

# FOSS projects

## and the European Research & Development Framework Programme



As part of its research funding activities the European Commission has been funding research into Free, Libre and Open Source software (FOSS) for a number of years. Many projects make use of existing FOSS, or release their results as FOSS. Some focus on FOSS itself, seeking to improve the technologies used and to remove barriers to FOSS adoption and use. These are the projects that are highlighted in this leaflet.



**ALERT**

**ALERT** aims at the core of Open Source: how to efficiently manage and develop a community of developers and users to create high-quality software. The project will create tools to implement an "interaction highway" enabling active, timely and personalized interaction / coordination between all relevant artefacts and developers; in particular applying such an interaction highway in reducing the negative distance effects on collaboration in bug resolution. [www.alert-project.eu](http://www.alert-project.eu) (FP7 Call 5)



The process of managing large scale endeavours like Linux distributions raises complex issues, notably stemming from the dependencies between components and their compatibility. EDOS developed tools for dealing with those issues along three axes:

- Software dependency management,
- System testing,
- Code and binaries dissemination over the Internet in P2P.

The benefit is a dramatic productivity increase for Linux distributors.

<http://www.edos-project.org/> (FP6)

## FLOSS [include]

FOSS is arguably one of the best examples of open, collaborative, internationally distributed production and development that exists today. With partners around the globe, the **FLOSSInclude** project developed a roadmap for international cooperation to realise the potential of FOSS as a tool for social and economic development. <http://www.FLOSSinclude.org/> (FP7 Call 1)



In order to provide information about FOSS development processes, their productivity and the quality of their results **FLOSSMETRICS** analysed a large quantity of FOSS development projects, providing detailed quantitative data about them. <http://FLOSSmetrics.org/> (FP6)

**For further information:**  
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 Check this out!  
<http://cordis.europa.eu/software-services>





Free/Libre/Open Source Software (FOSS) is much discussed, but very little hard data are available on its use, deployment and development outside Europe and North America. **FLOSSWORLD** analysed FOSS communities in some developing countries in Asia, Africa and Latin America to answer some key questions: where in the world do FOSS developers live? Does their contribution and motivation differ based on the countries and regions in which they live and work? What about the role of employers, higher education institutes and governments?

FLOSSWORLD has made available for the first time a significant collection of data on these subjects.

<http://FLOSSworld.org/> (FP6)



The **MANCOOSI** (Managing the Complexity of the Open Source Infrastructure) project tackles the problem of updating large and software complex packages, like a Linux distribution. In general, there is no way to know if a software package will work correctly before installing it: Mancoosi is developing a theoretical framework to model dependencies in software, and practical tools to guarantee that a software update will succeed, or to bring back the system to a stable status. (FP7 Call 1)

<http://www.mancoosi.org/>



**mOSAIC**'s objective is to progress the state-of-the-art in Cloud computing by creating, promoting and exploiting an open-source Cloud API and platform targeted for developing multi-Cloud oriented applications. The project results will be materialize in an API that allows programming Cloud applications independent from vendor resources, a platform including the solutions to the current Cloud challenges, and applications as proof of the concept for platform usability. [www.mosaic-project.eu](http://www.mosaic-project.eu) (FP7 Call 5)



The PyPy platform allows for efficient interpreters of languages like Python to be produced for different hardware and virtual target environments.

<http://codespeak.net/pypy/dist/pypy/doc/home.html> (FP6)



**QualIPSo** aims is to help industries and governments to fuel innovation and competitiveness in today's and tomorrow's global environment, by providing the way to use trusted, low-cost, flexible Open Source software to develop innovative and reliable information systems. To meet this goal, QualIPSo is defining and implementing the technologies, processes and policies needed to facilitate the development and use of Open Source software components, with the same level of trust traditionally offered by proprietary software.

<http://www.qualipso.org/> (FP6)



The **Qualoss** project developed a methodology for assessing the robustness and evolvability of FOSS endeavours. This includes the assessment of software code but also of the other elements that constitute a FOSS endeavour, i.e., work products, community, software processes, tools and libraries. An assessment based on all those aspects FOSS provides a comprehensive picture and therefore improves the decision makers' confidence in making an informed decision about FOSS endeavours. <http://www.qualoss.org/> (FP6)



Metric-based evaluation has been at the heart of software quality assessment for some time and the topic has subsequently reached maturity within the research context. The **SQO-OSS** project aims to leverage and expand upon what is known in order to automate software quality assessment. In particular, the project aims to assess open source software and publish a league table of open source quality. Through these means the project aims to raise awareness of automated software quality assessment practices and the quality of open source products whilst concurrently aiding software procurers in their selection of products. <http://www.sqo-oss.eu/> (FP6)



To cope with the need for adaptability at the higher level, the infrastructure at the lower level must support dynamic, on-demand allocation and assembly of resources. FP6 funded **XtreemOS** project faced this challenge from a fairly unexplored view: embedding grid features at operating system level. XtreemOS open source operating system comes in two versions: one targeting both PCs and HPC clusters, and another for mobile devices. <http://www.xtreemos.eu/> (FP6)

