

A newsletter for Component discovery, identification, retrieval and adaptation aiming at systematic Open Source Software Reuse on Small and Medium Enterprises (SMEs).



Details:

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OPEN-SME: What is it?

OPEN-SME is an FP7funded research project by the European Commission (FP7-SME-2008-2)focusing on the "Research for the Benefit of SMEs". The project aims at enabling software SMEs to effectively introduce Open Source Software Reuse practices in their production processes by developing a set of methodologies, associated tools and business models centred on SME Associations.

By endorsing the OPEN-SME approach, the SMEs and SMEs Associations will benefit in many ways:

- *Remove the need for having specialised personnel dedicated to acquiring, modifying, testing, and documenting reusable software resources.*
- *Reduce the required investment in software engineering tools together with the associated risks that frequently have proven to confine future product development decisions.*
- *Create new software-sales channels and create new revenues by using the software repositories of SME Associations.*
- *Facilitate the creation of new business cases in new Application Domains that up to now have required the development of new technology expertises.*
- *Reduce software product time-to-market and improve ability to react to changing market demands.*
- *Increase market competitiveness (i.e. being able to provide more competitive prices) due to the reduction of software development costs.*
- *Improve software product quality due to the increased utilisation of pre-existing and already tested software modules.*

These foreseen benefits will tip the scale in favour of SMEs which face the following prohibiting factors in adopting Software reuse practices:

- *The large initial investments in technology know-how and tools required for a successful software reuse program are inhibiting reuse for SMEs, since their budget is limited.*
- *Effective accumulation of modules requires multiple products in different application domains. Software development SMEs typically develop only a limited number of products or just a single system that evolves in different versions.*
- *The market presently lacks services that would allow the effective identification, cataloguing reshaping and utilisation of open source software components. This significantly prohibits the reuse of code concerning application functionality, which is common to a limited set of domains.*

Objectives & Results

The key objectives of this project are:

- *To define, systematically document and apply in practise the OPEN-SME Processes for Open-Source Software Reuse*
- *To develop the OPEN-SME tools that will effectively support the Domain and Application Engineering Processes*
- *To assess and evaluate the effectiveness of the OPEN-SME processes and tools through the realisation of a set of pilots to be administered by the participating SME Associations*
- *To investigate, assess, and quantify the economic benefits of the OPEN-SME approach. Moreover, to derive generic business models and cost models pertaining to the commercialisation of the OPEN-SME approach in real-world use cases*
- *To widely disseminate the knowledge to be generated by the project and promote the adoption of the OPEN-SME approach at the European Level*

In order to achieve these objectives, the OPEN-SME Consortium has defined a set of results that will be available during or at the end of the project.

Among these results lie two processes: a Domain Engineering Process and an Application Engineering Process. The Domain Engineering Process will guide the definition, implementation, and maintenance of domain specific components, as well as the identification and adaptation of available OSS components to the domains of interest.

On the other hand, the Application Engineering Process will guide the exploitation of the Domain Engineering outcomes in the framework of a systematic, component-based, and reuse-oriented Software Product Development Methodology.

Furthermore, a set of tools will be implemented in order to address the objectives and assist the application of the aforementioned processes.

- The Open Source Search Engine (OCEAN) that will provide unified access to existing OSS search engines (e.g. FOSSOLOGY, Google Code Search, Koders, etc.) and will allow the initial retrieval of open source software modules to be analysed and adapted by the Domain Engineering Activities.
- The OPEN-SME Component Adaptation Environment (COPE) tool that will support in a holistic manner the different activities of the Domain Engineering Process.
- The OPEN-SME Component Repository and Search Engine (COMPARE) that will allow software re-users to effectively search, browse, and retrieve the assets produced by the Domain Engineering Process as well as provide a communication bus supporting the effective exchange and processing of structured information flows between the software reuse stakeholders.

1st OSS Component Reuse Workshop

Within the project's scope, the *1st Open Source Software Component Reuse* workshop was held in Kopaonik (Serbia) on March. In this workshop, members of the OPEN-SME Consortium presented an overview of the OPEN-SME project outlining the needs of SMEs in reusing open source code and more specifically open source components.

Moreover, in order to fulfill that needs the proposed approach of OPEN-SME was presented and in specific emphasis was given to the needs addressed by the Component Adaptation Environment (CO.P.E.) and the Domain Engineering Process. During the presentation, specific examples of such needs were provided and analysed in contradiction with the OPEN-SME approach making clear to the attendants the actual benefits of adopting that kind of approach.

Finally, the exemplar-based Reuse-Oriented Domain Engineering process (R.O.D.E. process) was presented depicting its generality and configurability across different domains. In more details, the domain engineering process was presented in its full extend highlighting the outcomes of each phase, activity and task illustrating the way in which the process can be adapted in order to handle any technical and/or other constraints induced by the specificity of a domain.

The participants of the workshop included members of the ISS and AUTH, people from the academia but also members of public and private IT companies interested in the goals of the OPEN-SME project.

OPEN-SME Consortium

SME Associations



SMEs



RTD Performers



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Impressum

OPEN-SME Newsletter is a publication prepared as part of the dissemination and public awareness activities of the Open-SME project (<http://opensme.eu>)

You can feel free to copy or refer to content of our newsletter - we encourage you also to send us your comments.

Our ambition for Open-SME is to become a medium that shall help the organic cooperation amongst professionals and practitioners from different disciplines with a focus on Open Source Software reuse for the benefit of SMEs.

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