

Platform-independent model for service-oriented architecture (PIM4SOA)

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1. About

The [PIM4SOA project](#) aims to develop open-source modelling tools and modelling services in the Eclipse environment to support the design of service-oriented architectures (SOAs) in a platform-independent or technology-neutral manner following the OMG MDA approach. The tools and services are released under the [Eclipse Public License](#) (EPL).

One important result is the PIM4SOA metamodel which defines an abstract language to specify executable business processes that execute within an enterprise and may collaborate between otherwise independent business processes executing in different business units or enterprises. The main objective of the specification is:

- The ability to exchange business process specifications between modelling tools, and between tools and execution environments.

PIM4SOA is closely aligned and has been based on the Business Process Definition Metamodel that is in the process of standardisation by OMG. However as the standardization did not completed in the timeframe of ATHENA, the PIM4SOA metamodel was developed as a simplified version. The PIM4SOA metamodel covers four important aspects: service, process, information and quality of service.

- Information: in the context of virtual enterprises information represents one of the most important elements that need to be described. In fact the other aspects manage or are based on information elements.
- Service: our main intention is to be able to describe SOA independently from the technology used. Service represents business accessible functionality.
- Process: processes describe a set of interactions amongst services in terms of messages exchange.
- Quality of service (QoS): a suitable feature is the description and the modelling of non-functional aspects related with the services described.

2. Contributions

The following organisations (listed in alphabetical order) have contributed to the development of the PIM4SOA results:

- [European Software Institute \(ESI\)](#), Spain
- [DFKI GmbH](#), Germany
- [SINTEF ICT](#), Norway

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