



MARKOS realizes a prototype of an interactive application and a Linked Data API providing an integrated view on the Open Source projects available on the web, focusing on functional, structural and licenses aspects of software code. The MARKOS system itself will be released as Open Source software, which thanks to the offered functionalities, is expected to facilitate software development based on the Open Source paradigm in a global context.

AT A GLANCE

Project title:

The MARKet for Open Source -
An Intelligent Virtual Open Source
Marketplace.

Project Coordinator:

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Partners:

Engineering Ingegneria Informatica S.p.A.
(Italy),
ATOS SPAIN SA (Spain),
Poznan Supercomputing and Networking
Center (Poland),
Geeknet Media (UK),
Universita degli Studi del Sannio (Italy),
T6 Ecosystems (Italy)

Duration:

October 2012 - March 2015

Total Cost:

€ 4.5 M

Website:

www.markosproject.eu

GOALS & OBJECTIVES

Recent studies investigating the reuse of code in Open Source software projects show that developers in Open Source software projects commonly reuse available code and other knowledge that solves their technical problems.

Moreover, developers spend no negligible amounts of time studying scientific publications and standard specifications, or learning from the source code (and its documentation) of related projects to reuse of algorithms and methods without simply copying the code.

Therefore, developing a software system reusing existing (FLOSS) solutions implies time consuming activities that are not performed when software is developed from scratch or without third party code.

All those highlights the need to free the software analysts and developers from the technological barriers caused by the heterogeneity of approaches adopted by each Open Source project to provide similar information on the software characteristics.

MARKOS intends to realize the prototype of an automatic service providing an integrated view on the Open Source projects available on the web, focusing on functional, structural and licenses aspects of the software code released by the projects.

MARKOS' INNOVATIVE APPROACH

While existing services already offer a central repository and search tools on Open Source projects at a worldwide scale, they are of limited support for the users to understand the produced Open Source code, because it mainly focuses on *people* and *activities*.

MARKOS, on the contrary, wants to offer to developers and analysts a solution for choosing the Open Source components more suitable to their needs, to learn how to integrate or extend them and more in general to foster easy adoption of Open Source Software.

MARKOS will offer semantic querying and browsing tools to inspect the structure of the software code, showing the components, their interfaces, their dependencies, and their Open Source licence models. In this sense MARKOS will strongly innovate with respect to popular services that allows to search and navigate just the text of the source code, without offering any kind of abstraction on the code or that give a structured view just of a single file.

MARKOS will show the relationships between components of the same project and also between components of different projects, giving an integrated view of the available Open Source software at a global scale.

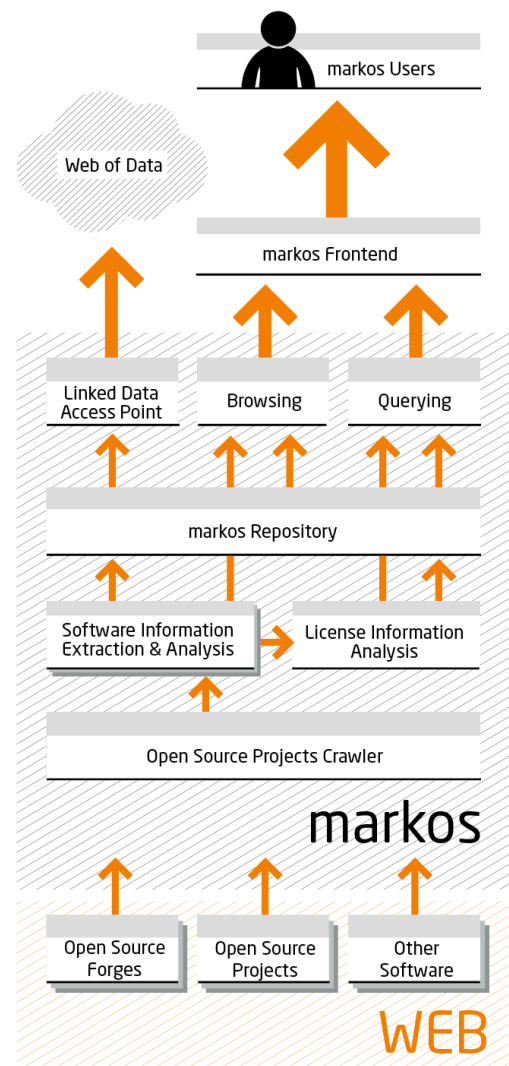
EXPECTED IMPACTS

MARKOS aims to give a considerable contribution to target outcome "c) *Advanced Software Engineering*", specifically to the outcome "Tools and methods for community-based and Open Source software development", in particular:

- Allowing a faster adoption and integration of Open Source components and libraries removing all the issues related to licensing incompatibility.
- Strengthening the European community of Open Source developers as it will increase quality of Open Source software, reduce time to market/use and establish a proofed path to integrate Open Source components among them or without the risks linked to complex and incompatible licensing schemata.

- Enabling software developers to use an intuitive and advanced searching platform with an advanced service front-end enabling the easy identification of the more suitable Open Source solutions needed and the analyses of code dependencies, software structures, and potential license infringements.

- Facilitating the publication of the description of Open Source software as Linked Data and the production of new tools for software analyses and development that leverage on this semantic data.



MARKOS Architecture