

## VIRTUAL FIRE-PROTECTION COMMUNITY

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**Zoran Lovreković**

Higher Education Technical School of Professional Studies, Novi Sad, Serbia  
lovrekovic@vtsns.edu.rs

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**Abstract:** In the first part of the paper, the authors presented the problems which our subjects from the fire-protection area in their beginnings, development and work encounter. As a solution which the authors suggest is the use of the Internet, as a medium that provides a simple, easy and cheap overcoming the geographical and time barriers in the flow of the (necessary) information. While building the site that should offer assistance to the FP subjects, it is necessary to define the goals and to build a strategy to achieve the goals through internet site. In this paper the authors suggested several possible approaches: Web site with statistic contents, Web site with dynamic contents, Web site with dynamic contents and two-way flow of information and Web site for knowledge management. VFPC (virtual fire-protection community) would be a legal counsel, a dot-com company, and basically a community of all stake-holders considering FP. So, VFPC does not have its own premises or assets. It is situated in a "virtual reality", i.e. it is a Web portal which exists owing to joint activity of several subjects.

**Keywords:** *Web site, fire-protection, virtual community, virtual fire-protection*

### **Introduction**

At the European summit held in Lisbon in March 2000.[1], and at the Summit of Europe held in Barcelona in March 2002. [2], it was concluded that in the modern society which is based on the knowledge and in where the organizational environment is

changing with hectic pace, information and knowledge are the key factors in promoting innovations in order to achieve competence and success. In the conclusions brought in Barcelona it is said that one of the goals of Europe is to achieve "a competitive society based on knowledge", concentrating on the education through systems of training, quickly adjusting to "the demands of the knowledge society and needs to improve the quality level of the employees". These goals have to be achieved with the improvements in "qualification basics, development of computer literacy and lifelong training". Similar conclusions can be found in the UNICE Benchmarking Report 2000 (see ex. [3]).

As opposed to everything mentioned above, our **subjects from the fire-protection area** meet with a lot of problems in their beginnings, development and work where they would need an adequate help:

- **legislative regulations**
  - which fire-protection regulations are valid
  - which are the other elements of government regulations (facilities, incentives, help)

- which are government's plans and intentions considering fire-protection
- what is the state and perspectives of FP in Serbia?
- comparison with the legislative regulation of EU, and other countries
- links to the appropriate government's and other sites where useful information for FP can be obtained
- **start-Up programs for small companies from FP area**
  - market of business ideas
  - validation of business ideas
  - creation and evaluation of business plans
  - credit market
    - links to other sites where information about creditors and credits can be obtained
- **assistance to the organizations of FP in actual activities**
  - information about the market and products connected to FP
  - development of new products/services from FP
  - promotion of new products/services from FP
  - development/improvement of FP organizations
  - assistance in connecting FP organizations in order to exchange and unite ideas, experiences, knowledge and resources
  - assistance in the development/improvement of logistics
  - connecting the creators of services/products of FP (suppliers, manufacturers, subcontractors, distributors, financiers,...)
- **training**
  - the market of specialized courses and training
  - on-line training and tutorials
  - forums and discussion groups (FP organizations, experts, students,...) with actual questions and answers to the questions
  - experts' answers to the questions with all necessary information and processes that led to the suggested decision
  - files on experts and consultants for FP and specific areas of FP
  - assistance to the students while they are writing their term papers – providing them with topics, advices, discussions, evaluations, information...
  - scientific and professional studies concerning FP
- **innovations**
  - innovations (supply and demand)
  - assistance in the realization of patents
  - innovations of products/services from FP area

- innovations of the safety process (tactics, strategy...)
- innovations of the technological processes from FP
- innovations forum (Brain Storming)

• **labor**

- demand for the FP labor
- labor supply from FP area
- certification of knowledge acquired through work and not through formal educational systems
- head-hunt –finding experts needed for the companies
- Human resource Management for organizations dealing with FP, users of this portal

• **Market of Knowledge Management tools for FP**

**A suggestion for the possible solution**

How to provide above mentioned assistance in an adequate way to those who need it? It is possible to follow the business logics of our government concerning the development of small and medium companies – foundation of (business) incubators, i.e. centers that would support the development and growth of the subjects from FP area. This demands significant financial investments in the infrastructure of the centre, business premises, equipment and staff. Besides this, geographical distance between the centers and those

who would use their assistance makes the efficiency and efficacy of the work of the centre difficult and raises the question of its appropriateness.

The possible solution is the use of the Internet, as a medium that provides a simple, easy and cheap overcoming the geographical and time barriers in the flow of the (necessary) information. While building the site that should offer assistance to the FP subjects, it is necessary to define the goals and to build a strategy to achieve the goals through internet site. The following approaches are possible:

- **Web site with statistic contents:** Information interested to the FP subjects would be put on this site, and they would be classified in the appropriate areas that would be occasionally updated with the help of the information technology staff. The purpose of this site is **offering necessary information.**
- **Web site with dynamic contents:** this site would have two component parts: -front office and back office. From the user's point of view, who can see only front office, this site does not differ from the site with statistic contents. However, those responsible for the contents of this site (necessary information) do not forward the contents to the information technology staff that makes a Web page out of it, but they use graphical user interface (screen forms) through which they can set wanted contents on the site without any demand for the informational knowledge.

- This ensures a **better promptness of information offered on the site**, and **responsibility** of an individual for the contents (information). A Web site like this relies on the **data base** at the background of this site (web data base) in which it is remembered and from which contents that editors want to put on the site are shown. Back office ensures editors to put contents into the data base through screen forms, and Front office ensures them to show the contents on the pages of the web site accessible to the users [10].
- **Web site with dynamic contents and two-way flow of information:** from the technical aspect, this site functions as the previous one, except that the goal is qualitatively new: **it is no longer offering information to the users, but exchanging information between site editors and users, and users with each other.** Thus, the direction of information is multiple through this site, and there is a full (two-way) interaction among the users of this site.
- **Web site for knowledge management:** In order to define what are the goals and tasks set for a site like this one, it is necessary to define the notion of knowledge, and knowledge management. Knowledge is as old as the human race. But the story about the knowledge management begins in the late 90s of the 20<sup>th</sup> century. A great interest and the practical maker of this whole story was the book written by the authors

Nonaka, I., and Takeuchi, H., “The Knowledge-Creating Company”, Oxford University Press, New York, 1995. [4]. Under the influence of these two authors, as well as Tomas Dawenport, Karl Erik Svaiby, Edna Levinson, and many others, all in search of a way to accelerate technological progress and the progress of human society in general, knowledge has been identified as the main resource. There comes a change of the paradigm in most developed countries of the world –**from the era of acquiring competitive advantage based on the holding information, developed world moves to the era of acquiring competitive advantage based on the ability of creating new knowledge.** And the knowledge results in:

- new technologies
- new products
- increased and even determining influence of the buyer on the product/service
- new organizational processes
- new quality
- new, additional satisfaction of the buyer since this is what secures competitive advantage to an organization.

Many of the above mentioned theoreticians of knowledge management gave their own definitions of knowledge.

So Kioshi Niva from The University of Tokyo defines knowledge as “a set of facts, convictions and experiences“ [5]. Dawenport and the marriage couple Prusak have their own definition: “**Knowledge is a fluid mixture of experiences, contextual information and expert ingenuity which ensures a frame for valuation and incorporation of new experiences and information. It exists and it is applied in the minds of the knowledge workers. In an organization, it often becomes built into not only documents and data bases, but also into organizational routines, processes, practical work and norms**” [6]. Knowledge is made of [7]:

- “contextual information” which is called “**explicit knowledge**” (that is the knowledge that can be codified and remembered for later use or transfer) and
- “**tacit**” knowledge which includes **intuition, experience, skills, attitudes and creativity.**

Nonaka and Takeuchi [4] define four types of knowledge conversion:

- Socialization (tacit into tacit)
- Internalization (explicit into tacit)
- Externalization (tacit into explicit)

- Combination (explicit into explicit)

Socialization is a process of creating tacit knowledge based on sharing experiences through business training or, for example, through “apprenticeship”. Internalization is a process of converting explicit knowledge into tacit through the use of documentation, literature, etc. while dealing with actual problems. Externalization is a process of articulating tacit knowledge into explicit concepts such as written documents or software. Reconfiguration of the existing information through sorting, adding, combining and categorizing knowledge can lead to a new knowledge, and that is the process of combining.

Basically, knowledge defined like this is the information that **changes something or somebody** – or it becomes a basis for an activity, or it **makes a person (or an organization) capable for different or more efficient performance.**[8] The goal of knowledge management is to keep balance between implicit and explicit knowledge, and to direct them in order to achieve **more innovations** or better **effectiveness** (doing the right things) and **efficiency (doing those things in the right way)** [8].

In order to provide sharing of knowledge, and not only **information** on this web site, it is necessary that it serves for sharing complete (organizational) processes in which information are used, and for constant analysis, valuation and use of information and knowledge in order to create new knowledge that can lead to better effectiveness, efficiency and innovation. [9]

- **Virtual community** is actually a Web site for knowledge management which sets qualitatively new goal: initiatives for knowledge management in a certain area are no longer partial and separate, but broad in all their dimensions. A site like this provides constant «on-line» **sharing of all activities, processes, information and knowledge between all the participants in the chain of creating values from the domain to which virtual community belongs (in this case FP)**. In this way, knowledge that is otherwise «invisible» since it is divided into segments between different participants while creating new value in FP area, is now made visible [9]. Members of the community do not share only data, nor just information (information is a data put in the context). They also share knowledge (information «sunk» in a certain context), and business and organizational processes, routines and practical work, enabling faster creation of new knowledge, automation of innovation process and they also

find new, more efficient products and services, and more efficient ways to deliver them to the user. This can be done by working together, and with everybody trying to perceive, define and solve problems. [7].

**VFPC**-virtual fire-protection community would be dealing with all the above mentioned things with the aim defined specifically for virtual communities. VFPC would be a legal counsel, a dot-com company, and basically a community of all stakeholders considering FP. So, VFPC does not have its own premises or assets. It is situated in a "virtual reality", i.e. it is a Web portal which exists owing to joint activity of:

- Permanently employed in VFPC
- Part-time employees in VFPC hired when needed
- FP organizations looking for assistance or solutions
- All other interested parties (students, inventors, investors,...)

Web portal would consist of all those seven areas. Each of them would represent a separate portal page, and one permanently employed person as an editor and a needed number of part-time associate-editors would be responsible for each one of them. The number of permanent and part-time employees would change according to the need, the market interest and resources provided for an area.

One part of the contents of each area would be publicly accessible, and one part would be accessible only to those who have paid regular dues (monthly, or even annually). There would also be "safe-private" parts of the portal which would be accessible only to representatives of FP organizations who would ask for assistance and to the consultants who would provide them assistance. Therefore, the privacy of data and information would be divided into three safety levels:

- Publicly accessible
- Accessible to community members
- Accessible to personally interested parties – FP organization which has a problem and consultant(s) who solves them

Management is achieved through "decision board" which consists of seven permanently employed editors, and one of the founders. CEO, as a permanent employee, manages the board.

VFPC finances would come from several sources:

- regular dues for FP organizations
- regular dues for experts who would be hired for offering services to organizations dealing with FP
- regular dues for individuals (job offers, job demand, products, students,...)

- percentage gained from business transactions through VFP
- renting advertising space to the manufacturers of the equipment for FP

### **Conclusion:**

What is achieved in this way?

- FP organizations receive needed information, knowledge and other help which directly influences the development of FP and related sectors in Serbia
- The parties in the chain of creating new value for the users of FP are becoming connected, and that regulates a better market of services and products of FP
- Needs and possibilities of those offering services/products, of consumers, market, labor, information and knowledge are better articulated
- New knowledge is better, faster and easily created, shared, applied and valued
- Experts are better educated (future students, labor and experts)
- Management as well as the nation would be more aware of the necessity to develop potentials in order to create new knowledge from FP area

- All resources are better and used more qualitatively

It is obvious that in a poor society which is still wandering on the road of transition, faced with a large number of problems, virtual community can be a significant way of sociological, trade, expert and scientific organization in FP area. It can be a driving force for innovations and for finding new, more effective and more efficient products, services and fire-protection processes.

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