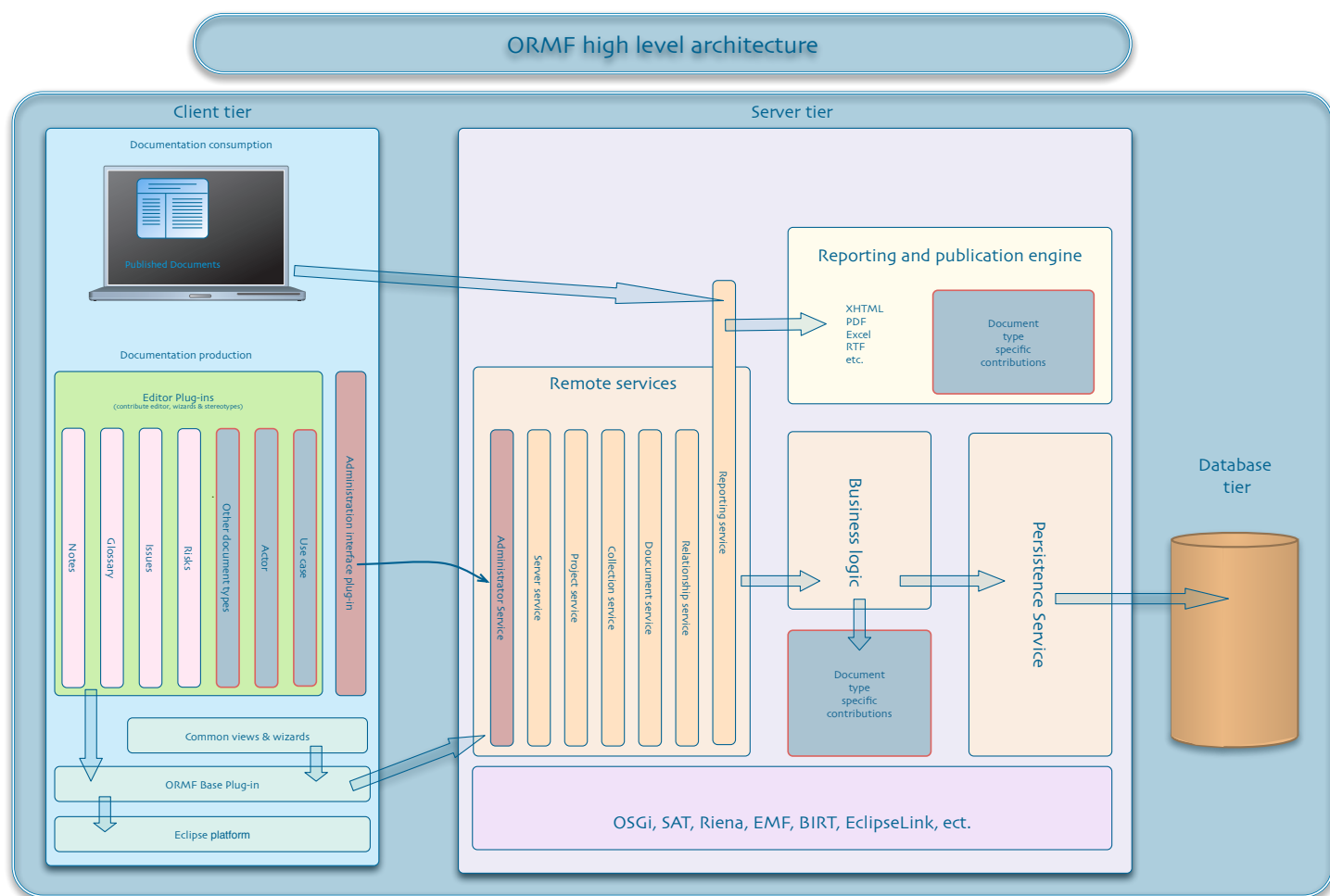


ORMF Architecture in Brief

Functional architecture

The diagram that follows is a high level representation of our vision for the structure of ORMF, with some of the add-on plug-in tools that it will facilitate. As the diagram shows, we plan to architect ORMF in three tiers, namely the client tier, the server tier and the database tier. Each tier will provide APIs and extension mechanisms that will enable the creation of the add-on plug-ins. These are indicated in the diagram by the components that have a red border. The client tier rests on the Eclipse platform, whereas the server tier is based upon the OSGi (Equinox) platform.



The client tier

This tier contains all components which deal with the direct production or with the consumption of the requirements.

The consumption portion of the client tier is of no great interest for this discussion as it will simply consist of a suitable program on the consumer's machine, e.g. web browser, Acrobat Reader, Microsoft Word etc.

The production portion of the client tier is a lot more interesting. It is a set of custom Eclipse plug-ins that will be based on a common extension of the Eclipse Platform that provides services of general applicability. Example of such services are:

- ✿ the translation of the XML based model elements into/from visual gadgets;
- ✿ a common wizard validation mechanism;
- ✿ a single pattern for handling views updates upon model changes based upon the well known observer/observable pattern
- ✿ common strategies for synchronisation of the contents of the visual components with changes occurring at the server level as a result of other users modifying the project.

The base plug-in is also responsible for acting as the communication mechanism between the client and the server tier.

The client tier will also offer a plug-in containing many common views, wizards and dialogs that will be used by any specialised tool that functions on top of ORMF.

Finally the client tier will also offer the Administration interface for direct usage by all ORMF based tools.

The server tier

The server tier will offer all the business logic and persistence mechanisms that are required to handle users requests coming from the client tier. These services will be mediated by agents located in a Web services layer, which will also be utilised by the publication and reporting engine. The latter will be responsible for the production of publishable documentation for consumption. Any tool that is built on top of ORMF will simply need to add its own document specific contributions to both the business logic components and to the publication and reporting engine, as indicated in the diagram above.

The persistence layer will finally be responsible for any communication with the database tier.

The database tier

Presently the framework is dependent on the Apache Derby database. It will be considered in the future if there is sufficient demand by the community for the database to be replaceable by any SQL compliant datastore.

Server component architecture

To be completed.

