Information Network Systems and Information Sharing on Administrative Websites

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Abstract In Japanese “e-government” policy, called “e-Japan”, the "administrative document management system" is functioning as information searching systems. On the other hand, this system has also generated the problem that it is not fully functioning as a means for the information sharing in a governmental agency. So, the purpose of this research is to find how the administrative document management system can function as information sharing in administrative organization. For this purpose, this paper considers the current status and some problems firstly. And secondary, this paper proposes the idea and constructs some information systems using administrative official Website. This is the method and approach of this research. As a conclusion, this proposal information system functioned as information sharing support systems.

Key words information Network; Information Sharing; Administrative Websites; Information Management Systems; Document Management Systems

In order for an organization to attain its purpose, it is required to utilize a variety of organizational resources effectively and efficiently. Information resources are also contained. Therefore, information also needs to be effectively utilized all over an organization. Furthermore, in order for the information resources to function effectively, it is also required to be shared in the inside of an organization. And more, for information sharing, the role of the information network in an organization is also important.

As in the case of company, information sharing is indispensable in a municipal corporation. However, in many municipal corporations, information is not shared in fact. First reason is each section of a municipal corporation functions independently. The second reason is the situation that each section is seldom using the information on other sections. The third reason is that there is no recognition that information is organizational resources primarily.

Furthermore, it also has many problems about information network in a municipal corporation. The first problem is that the information network have just established. The second one is that the usage of network is not fully established. The third problem is that the information network is seldom used primarily.

So, this paper takes up municipal corporations as an example of an organization. And the consideration will be added between the information network and the information sharing in municipal corporations. The purpose of this research is to find how the administrative document management system can function as information sharing in administrative organization.

The research method is based on the following procedures. In the first place, the present condition about the information network in municipal corporations is summarized, and the problem to it is pointed out. And in the second place, the present condition about the information sharing is summarized, and a problem about it is pointed out. Thirdly, the relationship between information network and information sharing is described. And fourthly, the support system for the information sharing which utilizing the official website is considered.
And finally, the result of this research is considered.

1 Administrative Information Network: Current Status and Problems

In advance of all researches, the present condition and the problems of an information network system in a municipal corporation will be considered here.

1.1 Current Status of Administration Information Network

In electronic-government policy (e-Government), so called "e-Japan", or an electronic-local-government (e-Local Government) policy, the role of the information network is large. Moreover, There also exist with the great expectation for the information network of the people or a local resident [1].

Firstly, I will consider the environment that surrounds a municipal corporation [2]. Administration service broadens in today's consolidation of municipal corporation days. Therefore, an information network also needs to be broadened and be very important.

From such a background, the information network of a municipal corporation spread quickly. However, printer sharing, file sharing, etc. are main usage of the information network in a municipal corporation (refer to Tab.1).

From such the present usage, it can be said that the information network of a municipal corporation is not fully utilized.

1.2 Problems on Administration Information Network

Next, the information network for the information sharing in a municipal corporation is considered. Especially, it thinks focusing on the problem in the case of an information sharing. The big problem about the information network for an information sharing is the following two:

1) Un-existing of information search system;
2) Problem of information security.

It thinks from the first problem. Now, many of information networks of a municipal corporation are mainly used for office connection (refer to Tab.1).

First of all, in order to utilize the information resources in a municipal corporation effectively, the information search system for specifying information is indispensable. This information search system needs to be able to search all the information of a municipal corporation. However, there are seldom many municipal corporations that hold the information search system with which all information can be searched. Many information search systems of a municipal corporation are only reference to a part of information of a governmental agency.

Such a limitation information search system cannot turn into a search engine for an information sharing. Therefore, the information sharing in a municipal corporation cannot be attained, either. Since it is such, the information search system in a municipal corporation should enable it to search all information. For that purpose, it is required to input into database systems all the information firstly that the municipal corporation holds. Next, you should enable it to search all of the information by utilizing this database.

So, next thinks the second problem. The second problem on an information network is an information security. In the case of a municipal corporation, you have to take into consideration the confidentiality of information looked at by Local Public Service Law. That is, the information held in the municipal organization has many which cannot be used in

<table>
<thead>
<tr>
<th>Tab.1 Function in administrative LAN</th>
<th>(Unit: %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefectures</td>
<td>City, Town, Village</td>
</tr>
<tr>
<td>Printer sharing</td>
<td>100.0</td>
</tr>
<tr>
<td>File sharing</td>
<td>100.0</td>
</tr>
<tr>
<td>E-mail</td>
<td>100.0</td>
</tr>
<tr>
<td>E-bulletin board</td>
<td>100.0</td>
</tr>
<tr>
<td>Intranet</td>
<td>97.9</td>
</tr>
<tr>
<td>Schedule Management</td>
<td>89.4</td>
</tr>
<tr>
<td>Institution Managements</td>
<td>83.0</td>
</tr>
<tr>
<td>Document Management</td>
<td>76.6</td>
</tr>
<tr>
<td>E-Conference</td>
<td>66.0</td>
</tr>
<tr>
<td>E-Sanction</td>
<td>31.9</td>
</tr>
<tr>
<td>VoIP correspondence</td>
<td>17.0</td>
</tr>
</tbody>
</table>
addition to the original purpose. It is important whether the one information can use it for multiple purposes. Moreover, the judgment standard of whether to be able to use the one information for multiple purposes is also important. Furthermore, it is important that who performs the judgment. The problem on such an information security remains.

When the information network from one municipal corporation to the exterior exists, the further problem occurs. That is, it is the problem of the information leak to other corporations. Administrative information is flowing out of many municipal corporations. Especially, the newest cautions are required for the handling of the personal information in a municipal corporation. In the present municipal corporation, the personal data protection system is enacted for protection of personal information. Information security problem is also important from the meaning of this system [3].

2 Administrative Information Sharing: Current Status and Problems

The present condition and the problems of administrative information sharing in a municipal corporation will be considered here.

2.1 Current Status of Administration Information Sharing

Now, the personnel of a municipal corporation came to create and collect a huge quantity of information day after day. Thus, too much information came to be accumulated in a municipal corporation. Accumulated information has been saved in the municipal corporation traditionally at the each department in charge. This is because each role in municipal organization is defined clearly. As for the information in a municipal corporation, the person in charge of the office work mainly performs creation, acquisition, and handling. As a result, the personnel in charge will save the information on past relative job.

2.2 Problems on Administration Information Sharing

The new problem occurred as a result of present condition described previously. Two big problems about the information sharing in a municipal corporation are as follows:

1) Information resources management (IRM);
2) Information management by individuals.

It thinks from the first problem. The problem of this information resource is how to utilize the information which the municipal corporation collected. In the process of many activities in municipal organization, created and acquired information should be effectively utilized also in other administration activities. This is because it is common for the effective information for a certain activity to be also effective in other practical use. On the other hand, the information in many municipal corporations is not shared.

One of the reasons that information sharing does not progress in the municipal organization can be considered that the effective intelligent information management system does not exist in a municipal corporation. Since such an intelligent information management system does not exist, each piece of information is managed independently. Consequently, it may be happened that without recognizing such a useful information. When an effective intelligent information management systems functions, the information in a municipal corporation becomes possible to be utilized freely in an organization. Therefore, in order to share information in a municipal corporation to progress, an effective intelligent information management system is indispensable.

The second problem is considered. As for this problem, information resources are individually managed by the personnel in charge. Such a situation starts the problem of business inefficient nature. Specifically, the office work at the time of a person's in charge absence will not advance by carrying out individual management of the information. Furthermore, even the informational whereabouts becomes unknown at the time of a person's in charge absence. Such a situation will contain problems, such as business inefficient nature, before considering effective use of the information resources in a municipal corporation.

The evil by information being managed
individually is serious in this way. In order for the information in a municipal corporation to serve as resources of an organization, it is indispensable to improve management by the individual of such information.

3 Relation between Information Network and Information Sharing

Here, the conditions for the information of a municipal corporation being shared are considered. Specifically, it considers what requirements are called for from the information system of a municipal corporation.

3.1 Mutual Information Network Systems between Municipal Corporations

It thinks first from the information network system that connects a municipal corporation and other municipal corporations. Among municipal corporations, the comprehensive administrative network, so called local government wide area network (LGWAN) has already built. This is a network only for administrative use that connects a municipal corporation mutually as shown in Fig.1.

![Fig.1 Image of LG-WAN](image)

This LGWAN connects LAN of a municipal corporation mutually. Furthermore, this information network is improved as a network that enables advanced information circulation. Mutual communication of a municipal corporation is attained with using this information network. Furthermore, the information sharing between municipal corporations is also attained. Furthermore, the information sharing with each government agency is also possible by connection with “Kasumigaseki WAN”, called “K-WAN”.

3.2 Information Network inside Municipal Corporation

Next the information sharing inside of a municipal corporation is considered. As thought so far, in order to make information sharing in a municipal corporation, the network of an information system is indispensable. In the case of a municipal corporation, LAN in the municipal corporation will be utilized. When the problem on security is solved technically, an information sharing will progress by utilizing the inside LAN.

And more, important thing is what kind of information system should be worked on an information network. It is actually difficult to manage on a network all of the information that the municipal corporation holds. Therefore, it is effective to manage on a network the database in which the informational contents are shown. Moreover, this methodology is also realistic problem solution.

Let the information disclosure table, called administrative document management system (ADMS) specifically created by the official information disclosure system be administrative information databases. All of the information held by an organization is databased with the information disclosure table. Therefore, this database functions also as an information search system. An ADMS can record all of the held information on a database from a creation stage.

Therefore, when promoting information sharing, it is required to utilize the ADMS that can be databased from an informational creation stage. Furthermore, this ADMS is important also for utilizing the inside LAN.

Consequently, information sharing in a municipal corporation is attained. Furthermore, discovery of the new knowledge in a municipal corporation is also attained.
4 Construction of Information Sharing Support System Using Official Websites

For which has the influence of an e-local government policy, today’s many municipal has built the official homepage (H.P.)[6]. However, the organization who is building HP as a sharing measure of the information in a municipal corporation is not so much. According to the document management guideline of the Ministry of Public Management, Home Affairs, Posts and Telecommunications, the document table accompanying enforcement of an official information disclosure system is said that it should be managed on network systems [5]. When this is taken into consideration, the way a user can use a document table on formal HP is desirable.

Next, an actual example of information sharing in a municipal corporation is considered. There exists the municipal corporation that is utilizing the ADMS for the formation of information sharing in a municipal corporation [6]. This municipal corporation uses the official website as an information network for an information sharing. As a result, the information sharing is attained by working an ADMS on an official website.

![Information sharing support system](image)

So, next consider this municipal corporation’s example of HP. In an official HP of this town, it can move from a “Top Page” to a “Document Table.” On this page, the information search by keyword of a maximum of five affairs is possible. An administration database is searched with this information system. When the document folder in which the keyword is contained exists, the total number of cases, a document generating fiscal year, a jurisdiction department, a document classification (big and medium classification), and a document folder name (small classification) are displayed as a result of document table reference. Furthermore, by inputting more keywords, it can narrow down and reference can be carried out (see Fig.2).

In checking the concrete contents of the specified document folder name as a result of reference, it double-clicks a document folder name. Consequently, the concrete contents of document information can be grasped. Here, not only the classification system of document information but a creation department, a maker, a creation fiscal year, a preservation period, the kind of media, a preservation place, etc. are recorded as informational contents (see Fig.3).

It is possible to build the information sharing support system which utilized the official website by the above method. By this method, the information search system for the information sharing is built not only to each municipal corporation personnel but to a local resident and also a global user. Moreover, this method is considered to be the information sharing methodology that utilizes the information network. Furthermore, this method can change with the means
for realizing the town planning and the opened administration of the citizens' participation in municipal affairs cried for today. Moreover, it is thought that it is connected also with the main object of local autonomy.

5 Conclusions

In this research, many problems about the information network and the information sharing in municipal corporations were considered. Therefore, the present condition of the information network and the information sharing in a municipal corporation was summarized, and the problem was pointed out. Then, the solution over this problem was proposed. That is, the information sharing support system which utilized the official website was proposed. Specifically, the methodology which utilizes an administrative document management system (ADMS) on a formal website was proposed. Furthermore, this solution system for the problems was actually constructed. Then, the effect about this methodology was also considered.

As a result, an information sharing package which utilized the information network in a municipal corporation was proposed. Moreover, this result is also having proposed and enforced the method of using effectively the information resources for corresponding to today's municipal corporation management time.

From now on, the further improvement of an administrative document management system (ADMS) is a subject. Also for the practical use in municipal corporations, consideration of the special feature for the official document is also the next work.

Acknowledgement

I appreciate having obtained support of the administrative division of many local governments and the personnel, and so much cooperation in this research.

References


Brief Introduction to Author

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