Building e-learning communities: The case of VirRAD

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Abstract

This paper discusses the development of virtual communities and especially e-learning communities. In particular, this paper is inspired by VirRAD European project, and presents the intermediate results that have raised from the definition of this virtual radiopharmacy community.

1. Introduction

A key factor for the success and the subsistence of the virtual communities is a strong interest among the concerned people. Those people have a common goal and are captive of spatial, time and economical limitations that prevent their interaction in a real place. The shared purpose of a virtual learning community is learning [1]. The establishment of a virtual learning community could be an effective solution, especially for groups of people in highly specialised fields, such as radiopharmacy, because their main problem is poor communication. This paper presents the functional characteristic of such a community developed in the bounds of the VirRAD European project [2], whose main goal is to bring together learners, professionals and professors of the radiopharmacy community.

2. System Design

VirRAD system will be an intelligent, virtual reality enhanced, distance learning environment for vocational training for learners, practitioners and specialists in a knowledge community, using Radiopharmacy as the target learning and knowledge exchange area. In order to create the above environment, the VirRAD system has been divided into four main areas (sites): **Public web site:** this site, which is accessible by all users, aims to present the VirRAD project. **Community:** The Community site provides tools for scientific and professional communication and information exchange among the radiopharmasists' community members. **Instructional Component**: The main goal of the instructional component is to facilitate the interaction among learners, authors and mentors as well as to support the learning material access by the learners through an intelligent learner modeling system. The instructional component is being composed of the courseware, the virtual laboratory and the learning management element. **Project Internal site:** this site is used mainly for the internal communication among the project members, providing functionality similar to the Community site.

From the technical point of view, VirRAD will be a network-based environment, which will be mainly comprised of the following components: (a) a web based learning community, which supports not only asynchronous interactions but also synchronous communication and collaboration features; (b) a virtual-reality simulated environment where active experimentation may take place; (c) multimedia courseware. VirRAD will be based on a n-tier architecture in order to support the above components. The proposed system architecture is depicted in Figure 1.
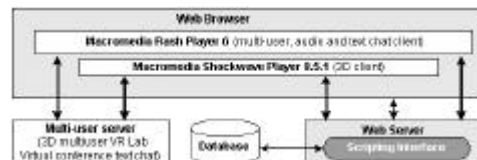

Figure 1. VirRAD Architecture

3. Conclusion-Future Work

In this paper we presented the main components of an educational virtual community. After the creation of the prototype a thorough evaluation will be conducted in order to assess the educational value of the VirRAD system.

4. References

[1] J. Laister, A. Koubek, "3rd Generation Learning Platforms. Requirements and Motivation for

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[2] VirRAD European project, http://www.virrad.eu.org