



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

PROJECT NUMBER: 645496



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

D1.1 – Project Web Site

Due date of deliverable: May 1st, 2015
Actual Submission: April 30th, 2015

Start date of the project: February 1st, 2015

Duration: 36 months

Lead contractor for the deliverable: UNISI

Revision: See file name in document footer.

Project co-funded by the European Commission within the HORIZON FRAMEWORK PROGRAMME (2020)	
Dissemination Level: PU	
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Change Control

Version#	Date	Author	Organization	Change History
1.0	09.02.2015	Maurizio Caporali, Roberto Giorgi	UNISI	Initial version
1.1	09.02.2015	Maurizio Caporali, Roberto Giorgi	UNISI	Second draft
1.2	17.04.2015	Jem Macy	UNISI	Third draft
1.3	24.04.2015	Jem Macy	UNISI	Fourth draft
				Final version

Release Approval

Name	Role	Date
Jem Macy	Originator	17.04.2015
Jem Macy	WP Leader	24.04.2015
Roberto Giorgi	Project Coordinator for formal deliverable	30.04.2015

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Printed in Siena, Italy, Europe.

Part number: *Please refer to the file name in the document footer.*

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GLOSSARY

CMS – Content Management System

LAMP – Linux Apache MySQL PHP software bundle

SVN – Software versioning system

Executive summary

This report describes the AXIOM project web site (<http://www.axiom-project.eu>), including the public space (front end), the restricted-access intranet site or wiki for project participants, the web tools provided therein and the backend used to administer all of the above, namely:

Web Site Backend: <http://www.axiom-project.eu/wp-admin/>

Wiki (intranet): <http://wiki.axiom-project.eu>

Git: <https://git.axiom-project.eu>

SVN: <https://svn.axiom-project.eu>

Upload site: <https://upload.axiom-project.eu>

Note: Although the D1.1 deliverable was not due in document form (only the website itself is), we preferred to write a short description for our own records and to better document the work.

1 Introduction

1.1 Document structure

This is a very short document for our own records and to document the work.

1.2 Relation to other deliverables

The public and restricted-access sections of the web site are essential communication and collaboration tools for the project participants in the achievement of all deliverables from the beginning of the project onward. See also the dissemination plan, document D2.1

1.3 Tasks involved in this deliverable

- Develop the public project website to promote the project, provide information about it, share publicly-available project and project-related documentation, funnel inquiries from the public about the project and provide a forum for discussion among project participants and non-participants.
- Develop a restricted-access area to be used only by project that contains all project documentation with restricted dissemination levels, serves as a platform for collaborating on both deliverables and reports and provide tools that facilitate efficient teamwork across geographical distinct sites and among multiple contributors.
- Create the relevant project mailing lists.
- Outline a plan for ongoing administration and maintenance of the above.¹

2 The axiom-project.eu web site

The first version of the project web site was developed in advance of the start of the project and presented at the kick-off meeting. The new, definitive version, released on 16 April 2015, reflects changes and improvements made on the basis of the project participants' initial experiences with the initial web site.

2.1 Contributors

The project web site specifications were developed by Prof. Roberto Giorgi in collaboration with Maurizio Caporali. The development of the site itself, including the public and restricted-access areas, was carried out in large part by Maurizio Caporali.

2.2 Hardware

The web site server is based at the Department of Information Engineering at the University of Siena.

2.3 Software

The web site uses an OpenSource Linux server, running different web programs to manage the internet and intranet areas of the site. The software platforms are:

- A CMS framework based on Wordpress.org, a free, open-source content management system.
- A wiki system based on MediaWiki, a free, open-source collaborative web tool.
- Git, a free, open-source version control system used to trace software development.
- SVN, an alternative free, open-source version control system used to trace software development.
- An internally developed upload site for big files (e.g., several GBytes).

¹ Not indicated in the DoA.

2.4 Component specifics

2.4.1 Front end – the public web site

The Wordpress content management system was chosen for its power, simplicity and flexibility with respect to the creation and updating of elements in both the public and restricted-access areas. The Avada theme was chosen for both its power (in terms of what can be built into the site) and the clear navigation logic that it provides. The site's vertical layout allows for a rich variety of widget-based components. It is expected that the site will change over time as the content expands and develops.

2.4.1.1 Homepage

Elements of the homepage (Figure 1), from top to bottom, include:

- The project logo, EU logo, main menu and social network menu,
- An animated header,
- A summary of characteristics of project objectives,
- An infographical schematic of the main concepts of Smart Cyber-Physical Systems,
- A section with links to three most recent posts on the project blog (<http://www.axiom-project.eu/blog/>),
- A section with links to all project partners' web sites and to further project information,
- A footer menu with links to recent tweets from the project Twitter account (@axiom_project) and project contact details.

2.4.1.2 Main Menu

From the homepage, access is provided to other areas of the site including Project, Press Coverage, Blog, Publications and Private area menu.

- The Project section contains a list of all AXIOM project deliverables, all AXIOM partners and a group of related links.
- The Press Coverage section contains a list of links to all press coverage of the AXIOM project.
- The Blog item in the menu is a link to the AXIOM project blog.
- The Publications section will contain a list of all project-related publications, conference papers etc. For sake of simplicity, we prefer to avoid to sophisticated means to manage the publication insertion, which will be handled through the CMS interface.
- The Private Area section contains includes the areas listed below: Back End, Wiki, Git, SVN and Upload site.

2.4.2 Back end

The Wordpress administration tool (Figure 2) or back end provides quick and easy editing as well as the management of all users of both the public and restricted-access areas of the project web site and wiki. The site administrator assigns access permissions for all site areas from one central page.

Statistics are managed via Google Analytics

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**

AXIOM

Home The Project Press Coverage Blog Publications Private area

Flexible, energy efficient and modular board

Flexibility: FPGA, fast-and-cheap interconnects based on existing connectors like SATA
 Energy efficiency: low-power ARM, FPGA
 Modularity: fast-interconnects, distributed shared memory across boards

Easily Programmable FPGA

Programming model: Improved OmpSs
 Runtime & OS: Improved thread management
 Compiler: BSC Mercurium, OS: Linux, Drivers: provided as open-source by partners

Easy Interfacing with the Cyber-Physical Worlds

Platform: integrating also Arduino support for a plenty of pluggable board (so-called "shields")
 Platform: building on the UDOO experience from SECO

Smart Cyber-Physical System

Smart Home
 AXIOM will enable companies, such as VIMAR, to improve real time data analysis of its Energy Management catalogue and to extend the network from the home to a large number of existing or near future services in collaboration with the municipality or even in a peer-to-peer scenario

Smart Videosurveillance
 AXIOM will enable companies, such as HERTA, to deploy their multiple face recognition in real-time in crowded and changeable environments

★ Distributed Sensors
 ★ Internet of Things
 ★ Cyber Security

Blog posts:

UDOO-based miniaturized smart home wins Jugend Forscht
 An interesting smart home model based on UDOO, an open-source single board computer [...]

The house of the future will be open, but safe
 The AXIOM project has started, aiming to ease the programming of the [...]

DATE 16
 Roberto Giorgi appointed European Projects Chair of DATE 2016
 As settled in the kick-off meeting of DATE 2016, held on March [...]

Project partners

- BSC (OmpSs),
- EVIDENCE(LinuxOS+RunTime),
- FORTH(interconnection),
- HERTA (videosurveillance),
- SECO (which will actually build the computer),
- UNISI (coordination, evaluation, dissemination, exploitation),
- VIMAR (domotic).

Project Information

START DATE: 01 February 2015
 DURATION: 3 years
 EC CONTRIBUTION: 3945937 euro
 COORDINATOR: Prof. Roberto Giorgi

Objectives

- Realizing a small board that is flexible, energy efficient and modularly scalable
- Easy programmability of multi-core, multi-board, FPGA
- Leveraging Open-Source software to manage the board
- Easy Interfacing with the Cyber-Physical Worlds
- Enabling real time movement of threads
- Contribution to Standards

Figure 1 – Homepage

Deliverable number: **D1.1**

Deliverable name: **Project Web Site**

File name: AXIOM-D1.1 Project Web Site-v4.docx

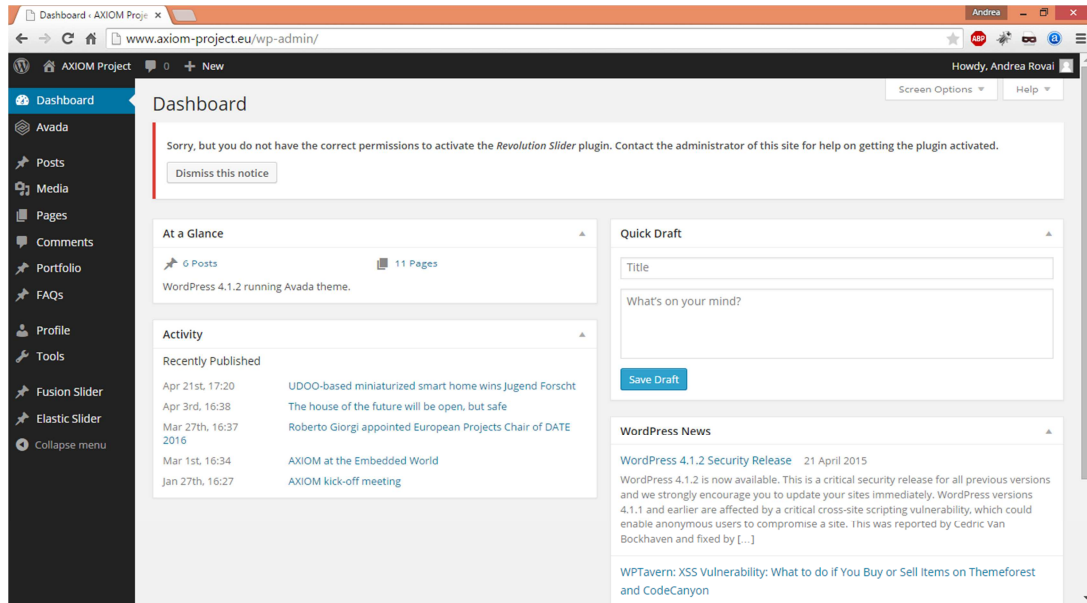


Figure 2 – Administration page

2.4.3 Wiki

This wiki area (Figure 3) of the web site is restricted to use by the project participants and exists to facilitate collaboration on reports and deliverables, to allow rapid publication of updated results and developments and to share non-public information and documentation. The Wiki is divided into sections for each Work Package (1-7), as reflected in its main menu.

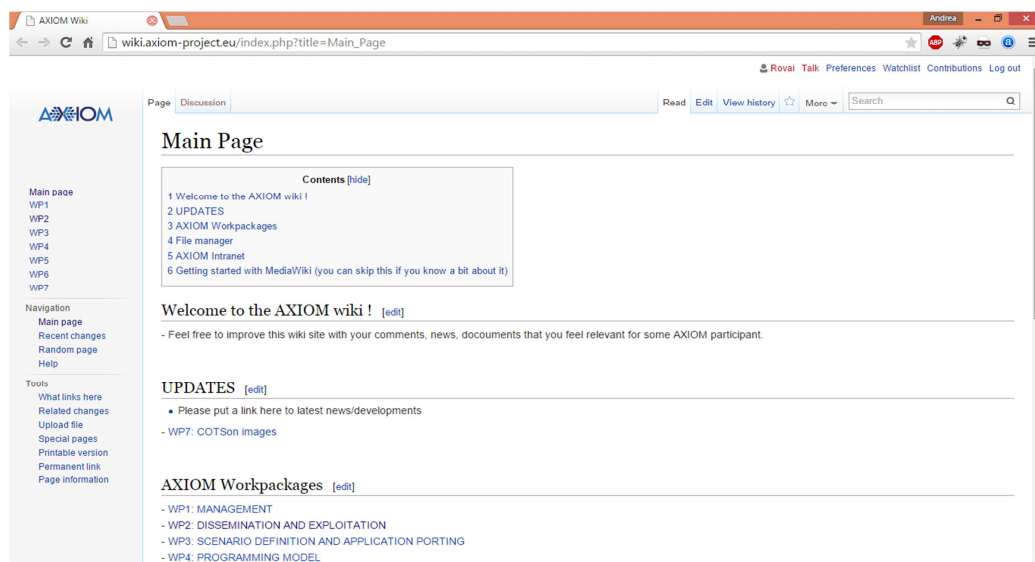


Figure 3 – Wiki

2.4.4 Git and SVN

Git and SVN (Figure 4 and Figure 5) are free, open-source version and revision control systems used to trace software development. Their use is restricted to project participants involved in developing software components. There is also a public section to check out those codes that we can release to the public. Both are high-performance, easy-to-learn tools that facilitate collaboration. Two tools are provided with the aims of including our source code in development and in order to respond to the working preferences of different developers.

Deliverable number: **D1.1**

Deliverable name: **Project Web Site**

File name: AXIOM-D1.1 Project Web Site-v4.docx

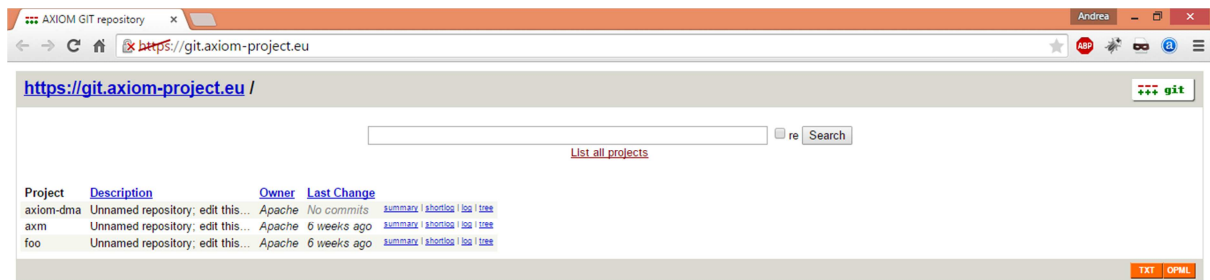


Figure 4 – Git

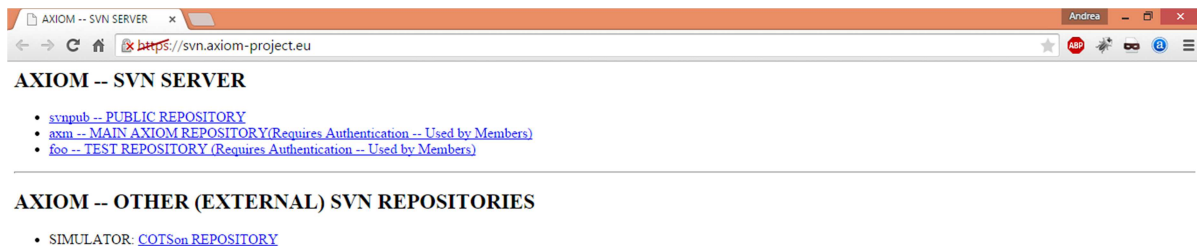


Figure 5 – SVN

2.4.5 Upload

The upload site was developed internally to expedite the sharing of the very large files needed in board development—for example, binaries, images and sources--among project participants.

AXIOM upload site

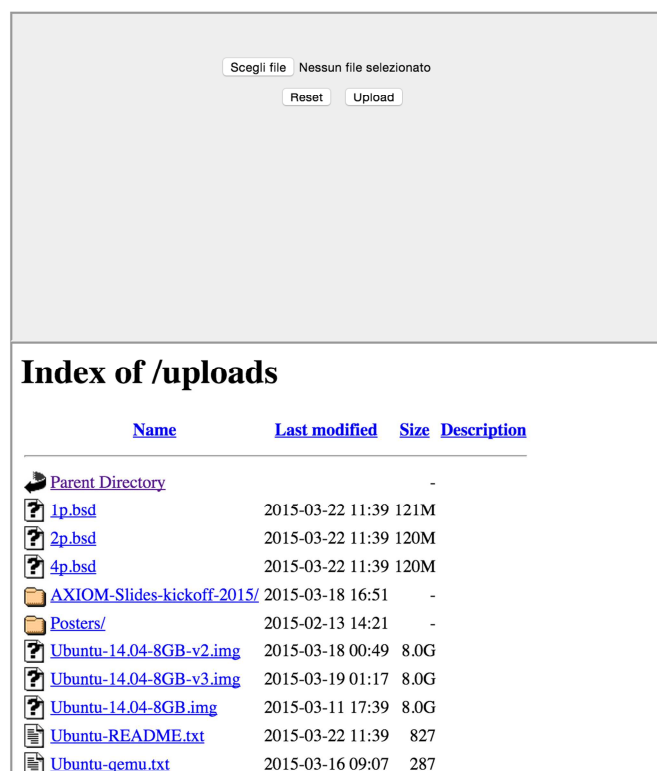


Figure 6 – Upload site

3 Mailing lists and their web sites

The following mailing lists have been created and are in use by project participants:

AXIOM Executive Board mailing list: This mailing list should be used by the Executive Board members and the Project Manager to discuss topics related to the Executive Board.

axiom-eb@mailsrv.dii.unisi.it

AXIOM Work Package mailing lists: These mailing lists should be used by Work Package participants to communicate information about the specific Work Packages.

axiom-wp1@mailsrv.dii.unisi.it or the alias axiom-adm@mailsrv.dii.unisi.it

axiom-wp2@mailsrv.dii.unisi.it

axiom-wp3@mailsrv.dii.unisi.it

axiom-wp4@mailsrv.dii.unisi.it

axiom-wp5@mailsrv.dii.unisi.it

axiom-wp6@mailsrv.dii.unisi.it

axiom-wp7@mailsrv.dii.unisi.it

Other mailing lists will be created as needed based on requests from the consortium. For each mailing list, a web site is available for administering it, for managing user options and to browse archives of all messages sent using these mailing lists.

4 Conclusion

This report describes the project web site architecture and contents. Other relevant information is contained in the report on the dissemination plan, D2.1.

References

1. Wordpress <http://www.wordpress.org>
2. Avada <http://theme-fusion.com/avada/>
3. MediaWiki <http://www.mediawiki.org>
4. Git <http://www.git-scm.com>