User requirements and functional specification in REMSSBOT

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The User Analysis phase of the project, which consists of the user needs and requirements investigation and the functional specification for each of the participating regions, was one of the most important activities of the project. The article presents the procedures followed during this phase and describes the user needs and requirements for the REMSSBOT project, together with the partners involved in the project and their current IT situations.

The user requirements analysis

Piemonte was the leader in the execution of the User Requirements work-package (WP05) and the Functional Specification work-package (WP06) of the REMSSBOT project.

WP05 activity aims at providing the detailed description for the organisational and technical situation of the partners participating in the REMSSBOT project. The common public document D05.02 Final User Needs and Requirements, delivered within this activity, brings together documents from Attica, Piemonte and Scheldt providing, for each demonstrator, the description of the structures involved and of the user needs and requirements.

User requirements study

The activity of studying the user requirements followed three main steps: to present the partners involved in the project, to describe their current IT situations and to point out their needs and requirements.

The REMSSBOT concept is sharing environmental information not by building a centralised data warehouse but by keeping data at their original locations.

The REMSSBOT design approach consists of one common system architecture and three different implementations, that are tested in different fields of application.

In Attica the chosen field of application of the demonstrator are air pollution, solid waste and bathing waters. The REMSSBOT Attica demonstrator aims at producing a single, unified system, through which it will be possible to access information, collected by various authorities. Data providing users require that REMSSBOT provides access to their data, without further interference with the way their system operates.

In Piemonte the chosen field of application is the management of technical and administrative procedure concerning industrial plants with a relevant risk of accident. In order to provide environmental protection and people safety it is important to share information on risky industrial processes among different public bodies involved in the controlling procedure and to disseminate information to the public. The general requirement for the Piemonte region demonstrator is that it effectively supports co-operative activity among all the different partners involved in investigating risky plants.

In the Scheldt region the chosen field for the demonstrator is the water management of the Scheldt river catchment. In order to realise a water management approach, the Scheldt demonstrator can provide an accurate overview of different kinds of data.

The activity points out the general user needs of the project. They mainly concern the identification of the available information, the retrieval and access to metadata and real data. A further project requirement is the application and testing, in a bounded field, of the EEA ETC/CDS&T Data Model and the GEMET Thesaurus (General European Multilingual Environment Thesaurus), developed by the European Environment Agency.

The study worked out on the user needs has led to an agreement of common guidelines, a local analysis by the partners to produce local preliminary draft documents, and the consolidation of the three preliminary contributions in one document (D05.01).

Within the WP05 activity general sharing and discussion were achieved among the partners. A further result was also the consolidation of the three final contributions in one common document (D05.02), that was checked through peer reviewing activities. Finally the D05.02 was submitted to the ANIMATE project.

For all three contributions, the project describes the general context, the present state and evolution, the local situation, references and users’ identification, objectives and main features of the demonstrator.

Moreover, the contents have been discussed and shared among the partners, being effectively useful for the System Architecture Analysis work-package of the project (WP03).

Further more, the user requirements, pointed out in the D05.02 document, were useful in performing the WP04-Evaluation activity of the project results.

With this aim, in each region user groups were created. Moreover the users participated in the analysis and were involved in presentations and dissemination activities.
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The functional specification phase of the project

This activity aimed at defining the general functional specification of the REMSSBOT system.

As in the above described WP05 activity, Piemonte was the leader in the execution of the WP06-Functional Specification activity.

Within this activity, a common document (D06.01 Functional Specification) was delivered. It provides the functional specification guidelines the partners ask for for the REMSSBOT project’s realisation and is the result of the merger of the three documents coming from the REMSSBOT partners.

For each involved region, the functional specifications concern:
• the project activity of a functional architecture;
• the definition of a physical architecture of the information system;
• the identification of a technical structure as defined as possible in order to perform successfully the implementation activity of the project;
• the identification of the different realisation steps of the information system.

The D06.01 deliverable was the main result of the functional specification gathering work, and was an important reference for the following WP07-Implementation activity. It was also an important input for the System Architecture definition (WP03).

The WP06 activity pointed out a general functional specification, that in each of the three participating regions, the users have to be able, without any knowledge, neither about the way to retrieve and access information, nor about the communication protocols, to select the scope of their search.

In addition they have to be able to set some constraints for the searching activity through the REMSSBOT Catalogue of Data Sources R-CDS (who, what, where, when approach).

Moreover, the users have to be able to provide indication for prototyping activities, to appraise feedback and to understand and assess the R-CDS use.

Both WP05-User Requirements and WP06-Functional Specifications are fundamental phases of the project’s success especially for the importance of involving users and defining and experimenting with an inter-regional initiative involving the cooperation among partners in different sub-projects.

Further reading
ETC/CDS project (1996b), Data Model CDS vers. 0.5 – Under Contract of the European Environment Agency, ETC/CDS project.
ETC/CDS project (1996f), Third ETC/CDS Workshop on CDS and Thesaurus, Copenhagen, 16-17 September 1996, Proceedings, ETC/CDS project.
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