

The SMARTer way to manage knowledge

Knowledge is, nowadays, the most valuable asset for modern organizations.

An appropriate management of the organization's knowledge is a key success factor. Knowledge must be gathered from many sources, stored into secure repositories, be accessed by the granted people at the right time. It will become a reusable component in the system and software projects...

When it comes to mix both, knowledge and requirements, it is extremely important to treat requirements as knowledge items, to get new knowledge from requirements, to transform knowledge into new requirements...

knowledgeMANAGER allows to manage knowledge from the requirements engineering point of view, thus getting the best of both kinds of assets.

Benefits of the tool



Quality:

The integration of knowledgeMANAGER into the Requirements Quality Suite shows the link of the tool with quality.

Time:

Requirements can rapidly be used to generate new pieces of knowledge. Create boilerplates just by typing an example of use.

Money:

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Knowledge is directly translated into money (Assets). Managing knowledge means managing money.

knowledgeMANAGER

knowledgeMANAGER gathers the knowledge surrounding your requirements intensive projects. It stores this knowledge into well-designed repositories and allows its easy access and maintenance.



knowledgeMANAGER allows the management of the **System Knowledge Repository (SKR)**, including its **System Knowledge Base (SKB)** as well as all the assets involved in the requirements improvement process.



Ontologies : Requirements knowledge Model

knowledgeMANAGER provides a powerful ontology management system allowing to define and manage the main semantics of your projects, as well as the concepts and relationships that better describe your knowledge.

Previous information coming from other applications can easily be imported into this tool. Knowledge managed with knowledgeMANAGER can be exported into many different formats to be used in other external systems.



Boilerplates

A **boilerplate** represents the grammar, structure or pattern a text has to follow according to the policies of an organization. We apply boilerplates to state which set of grammars should be followed by the requirements in our projects.

For example, the following requirement fulfills next boilerplate: "The Radar shall be able to detect hits at a minimum rate of 10 units per second"

THE <OBJECT DETECTION> SHALL <DETECT> <ITEMS> AT <MINIMUM> <RATE VALUE>

New knowledge tools... new knowledge roles

Knowledge Base Architects

A Knowledge Base architect represents a new generation of knowledge workers. He or she will have to collaborate with other roles (QA, PM, BA, SE...) in order to accurately represent knowledge included into a business domain.

knowledgeMANAGER allows to manage those pieces of knowledge in order to empower other tools in the Requirements Quality Suite such as RQA or RAT. **Managing knowledge** is an activity not covered yet in may organizations or IT departments. Therefore, aside of new tools such as knowledgeMANAGER, new roles are also necessary to cover those activities and support the activities of other roles such us quality manager, project manager, system engineer, business analysts...

Knowledge Base architect is the role suggested by the Requirements Quality Suite to lead those important activities. The main responsibilities of this role are the following:

- Agreeing, together with other roles, the borders of the domains to be modeled
- Finding sources that could help in the creation of the knowledge base
- Creating and evolving one or more knowledge models within the business domain
- Defining the right structure (boilerplates) of the requirements to be written
- Attending the suggestion of system engineers and business analysts to evolve the models

Knowledge Repository Manager is the role suggested by the Requirements Quality Suite to represent the responsibility for the whole Knowledge Repository.

knowledgeMANAGER into the Requirements Quality Suite



knowledgeMANAGER represents the core tool for the Requirements Quality Suite:

Requirements Knowledge Model:

- The semantics and concepts of the knowledge model consumed by RQA and RAT are easily generated here
- New concepts of the knowledge model can be generated out of the requirements managed by RQA

Boilerplates:

- The boilerplates used by RAT are managed in knowledgeMANAGER
- knowledgeMANAGER includes stats of use of every boilerplate, thus alerting of missing requirements or wrong boilerplates

knowledgeMANAGER list of features

Requirements knowledge model management
Management of semantics
Management of concepts and relationships
Boilerplates management
Manage the boilerplates used by RAT
Create new boilerplates just by typing an example
Manage groups of boilerplates to the agreed with the quality managers of every project
Detect missing requirements in projects
Collaborative system
New concepts and relationships can be suggested by RQA and RAT users
New boilerplates can be suggested and managed by RAT users
Indexing and retrieval
Index whatever source you want thanks to a semantic indexer system
Semantic search engine based on natural language processing
Manage all the semantic rules of the indexing & retrieval system
Import/Export system
Import thesauri information from external sources using different formats
Multiple kinds of reports: ISO, OWL, hierarchical, kwic, kwoc, glossary



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