

User Interface of Donantonio

Specification of Software Requeriments

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1. Introduction

This document is a Specification of Software Requeriments(SSR) for the client subssystem of the bibliographical automatic distributed publication system Donantonio. All this content has been elaborated considering the neededs observed in the experience of the publication's authors in Internet. This specification has been structured being inspired by the directives given by the standard IEEE *Recommended Practice for Software Requirements Specification ANSI/IEEE 830 1998*.

1.1. Purpose

The object of the specification is to define in a clear and exact way all the functionalities and restrictions of the system it wants to build. The document goes directed so much to the development equipment, like the members of the projects of free documentation and the community of possible end users. This document will be the communication channel between the implied parts, taking part in its preparation, members from each part. This specification is subject to revisions by the implied parts, specially by the potentials usuaries, that will be picked up by successive versions of the document, until reach its approval. Once approved it will serve as base to the equipment of development for the construction of the new system.

1.2. Scope of the system.

This system is required as a result of the increasing complication of the publication workings of documentation of free software.

It's evident the needed of a informatic system that it automates the publication workings of documents in Internet, in such form that are guaranteed the easy location of them and a fast availability to the users.

Using bibliographical norms it can become general the use and application of the system to any type of information susceptible to be classified.

The scope of the developed system reaches until the production of clients and servers for Donantonio, communication protocols between them and user interfaces; preferring the design of a system that can be embedded in other compatible applications so these can as well be compatible applications (clients, servers or interfaces) with Donantonio.

1.3. Definitions, acronyms and abbreviations

1.3.1. Definitions

Resource

Element accessible through a URL susceptible to be classified bibliographically.

Scheme

It describes the syntax of a description.

Description

Instance of a scheme that it identifies by metadata, in a unequivocal way to a resource.

Library

Collection of descriptions.

Server

Node that takes care of donantonio queries.

Client

Node that produce donantonio queries.

Query

Request of a subgroup of descriptions expressed in a standardized language.

1.3.2. Acronyms

SSR

Specification of Software Requirements

GFDL

GNU Free Documentation License

GPL

GNU Public License

RDF

Resource Description Framework, standard of the World Wide Web Consortium (W3C) for the codification and handling of metadata using the markup language XML.

URL

Uniform Resource Locator, scheme used for the localization of a internet resource.

XML

eXtended Markup Language, standard of the W3C.

1.3.3. Abbreviations

They have not been defined.

1.4. References

- IEEE Recommended Practice for Software Requirements Specification. ANSI/IEEE std. 830, 1998.
- Donantonio: bibliographic system for automatic distributed publication. Specification of Software Requeriments. J.J. Amor, D. Escorial e I. Olea, 2000.
- Donantonio Clients. Specification of Software Requeriments. J.J. Amor, D. Escorial e I. Olea, 2000.
- Donantonio Servers. Specification of Software Requeriments. J.J. Amor, D. Escorial e I. Olea, 2000.

1.5. Document's General Vision

This document is formed by three sections. This section is the Introduction and provides a general vision of the SSR. In the section 2 we give a general description of the system, with the purpose of knowing the main functions what must make the system, the data associate and the factors, restrictions, supposed and dependencies that affect the development, without enter in excessive details. In section 3 the requirements are defined in detail what must satisfy the system.

2. General Description

2.1. Perspective of the product

The user interface will interact with clients donantonio, with a communication mechanism that will have to be defined.

2.2. System's functions

2.2.1. Access to the information

The user interface will have access to the local library of a Donantonio client, to consult the metadata contained there.

2.2.2. Navigation's Mechanims

The user interface will include mechanisms that facilitate the navigation by the information of a Donantonio client.

Note: Now I think it this is the less defined part... probably it's necessary to define here the interactive queries and all about that.

2.3. user's Features

The user interfaces will have to be of intuitive use, easy to learn and simple to handle. The system will have to display a high degree of usability. The desirable would be that a new user became familiar with the system in very short time, being of immediate use for the functions of resources search.

2.4. Restrictions

The system will be free software (in agreement with the GNU-GPL license or similar) and will have to be free those components that it reuses.

The system will design according to a model client/server.

The system will base its communications on standard protocols of Internet. Internet.

The different subsystems must have a simple design and implementation, regardless of the platform or the programming language.

2.5. Suppositions and dependencies

2.5.1. Suppositions

It is assumed that the requirements described in this document are stable once is approved by the design team taking care of suggestions of the community. Any request of changes in the specification must be approved by the design team and be managed by the same one.

2.5.2. Dependencies

The Donantonio system works independently, with no need to communicate with other external systems, reason why there are no dependencies respect to other systems.

3. Specific requirements

In this section the it shows the functional requirements that will have to be satisfied by the system. All the requirements exposed here are ESSENTIAL, that is, a system would not be acceptable that does not satisfy some of the requirements presented here. These requirements have been specified considering, among others, the criterion of testing: given a requirement, it would have easily to be demonstrable if it is satisfied or not by the system.

Note: It is convenient to make the "requirements matrix", that confronts the requirements with the verification method.

3.1. Functional requirements

3.1.1. REQ01: Library's Access

The user interface will be able to access to all the library of a client donantonio.

3.1.2. REQ02: Library's Searches

The user interface will allow to make searches of descriptions, for which it can be specified total or partially the descriptions to look for.

3.1.3. REQ03: Refinement

The user interface, after make a search and show the results to the user, will allow to refine the search, that means, to rewrite it from the actual making it more restrictive.

3.1.4. REQ04: Resource's Access

The results of the search will include mechanisms that will allow to the user to ask for the making of a local copy of the referenced resource by the description.

3.1.5. REQ05: Client's programming

The user will have mechanisms to program his client, that means, introduce in this one the donantonio queries that will make in the chosen servers, and when they will take place.

3.2. External requirements of interfaces

3.2.1. User's Interfaces

3.2.1.1. REQ06: General requirement of the user interface

The designed user interface must have an hig degree of usability and have to be simple, fulfilling all the requirements specified.

3.2.2. Hardware's interfaces

They have not been defined

3.2.3. Software's interfaces

3.2.3.1. REQ07: Communication with other modules

The communication with the clients donantonio will be made with protocols based on standards that allow to fulfill the other requirements of the system.

3.2.4. Communication's interfaces

They have not been defined

3.3. Performance requirements

3.3.1. REQ09: Resources consumption

The complexity of the applications of user must be low, and consume few resources.

3.4. Development requirements

3.4.1. REQ10: Life's Cycle.

The chosen cycle of life to develop the system will be the evolutionary prototype, so that changes and new functions can be incorporated easily.

3.5. Technological requirements

3.5.1. REQ11: Bibliographical norms

The bibliographical schemes to use in the system will be expressed in RDF.

3.6. Attributes

3.6.1. REQ12: Free Software

The system will be free software and, therefore, any software component that it also reuses will have to be free.

3.6.2. REQ13: Portability

The system will be designed portable. It will have to be possible to implant donantonio applications in diverse languages and platforms.

3.6.3. REQ14: Maintenance

The system is susceptible to be extended. Therefore it will have to be designed for easily maintenance, applying for his development the methodologies that it will be necessary.

3.7. Other requirements

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4. Apendices

4.1. License

Donantonio: Specification of Software Requirements

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