttps://plus.google.com/b/106077641661897235281/</u> +Axiom-projectEu/posts/Qq4cNLTz1Kd
- Linkedin: https://www.linkedin.com/groups/8294592/8294592-6201340476688203776

### 2.1.6 12th International Workshop on OpenMP (IWOMP 2016)

Name of event: 12th International Workshop on OpenMP (IWOMP 2016).

Date of the event: October 5-7, 2016.

Location: Nara, Japan.

Link to the event: <a href="http://iwomp2016.riken.jp">http://iwomp2016.riken.jp</a>

**Main activity**: Presentation The secrets of the accelerators unveiled: Tracing heterogeneous executions through OMPT.

Topic of the event: OpenMP

### 2.1.7 10th International Parallel Tools Workshop (IPTW)

Name of the event: 10th International Parallel Tools Workshop.

Location of the event: Stuttgart, Germany.

Date of the event: October 4-5, 2016.

Link to the event: http://toolsworkshop.hlrs.de/2016/

**Main activity**: Presentation by Michael Wagner entitled "Tracing heterogeneous executions through OMPT".

People attending the event: about 20.

People engaged at the event: 11 presenters.

**Topic of the event**: state-of-the-art of parallel programming tools, ranging from debugging tools, performance analysis and best practices in integrated developing environments for parallel platforms (from the website).

#### **Resources and dissemination activities:**

• Proceedings: will be available from April/June 2017

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 14 of 59

### 2.1.8 IWES 2016

Name of the event: IWES 2016

Location of the event: Pisa, Italy.

Date of the event: September 19-20, 2016.

Link to the event: http://retis.sssup.it/iwes/program.htm

**Main activity**: Presentation, entitled "AXIOM: A 64-bit scalable embedded system including Arduino socket and on-chip FPGA", by Project Coordinator Roberto Giorgi.

Topic of the event: the event consisted in a workshop of embedded systems.

#### **Resources and dissemination activities:**

• Presentation: <u>http://www.axiom-project.eu/wp-content/uploads/2017/02/giorgi160919-iwes-v2-1-1.ppt</u>

### 2.1.9 FPL 2016

Name of the event: FPL 2016.

Location of the event: SwissTech Convention, Centre Lausanne, Switzerland.

Date of the event: August 29 - September 2, 2016.

Link to the event: http://www.fpl2016.org/http://www.fpl2016.org/

**Main activity**: Presentation held by Dionisios N. Pnevmatikatos (FORTH), entitled "AXIOM: Enabling Parallel-Processing in Cyber-Physical Systems", as part of the talk "Reconfigurable Computing — From Embedded Systems to Reconfigurable Hyperscale Servers".

**Topic of the event**: Field-programmable logic, reconfigurable computing, reconfigurable system architectures, applications, embedded processors, design automation methods.

#### **Resources and dissemination activities:**

• Presentation: <u>http://www.axiom-project.eu/wp-content/uploads/2016/09/2016-09-02-</u> <u>AXIOM-FPL-WRC-Final.pdf</u>

### 2.1.10 Science Communication Event

Name of the event: Science Communication Event.

Location of the event: Manchester, UK.

Date of the event: July 24, 2016.Deliverable number: D2.2Deliverable name: Report on AXIOM EventsFile name: AXIOM\_D22-v15.docxPage 15 of 59

### Link to the event:

https://ec.europa.eu/research/conferences/2016/scicomm2016/index.cfm?pg=abouthttps://ec.europa.eu/research/conferences/2016/index.cfm?pg=about

**Topic of the event**: the event was meant to be a workshop to improve the dissemination capabilities of the projects attending the event, and an opportunity to reflect on the best methods to inform the scientific community as well as how to publicize results to all citizens.

### **Resources and dissemination activities:**

- Twitter:
  - https://twitter.com/axiom\_project/status/757122488224649216https://twitter.com/axi om\_project/status/757122488224649216
  - https://twitter.com/axiom\_project/status/757127132539674625https://twitter.com/axi om\_project/status/757127132539674625
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### 2.1.11 Conference at the Instituto de Computaçao Univ. Estadual de Campinas

Name of the event: Conference at the Instituto de Computação Univ. Estadual de Campinas.

Location of the event: Universidade Estadual de Campinas, Sao Paulo, Brazil.

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 16 of 59

Date of the event: July 4, 2016.

Link to the event: http://www.ic.unicamp.br/enhttp://www.ic.unicamp.br/en

Main activity: Presentation held by Xavier Martorell (BSC), entitled "OmpSs on Embedded Hardware".

Topic of the event: embedded hardware, programming models.

# 2.1.12 Conference at the Programa de Pos-graduaçao em Informatica

Name of the event: Conference at the Programa de Pos-graduação em Informatica;

Location of the event: In Universidade de Brasilia, Brasilia, Brazil.

Date of the event: July 1, 2016.

Link to the event: <u>http://www.unb.br/http://www.unb.br/</u>

Main activity: Presentation of "OmpSs on Embedded Hardware", held by Xavier Martorell (BSC).

Topic of the event: embedded hardware, programming models.

### 2.1.13 Workshop do Projeto Capes/DGPU

Name of the event: June 30, 2016

Location of the event: Universidade de Brasilia, Brasilia, Brazil.

Link to the event: http://www.unb.br/http://www.unb.br/

Main activity: Presentation held by Xavier Martorell (BSC) entitled "Hands-on session on OmpSs@FPGA".

Topic of the event: programming models, field programmable gate array.

### 2.1.14 5th JLESC Workshop

Name of the event: 5th JLESC Workshop.

Location of the event: Lyon, France.

Date of the event: June 27-29, 2016.

Link to the event: https://jlesc.github.io/events/5th-jlesc-workshop/https://jlesc.github.io/events/5th-Deliverable number: D2.2 Deliverable name: Report on AXIOM Events File name: AXIOM D22-v15.docx Page 17 of 59 jlesc-workshop/

Main activity: Presentation by Carlos Alvarez entitled "OmpSs FPGA support".

Topic of the event: programming models, field programmable gate array, HPC.

### 2.1.15 Advanced Computing and Cyber-Physical Systems 2016, Collaboration Workshop

Name of the event: Advanced Computing and Cyber-Physical Systems 2016 Collaboration Workshop

Location of the event: Bedford hotel, Brussels.

Date of the event: June 17, 2016.

Link to the event: <u>https://www.hipeac.net/roadshow/events/4/advanced-computing-and-cyber-physical-systems-2016-collaboration-workshop-invitation-only/https://www.hipeac.net/roadshow/events/4/advanced-computing-and-cyber-physical-systems-2016-collaboration-workshop-invitation-only/</u>

**Main activity**: Workshop; Presentation entitled "AXIOM project. Modeling Multi-Board Communication in the AXIOM Cyber-Physical System" held by Project Coordinator Roberto Giorgi and Paolo Gai (EVI). The AXIOM Project and the other projects attending the event have been promoted by HiPEAC through the Collaboration Workshop, which is also available at this address as PDF: <u>http://www.axiom-project.eu/wp-content/uploads/2016/06/CollaborationWorkshops.pdf</u>.

**Topic of the event**: cyber-physical systems, advanced computing and mixed-criticality systems funded by the European Commission under the FP7 ICT Call 10 (2013), Horizon2020 ICT Call 1 (2014) and Call 4 (2015).

### **Resources and dissemination activities:**

• Presentation: <u>http://www.cister.isep.ipp.pt/ae2016/presentations/axiom.pdf</u>

Notes: the event was invitation only.<u>http://www.cister.isep.ipp.pt/ae2016/presentations/axiom.pdf</u>

http://www.cister.isep.ipp.pt/ae2016/presentations/axiom.pdf

### 2.1.16 Advanced Computing and Cyber-Physical System Collaboration Workshop

Name of the event: Advanced Computing and Cyber-Physical System Collaboration Workshop

Location of the event: Brussels.

Date of the event: June 14, 2016.

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 18 of 59

Link to the event: <u>https://www.hipeac.net/roadshow/events/4/advanced-computing-and-cyber-physical-systems-2016-collaboration-workshop-invitation-only/https://www.hipeac.net/roadshow/events/4/advanced-computing-and-cyber-physical-systems-2016-collaboration-workshop-invitation-only/</u>

**Main activity**: Presentation held by Project Coordinator Roberto Giorgi entitled "Brief introduction to the AXIOM project".

Topic of the event: cyber-physical systems and HPC.

### Resources and dissemination activities:

- Presentation: <u>http://www.axiom-project.eu/wp-content/uploads/2016/06/Brief-Introduction-to-the-AXIOM-Project.pdf</u>
- Blog post on BSC: <u>https://www.bsc.es/news/bsc-news/bsc-the-collaboration-workshop-advanced-computing-and-cyber-physical-systems-2016</u>

**Notes**: the event was invitation only. <u>https://www.bsc.es/news/bsc-news/bsc-the-collaboration-workshop-advanced-computing-and-cyber-physical-systems-2016</u>

https://www.bsc.es/news/bsc-news/bsc-the-collaboration-workshop-advanced-computing-and-cyber-physical-systems-2016

### 2.1.17 ACM International Conference on Computing Frontiers 2016

Name of the event: ACM International Conference on Computing Frontiers

Location of the event: Como, Italy.

Date of the event: May 16-18, 2016, Como, Italy.

Link to the event: http://www.computingfrontiers.org/2016/http://www.computingfrontiers.org/2016/

**Main activity**: Presentation held by Project Coordinator Roberto Giorgi entitled "Exploring Dataflow-based Thread Level Parallelism in Cyber-Physical Systems" (invited paper).

**Topic**: accelerated graph algorithms, scaling graph algorithms, compilers, runtime approaches, architectural optimization.

### Resources and dissemination activities:

- Presentation: <u>http://www.axiom-project.eu/wp-content/uploads/2017/01/p295-giorgi.pdf</u>
- Blog post on the AXIOM Project: <u>http://www.axiom-project.eu/2016/05/axiom-and-computing-frontiers-2016/http://www.axiom-project.eu/2016/05/axiom-and-computing-frontiers-2016/</u>
- Linkedin: https://www.linkedin.com/groups/8294592/8294592-

Deliverable number: D2.2 Deliverable name: Report on AXIOM Events File name: AXIOM\_D22-v15.docx Page 19 of 59

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- Google Plus: <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/MFxACuhB7Wnhttps://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/MFxACuhB7Wn</u>
- Twitter: https://twitter.com/axiom\_project/status/730413139418873857https://twitter.com/axiom\_proj ect/status/730413139418873857
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https://www.facebook.com/theaxiomproject/posts/534819290034924

### 2.1.18 Artemis Spring Event 2016

Name of the event: Artemis Spring Event 2016.

Location of the event: Vienna, Austria.

Date of the event: April 13-14, 2016.

Link to the event: <u>https://artemis-ia.eu/spring-event-2016.htmlhttps://artemis-ia.eu/spring-event-2016.html</u>

Main activity: Presentation held by Project Coordinator Roberto Giorgi.

Topic of the event: embedded and cyber-physical systems, Internet of Things, digital platforms.

### **Resources and dissemination**:

- Video of the presentation: <u>https://www.youtube.com/watch?v=WpGtobxx9h4https://www.youtube.com/watch?v=WpGtobxx9h4</u>
- Blog post: <u>http://www.axiom-project.eu/2016/05/axiom-at-vienna/http://www.axiom-project.eu/2016/05/axiom-at-vienna/</u>
- Facebook:
  - <u>https://www.facebook.com/theaxiomproject/posts/524531037730416https://www.facebook.com/theaxiomproject/posts/524531037730416</u>
  - <u>https://www.facebook.com/theaxiomproject/posts/524538957729624https://www.facebook.com/theaxiomproject/posts/524538957729624</u>
  - <u>https://www.facebook.com/theaxiomproject/posts/524587391058114https://www.facebook.com/theaxiomproject/posts/524587391058114</u>
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Deliverable name: **Report on AXIOM Events** 

File name: AXIOM\_D22-v15.docx Page 21 of 59

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Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** 

File name: AXIOM\_D22-v15.docx Page 22 of 59

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Figure 3. Attending a presentation at Artemis Spring Event 2016.



Figure 4. Exploring the connection between embedded systems and cyber-physical systems.

### 2.1.19 DATE 2016

Name of the event: Date 2016.

Location of the event: ICC, Dresden, Germany.

Date of the event: March 14-16, 2016.

Link to the event:

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 23 of 59

https://www.date-conference.com/date16/https://www.date-conference.com/date16/

**Main activity**: Project Coordinator Roberto Giorgi in the role of European Projects Chair of DATE Conference 2016.

People attending the event: around 1450 participants.

People engaged at the event: around 50.

**Topic of the event**: DATE – Design, Automation and Test in Europe – is an annual conference about Electronic System Design and Test.

### Resources and dissemination activities:

- Twitter:
  - o <a href="https://twitter.com/axiom\_project/status/582835753492840448">https://twitter.com/axiom\_project/status/582835753492840448</a>
  - <u>https://twitter.com/maubau/status/581500280577122304https://twitter.com/maubau/status/581500280577122304https://twitter.com/maubau/status/581500280577122304</u>
- Google Plus: <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/YxaxHautnABhttps://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/YxaxHautnAB</u>
- Blog post: http://www.axiom-project.eu/2015/03/roberto-giorgi-appointed-european-projectschair-of-date-2016/http://www.axiom-project.eu/2015/03/roberto-giorgi-appointed-europeanprojects-chair-of-date-2016/
- Facebook: <u>https://www.facebook.com/theaxiomproject/posts/432337336949787https://www.facebook.c</u> <u>om/theaxiomproject/posts/432337336949787</u>

### 2.1.20 TAMS4CPS Theme 3 EU Workshop

Name of the event: Theme 3 EU Workshop.

Location of the event: Brussels, Belgium.

Date of the event: February 9, 2016.

Link to the event: http://www.tams4cps.eu/theme-1-us-workshop/theme-3-eu-workshop/

Main activity: workshop.

**Topic of the event**: Real time modelling for autonomous, adaptive and collaborative cyber-physical systems.

https://www.facebook.com/theaxiomproject/posts/432337336949787

# 2.1.21 **REFORM – Workshop on FPGAs for scientific simulation and data analytics**

Name of the event: REFORM – Workshop on FPGAs for scientific simulation and data analyticsDeliverable number: D2.2Deliverable name: Report on AXIOM EventsFile name: AXIOM D22-v15.docxPage 24 of 59

Location of the event: Argonne National Laboratory, Building 240, Chicago.

Date of the event: January 21-22, 2016.

Link:

https://collab.cels.anl.gov/display/REFORM/Workshop20160121https://collab.cels.anl.gov/display/REFORM/Workshop20160121

Main activity: Workshop, held by Carlos Alvarez (BSC).

Topic of the event: FPGA.

Notes: the event was invitation only.

### 2.1.22 HiPEAC 2016

Name of the event: HiPEAC 2016.

Location of the event: Prague, Czech Republic.

Date of the event: January 18-20, 2016.

Link to the event: https://www.hipeac.net/2016/prague/https://www.hipeac.net/2016/prague/

Main activity: Presentation of the AXIOM poster. Also, about 100 flyers were distributed at the event.

People attending the event: around 640 participants

People engaged at the event: around 100

**Topic of the event**: computer architecture, programming models, compilers and operating systems for embedded and general-purpose systems.

### **Resources and dissemination activities:**

- Blog post: http://www.axiom-project.eu/2016/02/hipeac-2016-the-best-hipeac-conferenceever/http://www.axiom-project.eu/2016/02/hipeac-2016-the-best-hipeac-conference-ever/
- Linkedin: <u>https://www.linkedin.com/groups/8294592/8294592-6092271400570146817https://www.linkedin.com/groups/8294592/8294592-6092271400570146817</u>
- Google Plus:
  - https://plus.google.com/b/106077641661897235281/+AxiomprojectEu/posts/JP2bPCwTERMhttps://plus.google.com/b/106077641661897235281/ +Axiom-projectEu/posts/JP2bPCwTERM
  - <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/PRbPxAR84x2https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/PRbPxAR84x2</u>

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File name: AXIOM_D22-v15.docx Page 25 of 59
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- <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/4avfvwhJD6phttps://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/4avfvwhJD6p</u>
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- Twitter:
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Deliverable name: Report on AXIOM Events

File name: AXIOM\_D22-v15.docx Page 26 of 59

### Project: **AXIOM - Agile, eXtensible, fast I/O Module for the cyber-physical era** Grant Agreement Number: **645496**

### Call: ICT-01-2014: Smart Cyber-Physical Systems

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  - <u>https://www.facebook.com/theaxiomproject/posts/488571124659741https://www.facebook.com/theaxiomproject/posts/488571124659741</u>
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  - <u>https://www.facebook.com/theaxiomproject/posts/490444347805752https://www.facebook.com/theaxiomproject/posts/490444347805752</u>
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Deliverable name: Report on AXIOM Events

File name: AXIOM\_D22-v15.docx Page 27 of 59

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- https://www.facebook.com/theaxiomproject/photos/a.456576474525873.1073741829
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   /?type=3
- <u>https://www.facebook.com/theaxiomproject/posts/490842374432616https://www.facebook.com/theaxiomproject/posts/490842374432616</u>



Figure 5. AXIOM dissemination materiala at HiPEAC 2016.



Figure 6. HiPEAC 2016.

### 2.1.23 IEEE/IFIP Embedded and Ubiquitous Computing 2015

Name of the event: 13th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC 2015).

Location of the event: Porto, Portugal.

Date of the event: October 21-23, 2015.

### Link to the event:

http://paginas.fe.up.pt/~specs/events/euc2015/http://paginas.fe.up.pt/~specs/events/euc2015/

**Main activity**: Presentation held by Project Coordinator Roberto Giorgi entitled "Scalable Embedded System: Towards the Convergence of High-Performance and Embedded Computing".

**Topic of the event**: hardware architectures, design tools, software for embedded and ubiquitous computing, cyber-physical systems.

### Resources and dissemination activities:

- Presentation: <u>http://www.axiom-project.eu/wp-content/uploads/2015/08/giorgi151023-euc-v4.pdf</u> v4.pdfhttp://www.axiom-project.eu/wp-content/uploads/2015/08/giorgi151023-euc-v4.pdf
- Google Plus: https://plus.google.com/b/106077641661897235281/+AxiomprojectEu/posts/iSZ8NLMmF6Mhttps://plus.google.com/b/106077641661897235281/+Axio m-projectEu/posts/iSZ8NLMmF6M
- Facebook:
  - <u>https://www.facebook.com/theaxiomproject/posts/466842350165952https://www.facebook.com/theaxiomproject/posts/466842350165952</u>
  - <u>https://www.facebook.com/theaxiomproject/posts/466842473499273https://www.facebook.com/theaxiomproject/posts/466842473499273</u>

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 29 of 59

• Blog post: <u>http://www.axiom-project.eu/2015/10/scalable-embedded-system-towards-the-convergence-of-high-performance-and-embedded-computing/http://www.axiom-project.eu/2015/10/scalable-embedded-system-towards-the-convergence-of-high-performance-and-embedded-computing/</u>

http://www.axiom-project.eu/2015/10/scalable-embedded-system-towards-the-convergence-of-high-performance-and-embedded-computing/

### 2.1.24 HPC Advisory Council

Name of the event: HPC Advisory Council.

Location of the event: Málaga, Spain.

Date of the event: September 23, 2015.

Link to the event:

http://www.hpcadvisorycouncil.com/events/2012/Spain-Workshop/http://www.hpcadvisorycouncil.com/events/2012/Spain-Workshop/

Main activity: Presentation of the AXIOM Project by Roberto Giorgi, workshop.

**Topic of the event**: High Performance Computing systems, High Speed Networks, High Performance and Parallel I/O, Communication libraries such as MPI, SHMEM, PGAS.

### **Resources and dissemination activities:**

• Twitter: https://twitter.com/DEEPprojects/status/603209413323784192https://twitter.com/DEEPproje cts/status/603209413323784192

https://twitter.com/DEEPprojects/status/603209413323784192

### 2.1.25 Euromicro DSD/SEAA 2015

Name of the event: DSD 2015, 18th Euromicro Conference on Digital Systems Design.

Location of the event: Funchal, Madeira, Portugal.

Date of the event: August 26 - 28, 2015.

Link to the event: <u>https://paginas.fe.up.pt/~dsd-seaa-2015/dsd2015/https://paginas.fe.up.pt/~dsd-seaa-2015/dsd2015/</u>

Main activity: Presentation held by Carlos Alvarez (BSC) entitled "The AXIOM Software Layers".

**Topic of the event**: embedded, pervasive and high-performance digital and mixed hardware/software system engineering.

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 30 of 59

### **Resources and dissemination activities:**

• Presentation: <u>http://www.axiom-project.eu/wp-</u> content/uploads/2015/08/DSD\_15\_Presentation.pdfhttp://www.axiom-project.eu/wpcontent/uploads/2015/08/DSD\_15\_Presentation.pdf

http://www.axiom-project.eu/wp-content/uploads/2015/08/DSD\_15\_Presentation.pdf

### 2.1.26 Ada-Europe 2015 - De-CPS workshop

Name of the event: De-CPS workshop – Ada-Europe 2015.

Location of the event: Madrid, Spain.

Date of the event: July 22-26, 2015.

Link to the event: https://ae2015.dit.upm.es/De-CPS.htmlhttps://ae2015.dit.upm.es/De-CPS.html

**Main activity**: Presentation held by Carlos Alvarez (BSC) entitled "Simulating next-generation Cyber-physical computing platforms".

People attending the event: around 200 participants.

People engaged at the event: around 20 people.

**Topic of the event**: Workshop: Challenges and New Approaches for Dependable and Cyber-Physical System Engineering (De-CPS 2015).

### **Resources and dissemination activities:**

- Blog post: <u>http://www.axiom-project.eu/2015/08/simulating-next-generation-cyber-physical-computing-platforms-2/</u>
- Twitter:
  - https://twitter.com/axiom\_project/status/613269823112486912https://twitter.com/axi om\_project/status/613269823112486912
  - https://twitter.com/axiom\_project/status/613269485177470976https://twitter.com/axi om\_project/status/613269485177470976
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  - <u>https://twitter.com/alebagnato/status/743725940585312256https://twitter.com/alebag</u> nato/status/743725940585312256
- Facebook:
  - <u>https://www.facebook.com/theaxiomproject/posts/448867445296776https://www.facebook.com/theaxiomproject/posts/448867445296776</u>

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Figure 7. Carlos Alvarez (BSC) explaining the paper.

### 2.1.27 SAMOS XV 2015

**Name of the Event**: SAMOS XV: International Conference on Embedded Computer Systems: Architectures, Modeling and Simulation.

Location: Samos, Greece.

Date of the Event: July 20-23, 2015.

LinktotheEvent:http://samos-conference.com/Previous\_Samos\_Websites/SAMOS\_2015/http://samos-conference.com/Previous\_Samos\_Websites/SAMOS\_2015/

**Main activity**: Presented by Dionisios N. Pnevmatikatos during a special section entitled "Bridging FP7 Framework and Horizon 2020: Current and future priorities of Europe".

People attending the event: around 200 participants.

People engaged: around 40 people.

Topic of the event: embedded systems: architectures, modeling and simluation.

### **Resources and dissemination activities:**

- Presentation "Bridging FP7 Framework and Horizon 2020: Current and future priorities of Europe" <u>http://www.axiom-project.eu/wp-content/uploads/2015/08/SAMOS2015-v2.pdf</u>
- Blog post: http://www.axiom-project.eu/2015/07/axiom-presented-at-the-samos-conference/
- Linkedin: <u>https://www.linkedin.com/groups/8294592/8294592-6031903317469261825</u>
- Google Plus: <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/d38RQRp62JH</u>

Deliverable number: D2.2 Deliverable name: Report on AXIOM Events File name: AXIOM\_D22-v15.docx Page 32 of 59

- Facebook:
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- Twitter:
  - o https://twitter.com/axiom\_project/status/626016138623909888
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     om\_project/status/626016138623909888https://www.facebook.com/theaxiomproject/
     posts/440199112830276

### 2.1.28 RRI-ICT 2015

Name of the event: RRI-ICT 2015.

Location of the event: Brussels.

Date of the event: July 8-9, 2015.

Link to the event: <u>http://rri-ict.eu/http://rri-ict.eu/</u>

**Main activity**: the event was mostly meant to be a networking event and an occasion to reflect on the responsibilities of research in Europe and out of Europe and was mostly dedicated to H2020 projects.

#### Resource and dissemination activities:

- Blog post: <u>http://www.axiom-project.eu/2015/07/rri-ict-2015-brussels/http://www.axiom-project.eu/2015/07/rri-ict-2015-brussels/</u>
- Linkedin: <u>https://www.linkedin.com/groups/8294592/8294592-6029545645830922243https://www.linkedin.com/groups/8294592/8294592-6029545645830922243</u>
- Google Plus: <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/grwLCox74EGhttps://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/grwLCox74EG</u>
- Twitter:
  - <u>https://twitter.com/axiom\_project/status/618745007072247808https://twitter.com/axiom\_project/status/618745007072247808</u>
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• Facebook:

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Deliverable number: D2.2 Deliverable name: Report on AXIOM Events File name: AXIOM\_D22-v15.docx Page 34 of 59

### 2.1.29 IEEE MECO 2015

Name of the Event: IEEE MECO 2015.

Location: Budva, Montenegro.

Date of the Event: June 14-18, 2015.

#### Link to the Event:

http://www.ieee.org/conferences\_events/conferences/conferencedetails/index.html?Conf\_ID=35896ht tp://www.ieee.org/conferences\_events/conferences/conferencedetails/index.html?Conf\_ID=35896

**Main Activity:** Presentation head by Giovanni Burresi about "A field experience for a vehicle recognition system using magnetic sensors".

People attending the event: around 200 participants.

People engaged: around 40 people.

**Topic of the event:** Software and Hardware Architectures for Embedded Systems Systems on Chip (SoCs) and Multicore Systems Communications, Networking, Connectivity Sensors and Sensor Networks.

#### **Resources and dissemination activities:**

- Presentation entitled "A field experience for a vehicle recognition system using magnetic sensors": http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7181897
- Twitter: <u>https://twitter.com/axiom\_project/status/613665854123851776</u> <u>https://twitter.com/axiom\_project/status/613665854123851776https://twitter.com/axiom\_proj</u> <u>ect/status/613665854123851776</u>

### 2.1.30 CHI2015

Name of the Event: CHI2015 Workshop on Ecological Approach.

Location: Seul, South Korea.

Date of the Event: April 19, 2015.

Link to the Event: https://chi2015.acm.org/https://chi2015.acm.org/

**Main Activity:** Workshop head by Antonio Rizzo about "The AXIOM Project: CHI2015 Workshop on Ecological Approach".

People attending the event: around 2.900 participants.

People engaged: around 80 people.

Topic of the event: human computer interaction, human factors in computing systems

Resources and dissemination activities:

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 35 of 59

 Workshop Presentation entitled "The AXIOM Project: CHI2015 Workshop on Ecological Approach" <u>http://www.axiom-project.eu/wp-</u> <u>content/uploads/2015/08/EcologicalAXIOMSeul.ppt.pdf</u>

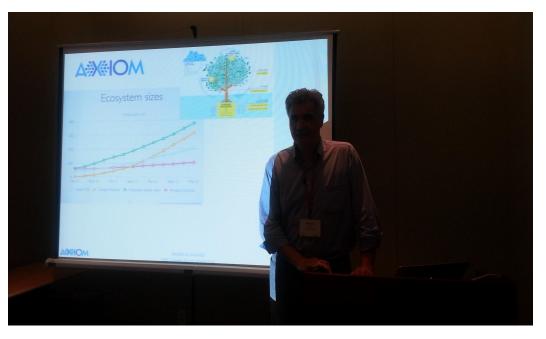


Figure 8. An introduction to the AXIOM Project by Antonio Rizzo (UNISI).

### 2.1.31 HiPEAC Computing Systems Week

Name of the event: HiPEAC Computing Systems Week.

Location of the event: Oslo, Norway.

Date of the event: May 7, 2015.

Link to the event: https://www.hipeac.net/csw/2015/oslo/https://www.hipeac.net/csw/2015/oslo/

**Main activity**: Presentation entitled "Runtime Support for Self-Awareness in Interconnected CPS Systems", presented by Dionisios N. Pnevmatikatos (FORTH). Also, roughly 15 flyers at the event were distributed.

People attending the event: around 200 participants.

People engaged at the event: around 15.

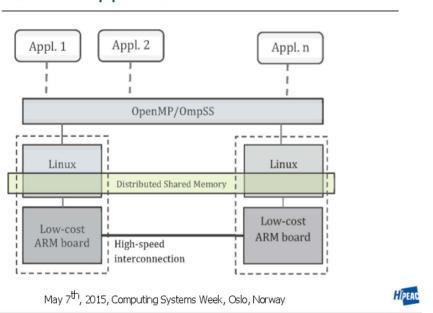
**Topic of the event**: computer architecture, programming models, compilers and operating systems for embedded and general-purpose systems.

### Resources and dissemination activities:

• Presentation: <u>http://www.axiom-project.eu/wp-content/uploads/2015/08/Runtime-Support-for-Self-Awareness-in-Interconnected-CPS-Systems.pdf</u>

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 36 of 59

- o Blog post: <u>http://www.axiom-project.eu/2015/05/beyond-self-aware-embedded-computing/</u>
- o Twitter: https://twitter.com/axiom\_project/status/601701613502345216



## **AXIOM Approach**

Figure 9. An image from the talk, which was about examining the necessary step towards "aware" systems.

## 2.1.32 Beyond Self-Aware Embedded Computing

Name of the event: Beyond Self-Aware Embedded Computing.

Location of the event: Oslo, Norway.

Date of the event: May 7, 2015.

Link to the event: <u>https://www.hipeac.net/events/activities/7231/beyond-self-aware-embedded-computing/https://www.hipeac.net/events/activities/7231/beyond-self-aware-embedded-computing/</u>

Main activity: Presentation of the paper.

Topic of the event: self-awareness in embedded computing.

**Resources and dissemination activities:** 

- Google Plus: <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/Ytx1N779vcuhttps://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/Ytx1N779vcu</u>
- Twitter: <u>https://twitter.com/axiom\_project/status/601701613502345216https://twitter.com/axiom\_proj</u> <u>ect/status/601701613502345216</u>
- Blog post: <u>http://www.axiom-project.eu/2015/05/beyond-self-aware-embedded-</u>

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 37 of 59

computing/http://www.axiom-project.eu/2015/05/beyond-self-aware-embedded-computing/

- Facebook: <u>https://www.facebook.com/theaxiomproject/posts/432339383616249https://www.facebook.c</u> <u>om/theaxiomproject/posts/432339383616249</u>
- Facebook Album: <u>https://www.facebook.com/theaxiomproject/posts/436793123170875</u> <u>https://www.facebook.com/theaxiomproject/posts/436793123170875https://www.facebook.com/theaxiomproject/posts/436793123170875</u>

## 2.1.33 HiPEAC 2015

Name of the event: HiPEAC 2015.

Location of the event: Amsterdam, Netherlands.

Date of the event: January 19-21, 2015.

Link to the event: https://www.hipeac.net/2015/amsterdam/https://www.hipeac.net/2015/amsterdam/

**Main activity**: Presentation of the AXIOM Presentation Poster, by Project Coordinator Roberto Giorgi, and exposition of AXIOM dissemination material at the AXIOM booth. About 100 flyers of the AXIOM Project were distributed to people attending the event.

**People attending the event:** around 630 participants

People engaged at the event: around 100.

**Topic of the event:** computer architecture, programming models, compilers and operating systems for embedded and general-purpose systems.

## **Resources and dissemination activities:**

- Poster: <u>http://www.axiom-project.eu/wp-content/uploads/2015/08/giorgi150120-axiom\_poster\_hipeac\_0902.pdfhttp://www.axiom-project.eu/wp-content/uploads/2015/08/giorgi150120-axiom\_poster\_hipeac\_0902.pdf
  </u>
- Blog post: http://www.axiom-project.eu/2015/01/hipeac-conference-2015/
- Twitter
  - https://twitter.com/axiom\_project/status/557532613829992448https://twitter.com/axi om\_project/status/557532613829992448
  - https://twitter.com/axiom\_project/status/557108931747917824
- Linkedin: <u>https://www.linkedin.com/groups/8294592/8294592-</u> 6015050598481739776https://www.linkedin.com/groups/8294592/8294592-6015050598481739776
- Video Interview: <u>https://youtu.be/5ySblCFw8AY</u>
- Google Plus: <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/FzH6ACT6yc7https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/FzH6ACT6yc7</u>
- Facebook: https://www.facebook.com/theaxiomproject/posts/432335903616597https://www.facebook.c

Deliverable number: D2.2 Deliverable name: Report on AXIOM Events File name: AXIOM\_D22-v15.docx Page 38 of 59

om/theaxiomproject/posts/432335903616597

https://www.facebook.com/theaxiomproject/posts/432335903616597

https://www.facebook.com/theaxiomproject/posts/432335903616597



https://www.facebook.com/theaxiomproject/posts/432335903616597

Figure 10. Poster presentation by Roberto Giorgi.

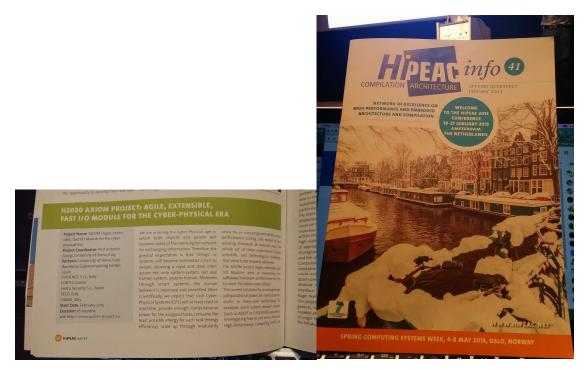


Figure 11. AXIOM Project article on the HiPEAC Info Newsletter 41, presented during the conference.

Deliverable number: D2.2 Deliverable name: Report on AXIOM Events File name: AXIOM\_D22-v15.docx Page 39 of 59

## 2.2 Industrial Events

Concerning events in the industrial domain, our main achievements have been the participation at Embedded World 2015, Embedded World 2016, with a dedicated space inside the UDOO's booth as well as dissemination material and various demos of our technology. These events have been exploited by the industrial members of the AXIOM consortium, strengthening our connections with the major manufacturing companies of FPGA architectures such as Xilinx. Also, SECO, as a member of our consortium, has been selected, together with other 39 European innovators, for the Innovation Radar Prize 2016, and even got selected as a finalist as "Horizon 2020 ICT Innovator - innovative excellence in Horizon 2020's digital research and innovation projects.

## 2.2.1 The Innovation Radar 2016

Name of the event: Innovation Radar Prize 2016

Location of the event: Bratislava, Slovakia.

Date of the event: September 26, 2016.

Link to the event: <u>https://ec.europa.eu/digital-single-market/en/innovation-</u>radarhttps://ec.europa.eu/digital-single-market/en/innovation-radar

## Resources and dissemination activities:

- Linkedin:
  - <u>https://www.linkedin.com/groups/8294592/8294592-6158622215345565697https://www.linkedin.com/groups/8294592/8294592-6158622215345565697</u>
  - <u>https://www.linkedin.com/groups/8294592/8294592-6163724574128119811https://www.linkedin.com/groups/8294592/8294592-6163724574128119811</u>
  - <u>https://www.linkedin.com/groups/8294592/8294592-</u> 6165912646043344899https://www.linkedin.com/groups/8294592/8294592-6165912646043344899</u>
  - <u>https://www.linkedin.com/groups/8294592/8294592-6166177552021876739https://www.linkedin.com/groups/8294592/8294592-6166177552021876739</u>
  - <u>https://www.linkedin.com/groups/8294592/8294592-</u> <u>6166886773856169984https://www.linkedin.com/groups/8294592/8294592-</u> <u>6166886773856169984</u>
  - <u>https://www.linkedin.com/groups/8294592/8294592-</u> 6179579429417680896https://www.linkedin.com/groups/8294592/8294592-6179579429417680896</u>
  - <u>https://www.linkedin.com/groups/8294592/8294592-</u> <u>6188743198970519556https://www.linkedin.com/groups/8294592/8294592-</u> <u>6188743198970519556</u>
- Blog post:

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 40 of 59

# • <u>http://www.axiom-project.eu/2016/09/seco-passes-the-first-phase-of-the-innovation-</u>

- radar-prize-2016/http://www.axiom-project.eu/2016/09/seco-passes-the-first-phaseof-the-innovation-radar-prize-2016/
- <u>http://www.axiom-project.eu/2016/10/innovation-radar-prize-2016-an-update-on-the-final-results/http://www.axiom-project.eu/2016/10/innovation-radar-prize-2016-an-update-on-the-final-results/</u>
- <u>http://www.axiom-project.eu/2016/08/vote-seco-for-the-innovation-radar-prize-2016/http://www.axiom-project.eu/2016/08/vote-seco-for-the-innovation-radar-prize-2016/</u>
- <u>http://www.axiom-project.eu/2016/07/seco-axiom-member-selected-for-the-innovation-radar-prize-2016/http://www.axiom-project.eu/2016/07/seco-axiom-member-selected-for-the-innovation-radar-prize-2016/</u>
- Google Plus
  - https://plus.google.com/b/106077641661897235281/+AxiomprojectEu/posts/MPqMjrQpbAChttps://plus.google.com/b/106077641661897235281/ +Axiom-projectEu/posts/MPqMjrQpbAC
  - https://plus.google.com/b/106077641661897235281/+AxiomprojectEu/posts/1onY5uNz91Shttps://plus.google.com/b/106077641661897235281/+ Axiom-projectEu/posts/1onY5uNz91S
  - https://plus.google.com/b/106077641661897235281/+AxiomprojectEu/posts/MrU9YWyJRgDhttps://plus.google.com/b/106077641661897235281 /+Axiom-projectEu/posts/MrU9YWyJRgD
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  - <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/CWRMNZxAd2Zhttps://plus.google.com/b/10607764166189723528</u> <u>1/+Axiom-projectEu/posts/CWRMNZxAd2Z</u>
  - <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/7CYhztqfGwzhttps://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/7CYhztqfGwz</u>
  - <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/ByPfoeSGMJGhttps://plus.google.com/b/106077641661897235281/</u> +Axiom-projectEu/posts/ByPfoeSGMJG
  - <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/iwrQZcpXfCUhttps://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/iwrQZcpXfCU</u>
- Twitter:
  - https://twitter.com/axiom\_project/status/752853860415336448https://twitter.com/axi om\_project/status/752853860415336448
  - https://twitter.com/axiom\_project/status/757959229324009474https://twitter.com/axi om\_project/status/757959229324009474
  - https://twitter.com/axiom\_project/status/760149293747535872https://twitter.com/axi om\_project/status/760149293747535872

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Deliverable name: **Report on AXIOM Events** File name: AXIOM D22-v15.docx Page 41 of 59

## Project: **AXIOM - Agile, eXtensible, fast I/O Module for the cyber-physical era** Grant Agreement Number: **645496**

### Call: ICT-01-2014: Smart Cyber-Physical Systems

- https://twitter.com/axiom\_project/status/760413426250309632https://twitter.com/axi om\_project/status/760413426250309632
- https://twitter.com/axiom\_project/status/760773484318425091https://twitter.com/axi om\_project/status/760773484318425091
- https://twitter.com/axiom\_project/status/760774692827521024https://twitter.com/axi om\_project/status/760774692827521024
- https://twitter.com/axiom\_project/status/761120233801121793https://twitter.com/axi om\_project/status/761120233801121793
- https://twitter.com/axiom\_project/status/771363533812539392https://twitter.com/axi om\_project/status/771363533812539392
- https://twitter.com/axiom\_project/status/773809975219089408https://twitter.com/axi om\_project/status/773809975219089408
- <u>https://twitter.com/robgiorgi/status/773893332527439872https://twitter.com/robgiorg</u> <u>i/status/773893332527439872</u>
- Facebook:
  - <u>https://www.facebook.com/theaxiomproject/posts/583683248481861https://www.facebook.com/theaxiomproject/posts/583683248481861</u>
  - <u>https://www.facebook.com/theaxiomproject/posts/581089545407898https://www.facebook.com/theaxiomproject/posts/581089545407898</u>
  - <u>https://www.facebook.com/theaxiomproject/posts/568806126636240https://www.facebook.com/theaxiomproject/posts/568806126636240</u>
  - https://www.facebook.com/theaxiomproject/posts/568408110009375https://www.facebook.com/theaxiomproject/posts/568408110009375
  - <u>https://www.facebook.com/theaxiomproject/posts/568025390047647https://www.facebook.com/theaxiomproject/posts/568025390047647</u>
  - <u>https://www.facebook.com/theaxiomproject/posts/567741996742653https://www.facebook.com/theaxiomproject/posts/567741996742653</u>
  - <u>https://www.facebook.com/theaxiomproject/posts/565405593642960https://www.facebook.com/theaxiomproject/posts/565405593642960</u>
  - <u>https://www.facebook.com/theaxiomproject/posts/559558160894370https://www.facebook.com/theaxiomproject/posts/559558160894370</u>

## 2.2.2 Embedded World 2016

Name of the event: Embedded World 2016.

Location of the event: Nuremberg, Germany.

Date of the event: February 23 - 25, 2016.

Link to the event: <a href="http://conference.embedded-world.eu/http://conference.embedded-world.eu/">http://conference.embedded-world.eu/</a>

**Main activity**: exhibition of the AXIOM posters, flyers and dissemination materials; presentation of the video demo performed and shot by Xavier Martorell (BSC) in regard to OmpSs@FPGA running on a cluster of UDOO boards. The exhibition was held by Maurizio Caporali (UNISI) and Paolo Gai (EVI), respectively at SECO/UDOO and EVIDENCE's booth. In addition, VIMAR had a very

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 42 of 59

important meeting with SunDance as well as many technology providers, such as Xilinx, Intel, Freescale; finally, VIMAR played an essential roel in the AXIOM camera Apertus meeting. In addition, we distributed 50 AXIOM flyers, as well as dissemination material.

People attending the event: tens of thousands.

People engaged: around 50.

**Topic of the event**: Embedded World is a faire dedicated to the industrial community. Exhibitors come from the field of embedded manufacturing, rapid prototyping, automotive, home automation, automation.

#### Resources and dissemination activities:

- Video demo: <u>https://www.youtube.com/watch?v=6BdR7O-</u> <u>cYUQhttps://www.youtube.com/watch?v=6BdR7O-cYUQ</u>
- Twitter:
  - <u>https://twitter.com/axiom\_project/status/702109686158467072https://twitter.com/axiom\_project/status/702109686158467072</u>
  - <u>https://twitter.com/axiom\_project/status/702426180784365568https://twitter.com/axiom\_project/status/702426180784365568</u>
  - https://twitter.com/axiom\_project/status/702775868775604224https://twitter.com/axi om\_project/status/702775868775604224
  - https://twitter.com/UDOO\_Board/status/702058994899230720https://twitter.com/UD OO\_Board/status/702058994899230720
  - <u>https://twitter.com/axiom\_project/status/702775868775604224https://twitter.com/axiom\_project/status/702775868775604224</u>
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- Blog post: <u>http://www.axiom-project.eu/2016/03/axioms-ompss-demo-for-easy-powerful-cluster-programming/</u>

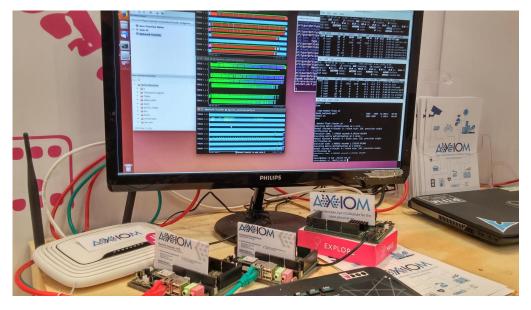


Figure 12. AXIOM-dedicated space at Embedded World 2016.



Figure 13. AXIOM dissemination material at Embedded World 2015.

## 2.2.3 Embedded World 2015

Name of the event: Embedded World 2015.

Location of the event: Nuremberg, Germany.

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 44 of 59 Date of the event: February 24-26, 2015, Nuremberg, Germany

Link to the event: https://www.embedded-world.de/en

Activities: AXIOM Project presence at the SECO/UDOO booth and EVIDENCE's booth. Exhibition of the AXIOM poster, flyers and dissemination materials at SECO's and EVIDENCE's booth Presented by Maurizio Caporali (UNISI) and Paolo Gai (EVI) respectively at SECO's and EVIDENCE's booth. In addition, we had flyers, which we distributed to roughly 80 people.

People attending the event: around 30.000 participants.

#### Engaged people: around 80.

**Topic of the event:** Embedded World is a faire dedicated to the industrial community. Exhibitors come from the field of embedded manufacturing, rapid prototyping, automotive, home automation, automation.

#### **Resources and dissemination activities:**

- Poster: <u>http://www.axiom-project.eu/wp-content/uploads/2015/08/giorgi150120-axiom\_poster\_hipeac\_0902.pdf</u>
- Twitter: https://twitter.com/axiom\_project/status/570264641810464769
- Blog post on SECO/UDOO blog:
  - <u>http://www.udoo.org/udoo-at-droidcon-turin-italy-and-other-good-news-from-the-udoo-world/</u>
  - <u>http://www.udoo.org/udoo-at-droidcon-turin-italy-and-other-good-news-from-the-udoo-world/</u>
- Facebook:
  - o https://www.facebook.com/theaxiomproject/posts/432336573616530
  - o https://www.facebook.com/theaxiomproject/posts/432336573616530
- Blog post:
  - o http://www.axiom-project.eu/2015/03/axiom-at-the-embedded-world/
  - <u>http://www.axiom-project.eu/2016/03/axioms-ompss-demo-for-easy-powerful-cluster-programming/</u>
  - http://www.axiom-project.eu/2016/03/axioms-ompss-demo-for-easy-powerfulcluster-programming/
- Google Plus:
  - https://plus.google.com/b/106077641661897235281/+AxiomprojectEu/posts/6N3awbb6nWH
  - <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/6N3awbb6nWH</u>
  - <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/gRNNS8uPSwG</u>



Figure 14. The banner up of the AXIOM Project at SECO/UDOO booth and EVIDENCE's booth.

## 2.3 Open-Source and Maker Community Events

For what regards events in the maker domain, our main achievements have been the participation at Maker Faire Rome 2015 and Maker Faire Rome 2016, Make/Florence and Italian Interaction Design Day. Finally, we also participated at Intel Schoolmakers Florence 2016, an event organized by Intel in collaboration with the Italian Ministery of Education, Universities and Research. At all these events, we had a dedicated space inside the SECO/UDOO's booth as well as dissemination material and various demos.

## 2.3.1 Maker Faire Rome 2016

Name of the event: Maker Faire Rome 2016

Location of the event: Fiera di Roma, Rome.

Date of the event: October 14-16, 2016.

Link to the event: http://www.makerfairerome.eu/en/http://www.makerfairerome.eu/en/

**Main activities**: Exhibition of the AXIOM Demos, posters, flyers and dissemination materials at SECO/UDOO's booth. We have distributed about 200 flyers during the three days of the event. Also, there were two demos of AXIOM: one consisted in OmpSs, the programming model by Barcelona Supercomputing Center and supported by AXIOM, running on a cluster of UDOO Quad (produced by SECO) to optimize performance. The other demo consisted of BioMarketing, a program by Herta Security, running on a UDOO X86 Ultra (produced by SECO), trying to guess ethnicity, gender and age of visitors standing in front of the camera. SECO, UNISI as well as VIMAR and EVIDENCE were present. All members of the consortium have contributed to the realization of such demos.

People attending the event: around 110,000.

People engaged at the event: roughly 300.

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 46 of 59 Topic of the event: Maker Movement, DIY electronics.

### Resources and dissemination activities:

- Blog post: <u>http://www.axiom-project.eu/2016/09/axiom-at-maker-faire-rome-2016-makers-expect-us/http://www.axiom-project.eu/2016/09/axiom-at-maker-faire-rome-2016-makers-expect-us/</u>
- Blog post on SECO/UDOO website: <u>http://www.udoo.org/udoo-maker-faire-rome-2016-</u> splendid-experience/http://www.udoo.org/udoo-maker-faire-rome-2016-splendid-experience/
- Facebook LIVE:
  - <u>https://www.facebook.com/theaxiomproject/videos/600161626834023/https://www.f</u> acebook.com/theaxiomproject/videos/600161626834023/
  - <u>https://www.facebook.com/theaxiomproject/videos/600133176836868/https://www.f</u> <u>acebook.com/theaxiomproject/videos/600133176836868/</u>
  - <u>https://www.facebook.com/theaxiomproject/videos/599545283562324/https://www.f</u> <u>acebook.com/theaxiomproject/videos/599545283562324/</u>
- Facebook:
  - https://www.facebook.com/theaxiomproject/photos/a.542586665924853.1073741830
     .372518552931666/600152610168258/?type=3&theaterhttps://www.facebook.com/th
     eaxiomproject/photos/a.542586665924853.1073741830.372518552931666/60015261
     0168258/?type=3&theater
  - https://www.facebook.com/theaxiomproject/photos/a.542586665924853.1073741830
     .372518552931666/600152603501592/?type=3&theaterhttps://www.facebook.com/th
     eaxiomproject/photos/a.542586665924853.1073741830.372518552931666/60015260
     3501592/?type=3&theater
  - <u>https://www.facebook.com/theaxiomproject/posts/600654723451380https://www.facebook.com/theaxiomproject/posts/600654723451380</u>
  - <u>https://www.facebook.com/theaxiomproject/posts/600599696790216https://www.facebook.com/theaxiomproject/posts/600599696790216</u>
  - <u>https://www.facebook.com/theaxiomproject/videos/600161626834023/https://www.f</u> acebook.com/theaxiomproject/videos/600161626834023/
- Facebook, by SECO/UDOO: https://www.facebook.com/udooboard/photos/a.262600577239110.1073741831.1595544475
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- Periscope, by SECO/UDOO: <u>https://www.periscope.tv/UDOO\_Board/1vOxwewoQmoGBhttps://www.periscope.tv/UDOO\_Board/1vOxwewoQmoGB</u>
- Twitter:
  - https://twitter.com/axiom\_project/status/787214548101193728https://twitter.com/axi om\_project/status/787214548101193728
  - https://twitter.com/axiom\_project/status/787257999488352256https://twitter.com/axi om\_project/status/787257999488352256
  - <u>https://twitter.com/axiom\_project/status/787258499227090944https://twitter.com/axiom\_project/status/787258499227090944</u>

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Deliverable name: **Report on AXIOM Events** 

File name: AXIOM\_D22-v15.docx Page 47 of 59

## Project: **AXIOM - Agile, eXtensible, fast I/O Module for the cyber-physical era** Grant Agreement Number: **645496**

### Call: ICT-01-2014: Smart Cyber-Physical Systems

- https://twitter.com/axiom\_project/status/787572284504567808https://twitter.com/axi om\_project/status/787572284504567808
- https://twitter.com/axiom\_project/status/787575001130164224https://twitter.com/axi om\_project/status/787575001130164224
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- Slideshare: <u>http://www.slideshare.net/maubau/designing-for-iot-and-cyberphysical-</u> systemhttp://www.slideshare.net/maubau/designing-for-iot-and-cyberphysical-system
- Google Plus: <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/ByPfoeSGMJGhttps://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/ByPfoeSGMJG</u>
- Linkedin: https://www.linkedin.com/groups/8294592/8294592-6187271219172110339 https://www.linkedin.com/groups/8294592/8294592-6187271219172110339

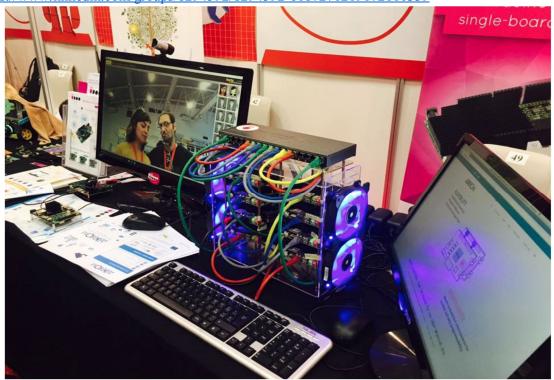


Figure 15. The two demos of the AXIOM Project at Maker Faire Rome 2016.

## 2.3.2 Students vs ICT 2016

Name of the event: Students vs ICT 2016

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 48 of 59

Location of the event: Physics Department of the University of Perugia, Italy.

Date of the event: June 16, 2016.

Link to the event: <u>http://www.ict-energy.eu/studentsvsict2016http://www.ict-</u> energy.eu/studentsvsict2016

Main activity: presentation of the AXIOM poster. In addition, we've distributed 20 flyers.

People attending the event: roughly 70 people.

People engaged at the event: roughly 20 people.

Topic of the event: the event is a school contest between students and schools around ICT-energy.

**Resources and dissemination activities:** 

• Facebook:

https://www.facebook.com/udooboard/photos/a.262600577239110.1073741831.1595544475 43724/631247393707758/?type=3&theaterhttps://www.facebook.com/udooboard/photos/a.26 2600577239110.1073741831.159554447543724/631247393707758/?type=3&theater

• Twitter: <u>https://twitter.com/UDOO\_Board/status/743450139658952704https://twitter.com/UDOO\_Board/status/743450139658952704</u> <u>https://twitter.com/UDOO\_Board/status/743450139658952704</u>

# 2.3.3 Workshop: Build your own Supercomputer with OmpSs, UDOO and Arduino

Name of the event: Workshop: Build your own supercomputer with OmpSs, UDOO ad Arduino.

Location of the event: Siena, Santa Chiara Lab.

Date of the event: May 31, 2016.

Link to the event: <u>http://www.axiom-project.eu/workshop-build-your-own-supercomputer-with-ompss-udoo-and-arduino/http://www.axiom-project.eu/workshop-build-your-own-supercomputer-with-ompss-udoo-and-arduino/</u>

Main activity: Workshop about OmpSs.

People attending the event: around 30.

People engaged at the event: around 30.

**Summary of the event**: The workshop explored the following points: – how to build a low cost, low energy consumption cluster based on 4 or 8 UDOO Quad boards; – how to use the Arduino-compatible microcontroller of UDOO to manage fans; temperature sensors and LCD displays or LED for feedback; – how to distribute the computation in a simple way using the OmpSs framework. The

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 49 of 59

duration of the workshop was 3 hours. The workshop was structured in 3 main phases: connecting the hardware, configuring the system, running the distributed algorithms. The speakers were Project Coordinator Roberto Giorgi, Maurizio Caporali (UNISI), Javier Bueno (BSC), and Francesco Montefoschi (UNISI). BSC also has been a fundamental partner for the development of the demo. In addition, we've distributed about 20 flyers at the event.

Also we released certificates at the workshop to the attendees.

### **Resources and dissemination activities:**

- Blog post: <u>http://www.axiom-project.eu/workshop-build-your-own-supercomputer-with-ompss-udoo-and-arduino/</u>
- European Maker Week: <u>http://events.europeanmakerweek.eu/events/view/345</u> <u>http://www.axiom-project.eu/workshop-build-your-own-supercomputer-with-ompss-udoo-and-arduino/</u>
- Blog post on SECO/UDOO website: <u>http://www.udoo.org/build-your-own-supercomputer-with-ompss-udoo-and-arduino/http://www.udoo.org/build-your-own-supercomputer-with-ompss-udoo-and-arduino/</u>
- Blog post on UNISI blog: <u>http://www.unisi.it/unisilife/eventi/crea-il-tuo-supercomputer-con-ompss-udoo-e-arduinohttp://www.unisi.it/unisilife/eventi/crea-il-tuo-supercomputer-con-ompss-udoo-e-arduino</u>
- Facebook LIVE
  - <u>https://www.facebook.com/theaxiomproject/videos/542593719257481/https://www.f</u> acebook.com/theaxiomproject/videos/542593719257481/
  - <u>https://www.facebook.com/theaxiomproject/videos/542596232590563/https://www.f</u> <u>acebook.com/theaxiomproject/videos/542596232590563/</u>
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  - <u>https://www.facebook.com/theaxiomproject/videos/542624042587782/https://www.facebook.com/theaxiomproject/videos/542624042587782/</u>
- Facebook, by SECO/UDOO:
  - https://www.facebook.com/udooboard/photos/a.159640044201831.1073741828.1595
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- Linkedin:
  - <u>https://www.linkedin.com/groups/8294592/8294592-6143096455633604611https://www.linkedin.com/groups/8294592/8294592-6143096455633604611</u>
  - <u>https://www.linkedin.com/groups/8294592/8294592-</u> 6135796326861938692https://www.linkedin.com/groups/8294592/8294592-6135796326861938692</u>
  - <u>https://www.linkedin.com/groups/8294592/8294592-6131350369780973571https://www.linkedin.com/groups/8294592/8294592-6131350369780973571</u>
- Google Plus:
  - <u>https://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/SmQSzVTCqUZhttps://plus.google.com/b/106077641661897235281/+Axiom-projectEu/posts/SmQSzVTCqUZ</u>
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  - https://plus.google.com/b/106077641661897235281/+AxiomprojectEu/posts/W3AbzmCjJwFhttps://plus.google.com/b/106077641661897235281/ +Axiom-projectEu/posts/W3AbzmCjJwF
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- Twitter:
  - https://twitter.com/axiom\_project/status/730029612953182212https://twitter.com/axi om\_project/status/730029612953182212
  - https://twitter.com/axiom\_project/status/737330158307315712https://twitter.com/axi om\_project/status/737330158307315712
  - https://twitter.com/UDOO\_Board/status/737325581059100673https://twitter.com/UD OO\_Board/status/737325581059100673
- Facebook: <u>https://www.facebook.com/theaxiomproject/posts/542598915923628</u>



Figure 16. Project Coordinator Roberto Giorgi presenting the Workshop.



Figure 17. Francesco Montefoschi (UNISI) presenting the workshop.

Deliverable number: D2.2 Deliverable name: Report on AXIOM Events File name: AXIOM\_D22-v15.docx Page 52 of 59



Figure 18. Preparing the demos for the AXIOM Project.

## 2.3.4 Make/Florence 2015

Name of the event: Make/Florence

Location of the event: Florence, Italy.

Date of the event: November 17-20, 2015.

Linktotheevent:http://www.fondazionetema.it/makeflorencehttp://www.fondazionetema.it/makeflorence

**Main activity**: Exhibition of the AXIOM posters, flyers and dissemination materials by Maurizio Caporali (UNISI) and Antonio Rizzo (UNISI). We have distributed about 20 flyers at the event.

People attending the event: around 20.

People engaged at the event: around 20.

**Topic of the event**: the event, promoted with the short blurb "Innovation meets Craftsmanship" was meant to be an opportunity of exchange between makers, artisans and designers.

#### **Resources and dissemination activities:**

• Twitter:

https://twitter.com/axiom\_project/status/667704002151366656https://twitter.com/axiom\_proj ect/status/667704002151366656

- Facebook:
  - https://www.facebook.com/theaxiomproject/photos/a.456576474525873.1073741829 .372518552931666/472848056232048/?type=3https://www.facebook.com/theaxiomp

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roject/photos/a.456576474525873.1073741829.372518552931666/472848056232048 /?type=3

- https://www.facebook.com/theaxiomproject/photos/a.456576474525873.1073741829
   .372518552931666/472848092898711/?type=3https://www.facebook.com/theaxiomp
   roject/photos/a.456576474525873.1073741829.372518552931666/472848092898711
   /?type=3
- https://www.facebook.com/theaxiomproject/photos/a.456576474525873.1073741829
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   2898710/?type=3&theater
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   eaxiomproject/photos/a.456576474525873.1073741829.372518552931666/47284811
   6232042/?type=3&theater
- <u>https://www.facebook.com/theaxiomproject/posts/472849002898620https://www.facebook.com/theaxiomproject/posts/472849002898620</u>



Figure 19. The official bag of Make/Florence 2016 and the AXIOM flyer.

## 2.3.5 Maker Faire Rome 2015

Name of the event: Maker Faire Rome 2015.

Location of the event: Città Universitaria La Sapienza, Pavillon G Booth 12, Rome, Italy.

Date of the event: October 17, 2015.

**Main activity:** Exhibition of the AXIOM poster, flyers and dissemination materials at SECO/UDOO's booth and a presentation entitled "UDOO NEO, the IoT board: Linux, Arduino, Wireless and embedded sensors to make your home smart", presented by Maurizio Caporali (UNISI). We have distributed about 30 flyers at the event.

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 54 of 59

People attending the event: about 100,000.

People engaged at the event: roughly 100.

Topic of the event: Maker Movement, DIY electronics.

#### **Resources and dissemination activities:**

- Twitter:
  - <u>https://twitter.com/axiom\_project/status/655055384860848128https://twitter.com/axiom\_project/status/655055384860848128</u>
  - https://twitter.com/UDOO\_Board/status/654973014828818432https://twitter.com/UD
     OO\_Board/status/654973014828818432
- Blog post: <u>http://www.axiom-project.eu/2016/01/axiom-at-maker-faire-rome/</u>



Figure 20. AXIOM at SECO/UDOO's booth at Maker Faire Rome 2015.

Deliverable number: **D2.2** Deliverable name: **Report on AXIOM Events** File name: AXIOM\_D22-v15.docx Page 55 of 59

## 2.3.6 Italian Interaction Design Day

Name of the event: Italian Interaction Design Day

**Location of the event**: IIDD Italian Interaction Design Day Piazza Madonna della Neve 7 52100 – Firenze.

Date of the event: June 19, 2015.

Link to the event: <u>http://www.i-i-d-d.org/http://www.i-i-d-d.org/</u>

**Main activity**: Presentation entitled "Designing for IoT and Cyber-Physical Systems" held by Maurizio Caporali (UNISI) at the Italian Interaction Design Day. In addition, we had flyers with us, which we distributed to about 20 people.

People attending the event: around 100 participants.

People engaged: around 20 people.

**Topic of the event**: an open round-table between professionals from the fields of arts, technology and design.

**Resources and dissemination activities**: <u>http://www.axiom-project.eu/wp-</u> content/uploads/2015/08/Designing-for-IoT-and-Cyber-Physical-System.pdfhttp://www.axiomproject.eu/wp-content/uploads/2015/08/Designing-for-IoT-and-Cyber-Physical-System.pdf

### **Resources and dissemination activities:**

- Presentation "Designing for the Internet of Things and Cyber-Physical Systems" <u>http://www.axiom-project.eu/wp-content/uploads/2015/08/Designing-for-IoT-and-Cyber-Physical-System.pdf</u>
- Twittter:
  - https://twitter.com/axiom\_project/status/611820730494382080https://twitter.com/axi om\_project/status/611820730494382080
  - <u>https://twitter.com/axiom\_project/status/611818647074512897https://twitter.com/axiom\_project/status/611818647074512897</u>
- Facebook:

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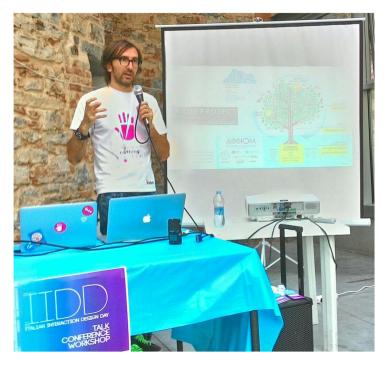


Figure 21. AXIOM scenarios presentation at Italian Interaction Design Day.

Deliverable number: D2.2 Deliverable name: Report on AXIOM Events File name: AXIOM\_D22-v15.docx Page 57 of 59

# **3** Confirmation of DoA objectives

Planned	Delivered
Organization of an OmpSs-dedicated workshop	Such a workshop is presented in section 2.3.3
Exploitation of scientific networks of the	As presented in section 2.1
partners.	
Exploitation of business networks of the	As presented in section 2.2
industrial partners.	
Dissemination of the AXIOM Project in the	As presented in section 2.3
open-source and maker community	

## 4 Conclusion

At the launch of the AXIOM Project, various key aspects were established as defining elements of the dissemination strategy of the events:

- $\circ$  information exchange between the members of the consortium;
- o interoperability and complementarity with existing and upcoming research results;
- cross dissemination;
- o organization of workshops;
- diffusion of knowledge;
- exploitation of the scientific and business networks to enhance the visibility of the project.

We believe that we have consistently achieved these results.

A close cooperation with all the members of the AXIOM Project has been put into place since the start, and as expected, the possibility to leverage the business and scientific networks of the partners has turned out to be crucial. The AXIOM Project members have in fact taken active place in the most important conferences in the fields of HPC and CPS, and its members have been invited by exclusive, invitation only events organized by HiPEAC. UNISI, FORTH and BSC have been fundamental to reach these results.

Furthermore, we have had great results in the open-source space, especially at Maker Faire Rome 2016, where our demos really attracted many visitors at our booth.

The same level of attention has been pursued about the industrial field, thanks to SECO, VIMAR and HERTA. In this matter, we are glad that SECO has been finalist of the Innovation Radar Prize 2016, a contest for EC-funded projects, innovators and excellent enterprises across Europe.

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- P. Burgio, C. Alvarez, E. Ayguade, A. Filgueras, D. Jimenez-Gonzalez, X. Martorell, N. Navarro, R. Giorgi, "Simulating next-generation cyber-physical computing platforms", Ada User Journal, vol. 37, no. 1, Mar. 2016, pp. 59-63.
- Jimenez-Gonzalez, Daniel; Alvarez-Martinez, Carlos; Filgueras, Antonio; Martorell, Xavier; Langer, Jan; Noguera, Juanjo; Vissers, Kees, "Coarse-Grain Performance Estimator for Heterogeneous Parallel Computing Architectures like Zynq All-Programmable SoC" (Journal Article) Second International Workshop on FPGAs for Software Programmers FSP 2015, CoRR, 2015.
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