

About the Intranet, Modern Technology for the Groups Decision Support Systems (GDSS) in Firm Groups

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On a macroeconomic level, it is difficult to conceive the organization of a firm group without an informational system capable of ensuring quick access to information, and, implicitly, the acceleration of the production and decisional processes. Besides, the electronic communication between the distant subsidiaries of a group reduces the costs very much. The productivity may significantly increase in the case of the groups using informational technologies and advanced communication systems. This paper tries to present briefly some dimensions of the intranet and synergies between intranet and GDSS in firm groups.

The existence of an electronic trade site or of a presentation site on the Internet facilitates the entrance of a group on a market it could not have easily access otherwise.

The tendency of many groups today is to use the Web in order to make themselves known through the most important source of information in the informational society – the Internet. In order to become providers of information, they must own a unique page for the start, called homepage, with the help of which any group can offer its goods, services and various useful information to the visitors of the site.

At a first glance, the intranet seems to be nothing more but the local network of a corporation. The feature that distinguishes the intranets from the local, traditional networks is the fact that the intranets are based on the protocol TCP/IP – the corpus of software rules that control the Internet. The basic functioning of the intranets and of the Internet is the same. The Internet has become indispensable due to elements such as its high quality programs, to the ease with which information is exchanged, and due to increased communication, and these elements are directly applicable to the intranets.

The intranets are cheap and easily applicable solutions that will allow firm groups to become even better provided with up-to-date information. The implementation solutions for the intranet may vary depending on the level of management.

- for the high level management, the Internet provides studies of some cases of various organizations that have adopted intranets as an alternative to traditional groupware products;

- for the management of informational systems, the Internet provides up-to-date topics and methods that help successfully create a plan for the passage to a solution based on the intranets;

- for the *common user*, the Internet shows the way an intranet increases productivity, simplifies the work fluxes and helps the user gain competitive advantage over those who have not yet learned how to exploit the intranets.

Further on the components of the intranet are described: the computer networks, the protocols used in the local networks, concepts and architectures, up-to-date intranet solutions.

The intranet integrates the Internet technologies in a firm group in a form that is accessible to the users. The transmission standards and the presentation of the information through the intranet are identical to those of the Internet, so the difference lies more in the ways and possibilities of accessing the two networks.

In my opinion, the intranet implemented in a firm group does not necessarily require a connection to the global Internet network, and this is very beneficial by adopting Internet technology and by connection to it, all the activities inside the firm are influenced and developed.

From among all the basic services offered by the intranet, I consider the DNS service, the WWW, the e-mail, the FTP protocol very important.

WWW is the most commonly used hypermedia system ever distributed, it is the system of multimedia information distribution with the fastest growth in the information industry, and it functions on the infrastructure of the open TCP/IP Internet/Intranet networks in the client-server architecture; all these are the advantages of using the Web as support for the intranet and it is due to these advantages that the intranet represents a paradigm for the infrastructure of the future collaboration organizational systems inside firm groups.

In my opinion, given the conditions of firm groups, when the subsidiaries are distant, the e-mail service is indispensable to communication and because of the great number of files spread on the intranet; the protocol FTP represents an important part of the Web.

Of all the Web solutions for the intranet, the ones meant for the stimulation of the documents, the HTML files, the CGI programs have been described here. Of all the Java solutions, the following have been described: the structure of the intranet based on Java technologies, the RMI technology, the direct access techniques to databases using JDBC, EJB and SQLJ. Of all the middleware technologies, the models DCOM, Corba, SOM/DOM and DCE have been synthesized.

The analysis of all the middleware technologies helps the manager and the network administrator choose the most suitable one for the intranet he is building.

Nowadays, the basic preoccupations in the information technology systems ranges from the orientation towards tasks to that towards support, the change being facilitated by two major elements: the appearance of groupware systems, which support human communication, the collaboration and coordination, and the appearance of the intranet systems, which ensure the effective connectivity on the level of a firm, as well as great power of calculus and storage.

Thus, a few intranet solutions for the SSDG

have been described: the message delivery, the annual of search and news, the videoconferences, the virtual work groups, the instruments for work flows.

The intranets may allow the destruction of the subsidiaries' walls in order to help efficiently carry out the commercial processes. They may also reunite the employees and partners otherwise geographically dispersed, in order to solve a common problem.

The intranet contributes to the organization of the firm group around the "activity community", not only on-line, but also off-line, thus changing not only the work being done in the firm, but also the culture of the group. If there is no impulse from the manager of the group toward the collaboration between the employees of different subsidiaries, for a more efficient activity, the intranet can only have very few possibilities of application and produce limited benefit.

Several strategies are available for the administration of an intranet that includes a largely-spread network. *Some firm groups may choose to have individual divisions, groups or subsidiaries to install, operate and lead their own intranets, thus generating a network of smaller intranets.* Under these circumstances, the cooperation and coordination between different intranet administrators becomes a problem that must be analyzed in detail. On the other hand, the strategy of implementing a unique intranet network for the entire firm may be adopted, though in this case there is higher risk regarding security, soft and hard malfunctions, power cuts, which would affect not only a certain compartment, but the whole group.

Some advantages of the intranet are tangible and can be easily measured, while others are more difficult to define. *In a firm group, before the intranet is implemented, people must know what it is and what advantages it would offer.* Actually, the presentation of the intranet could be a difficult task because the majority of the intranets are not accessible to outsiders. This is why I propose a study regarding the economic aspects of the intranets, and the conclusion would be that a well-structured intranet generates profit rising up

to 2000%.

The use of an intranet allows, in my opinion, the identification of the informational flows that do not exist inside the firm group or that are less developed. The intranet will stimulate these informational flows. At the same time, a vision of the intranet's usage needs to be created, because it would motivate the employees to develop the processes and the activity mechanisms that are necessary to the improvement of the information exchange.

The intranet, by taking over the facilities of the Internet, offers an important potential if compared to other media, given its selectivity, by building the commercial on the profile of the user. Through the intranet, the distributors of the ads can get real-time feed-back, at low costs, and this can be offered by no other media.

The intranet is a marketing medium that requires the observance of specific rules and regulations in order to do business in an efficient way. The on-line marketing has changed completely the traditional methods of commercial spreading.

Intranet's security

In my opinion, when the building of an intranet for a firm group is had in view, several aspects must be considered. The inobservance of the deadlines may lead to the loss of the information's relevance. Consequently, the group's decision centre must find equilibrium between the relative observance of the deadlines and sufficient reliability.

Sometimes, the information's being provided on time means that it is provided before all the aspects of a transaction are known, and this prejudices or harms the information's reliability. On the contrary, if the publication is delayed till the moment when all the aspects are known, the reliability is obviously secured, but the necessary usefulness (the decisions' elaboration being opportune) is not.

Hence the necessity of equilibrium between relevance and reliability, its accomplishment being determined by meeting the users' necessities as far as decision-making is concerned.

The classic formula of certification of the synthesis documents is their offering a faithful image or their representing faithfully the firm's feats, its financial position and evolution. A faithful image or representation of the information can be obtained by obeying the main qualitative standards and by applying relevant accounting norms.

The synthesis situations of the firm groups may suffer if high quality security systems are not implemented and if they do not ensure the best possible quality for the financial-accounting information.

It is very important also to describe the stages of security projection and achievement, the protection methods, the systems of encoding with public and secret keys, the encoding systems based on hash-functions. As for the security models, I proposed solutions for the protection against unauthorized access, solutions for protection and authentication, and solutions for the creation of secure communication channels.

The use of the VPN technology is a solution to the problems related to the tendency of business towards long-distance operating, towards globally distributed operations and towards interdependent partnership operations in which the employees of the subsidiaries must be able to connect to the resources of the mother-firm. The groups must efficiently administrate their resources. In order to offer the employees and the third parties the possibility to connect from a distance to the group's resources, the group must implement a reliable solution for long-distance access.

The main idea is that the intranet is, for the moment, the quasi-perfect answer to all the needs related to the information management and to the team work within a firm or a firm group. It is not a final model (the inventions continue, from the navigation through the Web to the visual navigation towards worlds of knowledge, from the "internauts" to the intelligent agents, who knows), obligatory and unique; it is only the *top of the mountain*. The bond between the intranet technology and the decisional sphere is extremely strong in a firm; but with the spread of the intranets

the firms have come to know the other, less commonly known aspects of this concept, like the direct impact of the new costs that came up as a consequence of the managerial challenges (which, in their turn, were brought about by this communicational environment). In the case of poorly administrated projects, these sums top the limits of imagination... And as in the world of Internet technology *change* is the daily motto, the constant nobody can doubt, one cannot forget that what is necessary and useful today may not be so tomorrow.

In Europe, a study on the implementation of the intranet shows that France is the most reserved country as far as this technology is concerned, while in Germany the situation is the best of all. In Great Britain, the year 2000 was the start of rapid expansion. Of course, these implementations lead to corresponding soft sales. However, the sales of soft for the intranet on the American continent outrun the ones in Europe.

As far as our country is concerned, the last three years seem to have registered some movement regarding the intranets. Some of the foreign banks that have subsidiaries in our country have already implemented an intranet. I succeeded in obtaining some information (confidential, of course) on the respective intranets, from employees of the banks, and what can be said is that, of the few banks that have the intranet, even fewer use it at its maximum capacity or that the intranet's implementation leaves much to be desired. In many situations, the clients are faced with incredibly long queues, which are justified by reasons of connection ("You know, I just can't get connected today!"), so the phone remains the compromise solution. The electronic signature law, adopted in Romania in the year 2001, also deserves a mention here, and it can guarantee, through certain soft, the worthiness of the contact persons and the integrity of the information on the Internet/intranet.

As far as the graphical way of working is concerned, a part of the intranets work with

Websites, others work in text-mode, with programs that start directly, without the help of an interface. Both cases allow the user to work efficiently, but it is important for the user to know what he/she wants to do and where he/she needs to get connected. Under the given circumstances, in which some institutions try to save money and do not invest in computers and software, we may expect to see some employees trying to connect to the intranet 486 computers. Certainly, this is a matter of internal management.

Beside banks, there are several soft firms that have implemented an intranet (it was somehow expected), but they have given up the graphical way of display, and the users of the intranet work in the command mode.

As a conclusion, the intranet becomes a reference point in the conscience of the community that adopted it. Making this effort implies the wish to migrate towards an extremely efficient information distribution instrument, which has the potential of development essential to any company. If, not long ago, only the large firms and the foreign groups could afford such luxury, the introduction of new and easy to use technologies caused the intranet technology to become available to any firm, no matter its dimensions.

I think that a prototype of a group decisions support system for firm groups that is framed in an intranet and founded on the idea that the combination between the management of knowledge and the firms' portal, helps the firms and their employees gather, administrate and access the information that till now has been disparate.

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