

DOCUMENT MANAGEMENT IN CONTEXT OF COLLABORATIVE SYSTEMS

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Abstract

In this paper we will present the implementation aspects of a document management application, meant to administrate different types of formats. We propose an application which provides full functionality for accessing information, taking into account the security aspects of documents, and quick access to data. The application offers the possibility to track changes, manage data, save information, as well as document management functionalities. Our purpose is to create a suitable, easy-to-use application which, if used, will guarantee efficiency in an organization.

Introduction

“Like any winning sports team, an unforgettable ballet, or the best theatrical production, collaborative social networks are the source of value creation. This is because they are our most cohesive pattern of social relationships” (Scott, 1991).

We should percept e-collaboration as a way of using information to create something new, by working together in real time. Collaboration uses the C-Three (cooperation, coordination, and communication) as a set of tools to achieve its goal but it should not be confused with these terms.

But collaboration is a key factor in every organization, as well. Thus, we cannot percept today's business world without referring to the term of collaboration.

One of the most important communication tools within an institution is the document (Zhao, 2004). It is the object that assures communication between departments and between institutions. Public sector institutions and private sectors organizations use different document management systems, within their departments, to structure data. Another objective of these systems is the electronic workflow tracking in the entry and exit points of their companies (Wolff, 2005).

To acquire a competitive advantage, the information system and its proper management, becomes an important economic and strategic objective, for an organization. Thus, purchasing the right application for document management could be seen as an important factor for the organizations success.

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Currently, due to integrated technologies we can discuss about a redefining process of the term document as follows: lots of structured data used as information. This mean we refer to a document as video information, holograms, etc. (Katzy, Loh, Zang, 2005). In this way a document is transformed into a structure, compounded by text and multimedia, less printed and more often used on digital media. New technology allows reading, viewing or, in different cases, listening the information on portable wireless devices simultaneously or on office equipment. This means people can make transactions at any time, from anywhere, without the constraints of space and time.

We will describe in what follows an application which is meant to allow a suitable document management process within an organization, and in its collaboration with its social partners.

Related works

The evolution of document management systems has several stages. An important step was the systems that had the purpose to "electronic archiving" the information. Most of the solutions aimed at areas of public administration and banks (insurance). In time, more and more companies realized that such a system would greatly benefit if it's properly used. Thus, software companies started to develop and provide such systems on the market.

M-Files Document Management Software System is such an application. This package is part of Microsoft Suit, and it is supported by any operating system. It provides an easy to use Explorer interface. The system stores documents in a centralized manner, where access to data is secured. Centralization of documents is done in one place. The application has a function for managing automated emails. It was created on the Microsoft SharePoint Services support (www.microsoft.com).

Liberty NET is also an application made in order to facilitate the flow of documents within an organization. It is currently used by a significant number of organizations providing a platform that offers numerous functionalities for electronic forms, information backup, data capture, and / or documents storage. The program can handle large amounts of information. It, also, provides a component called Liberty NET Office which is specific for office activities (www.libertynet.com).

An application that does not take into account the size of an organization, in order to replace conventional methods with some electronics that facilitate access to information is the EDMS (www.edms.org).

The applications described above have the main aim to manage an organization's documents in the most efficient manner possible. Not long time ago information was not easily accessible. This fact hampered the emergence of solutions for document management. Document management concept was vague, and not even those who used it understood exactly why it is so useful. Each application is a solution for people who have faced the problem of efficiently managing an organization's documents. Over time with

understanding the concept of document management ideas began to emerge. Applications evolve from one to other providing more specialized functions, upgrading, and offering ease of working processes with documents. But during evolution specialist found not only solutions for specific tasks but also other larger needs. This is why in theory appears the idea of prototyping document management systems and providing permanent upgrades. Our proposed application, as it will be seen later on this article, was projected as a dynamical system, that is suitable for a large amount of organizations, and that could be continuously upgraded to provide facilities needed for specific tasks.

Proposed architecture

The idea of developing this application started from a definition of a document which states that: "a document is the key tool of communication within the organization's internal and external departments" (Denise, 1999).

Bellow we present the proposed functionality for document reading:

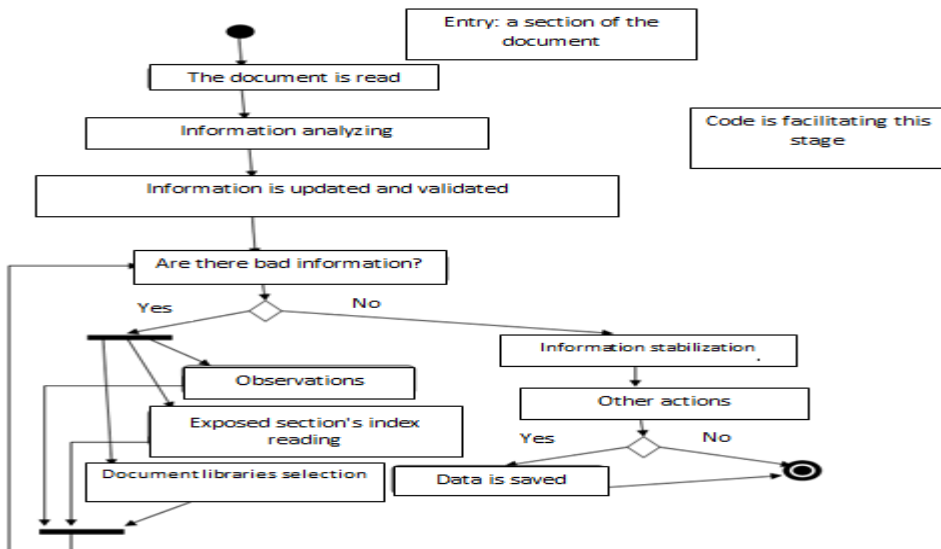


Fig.1. Activity diagram

The ways in which a document can pass from a state to another are represented in the following diagram:

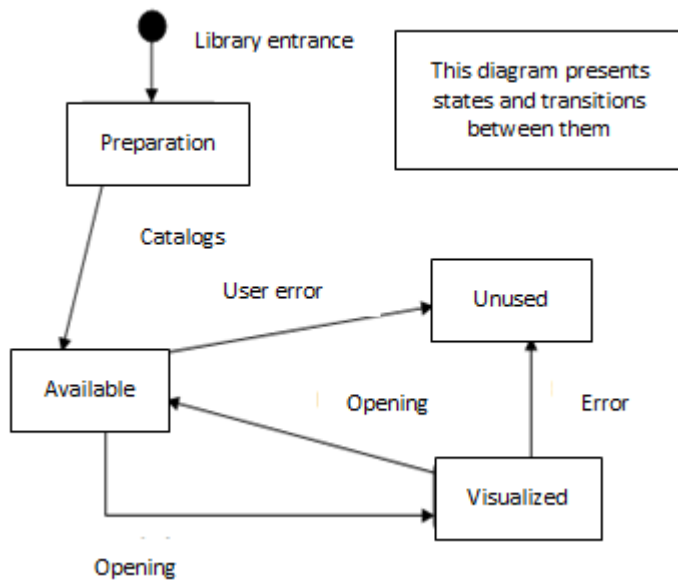


Fig.2. State diagram

The last diagram presents our perception of the connectivity between the concepts (Fig.3.).

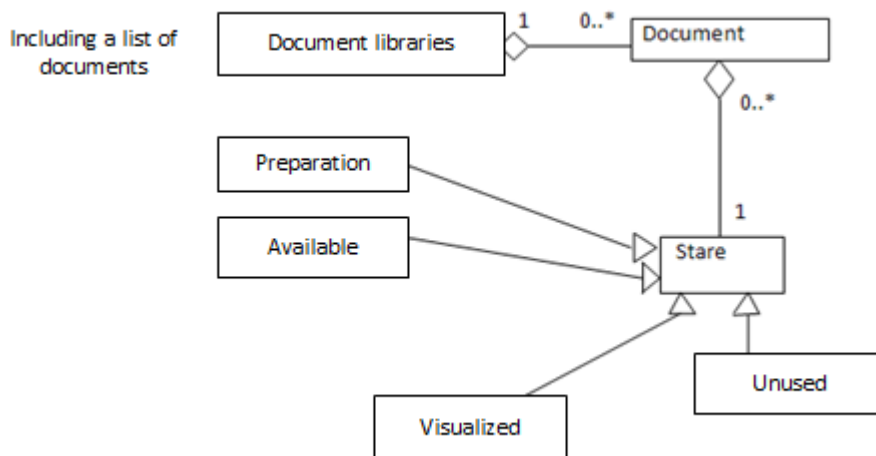


Fig.3. Relational diagram

Implementation aspects

The functional unit in the document management application is the electronic document. Accessing documents by employees of the organization must be secured as important information could be stored in them. Thus we proposed a user role based application. At the same time we have created a documents backup mechanism that is triggered on a regular basis.

administrators possess are documents archival, versioning control, and also adding, editing, or deleting users. Users, in this case are employees of the company.

As mentioned above, a user is considered an employee of the company. Employee who possesses the ability to management document features within the organization. Users will have full access to their documents but limited access to those that are managed by other users. Users can grant rights to each other or cancel them.

In the home page, users can select common applications, applications in departments, general announcements, other links, and the administration interface. Common applications are visible in all departments where all users have access to them. On the top left of the page, the users logo is displayed. Below the logo, the user can access the menu (Procurement, IT, HR, etc.) and common applications menu (unchanged for each department). The menu offers many possibilities for handling application documents, including providing a timetable, planning various events and booking rooms (Fig.5.).

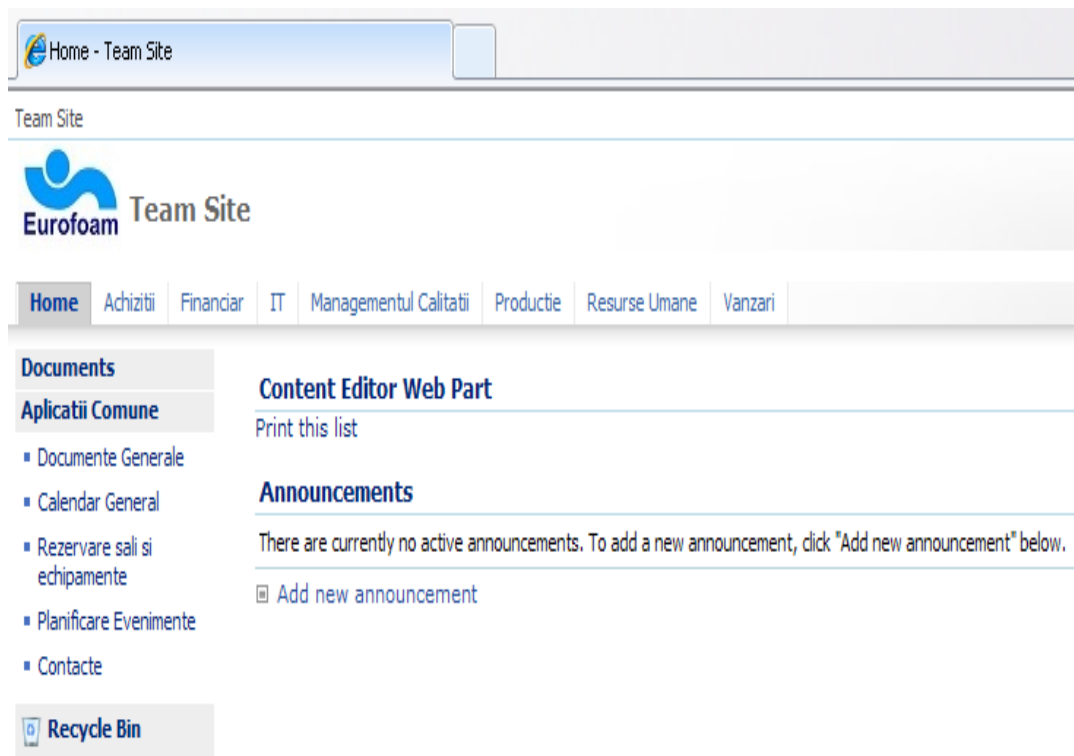


Fig.5. User Interface

In the General Documents section, users can add new documents or access existing documents. This part of the application provides the possibility to connect with Microsoft Outlook, which allows users to create e-mail alerts (Fig.6.):

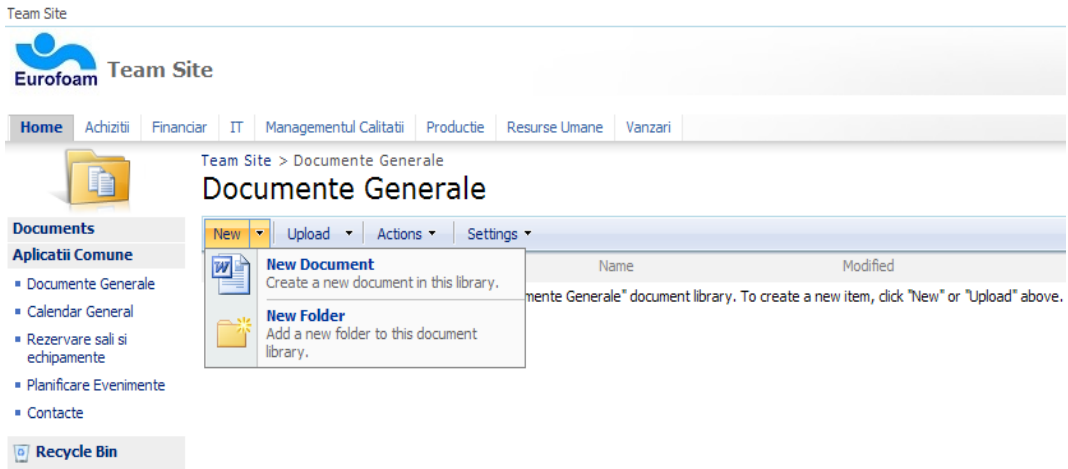


Fig.6. General Documents

Joint event planning within the company can be done using the "Planning events" menu:

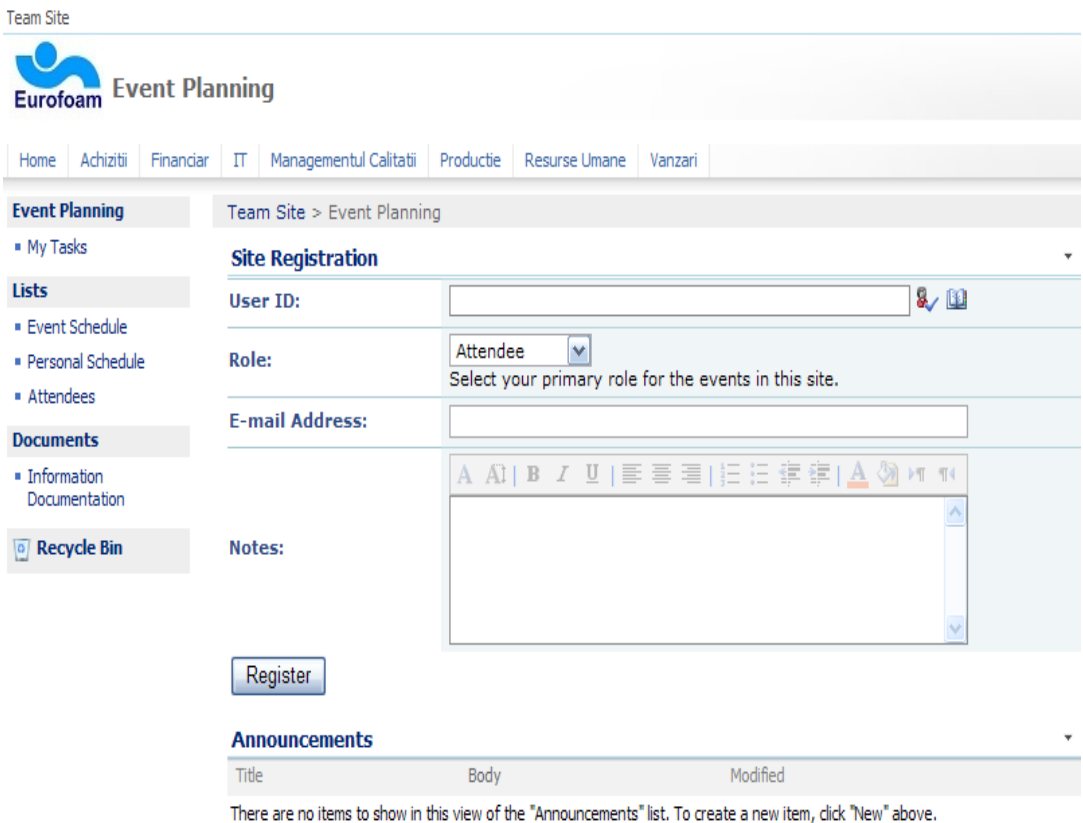


Fig.7. Planning Events menu

The application also provides much more other functionalities, but we considered that the ones we debated in this article are sufficient to make our point.

Conclusion

Collaboration with others who have an advanced level of knowledge is strength for teamwork processes. Sharing ideas through various means available is a concept that should be emphasized. Highlighting the view of each member is made much stronger in comparison with former times. Because evolution, now there are more and more available solutions for our everyday needs. Organizations should give a good look to the different applications available on the market as they could benefit from them and streamline their activities.

In this project we learned that a very important factor for things to work well within a company is communication. Communication's role is to collect and select useful and accurate information from everyone involved in business. A more important task is to retain information in the organization as employee environment is very dynamic. Companies gain and lose employees in a regular basis. This is why, we consider that such an application is more than needed in the company.

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