

Analysis of the Development of E-Government Information Service in China

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Abstract: The ultimate significance of e-government is to provide information and services to public. This paper provides a comprehensive study and analysis to the current e-government website of all level government in China. Firstly the style of e-government information resources is described. The style is summarized from different aspects. Then the present situation of e-government information services is described. The work can provide a reference for the e-government information resources organization, planning and website construction; also contribute to enhance the level of government information services.

Keywords: E-government; Information resources; Information services.

1. INTRODUCTION

E-government (short for electronic government) is the use of electronic communications devices, computers and the Internet to provide public services to citizens and other persons in a country or region. According to Jong, 2007 the term consists of the digital interactions between a citizen and their government (C2G), between governments and other government agencies (G2G), between government and citizens (G2C), between government and employees (G2E), and between government and businesses/commerce's (G2B). E-government delivery models can be broken down into the following categories[1]: This interaction consists of citizens communicating with all levels of government (city, state/province, national, and international), facilitating citizen involvement in governance using information and communication technology (ICT) (such as computers and websites) and business process re-engineering (BPR). Braham and Goth (2017) interviewed the third party designers of e-government tools in North America about the ideals of user interaction that they build into their technologies, which include progressive values, ubiquitous participation, relocation, and education of the public [2].

Other definitions are more away from technology as an object, to see them simply as facilitators or instruments and focus on specific changes in Public Administration issues, and in the internal transformation of a Government, is the case of the definition that established the specialist technologist Mauro D. Ríos in the paper "In search of a definition of Electronic Government", he says: "Digital Government is a new way of organization and management of public affairs, introducing

positive transformational processes in management and the structure itself of the organization chart, adding value to the procedures and services provided, all through the introduction and continued appropriation of information and communication technologies as a facilitator of these transformations." [3]

The direct connections between a government department and citizens, whether it be in the private sector, the academic world, civil society or NGOs, unions or associations and the individual citizen, eventually creates significant change in a society [4-5]. This change is the transfer of some of the traditional powers of government to groups and citizens in society. This has already been acknowledged by the United Nations and some countries that now recognize NGOs as a significant part of the power structure and decision-making process of organizations or in some cases, countries. This evolution is having long-term consequences as devolved power through the sharing of e-services entails the imparting of information and responses back from the citizen.

E-government has the potential to reduce costs, improve services, and bring transparency, and accountability to government, as well as control fraud and corruption. With the inter-time feature of network transmission, the own characteristics of electronic information resources provides unprecedented conditions to the building and sharing of government information resources [6]. With the implementation of electronic government information resources sharing, it's able to prevent duplication, excessive and improper construction, and gain largest financial interest with limit fund. It's linked to the enterprise, the public entity, the government departments at all levels and other institutions related to economic, cultural, political, legal, social security, management and other services. It can be imagined that they contain rich content and performance records of a variety of forms. Therefore, it is necessary to analyze the basic model and type of the e-government information resources in China, to provide reference to the planning and management of e-government resources, and the construction of e-government website.

2. E-GOVERNMENT INFORMATION RESOURCE TYPE

E-government is a compact, efficient government operation mode which uses the modern information technology in its management and service functions. It realizes the restructuring optimization of the organization structure and the working process, and surpasses the restriction time, space and department division [7]. In China, after the phase of office automation, three gold project and government online project, e-government has entered the system integration and information resource integration phase.

In this paper, we provide a comprehensive study and analysis to the current e-government website of all level government in China, including the Central People's government, the various ministries government, the local government and the embassies abroad [8]. And with reference to other e-government research, come out the following e-government analysis result. China's e-government information resources can be classified from different angles, as is shown in Table 1.

Table 1. The style of the e-government information resources in China

Classification angle	Style of the e-government information resources						
	Information formed in traditional government management	Information formed in e-government					
Forming process	Information formed in traditional government management	Information formed in e-government					
Sources	Upper level information	Parallel level information	Lower level information	Internal information	External information	Social information	International information
Content	Instruction type information	Experience type information	Dynamic information	Question type information			
Information processing depth	Basis information	Processing information					
The date of information	Historic information	Current information	Future information				
information storage	In database	Files documents					

According to the forming process of information resources, e-government resources can be divided into two parts: The first part is those various historical records and documents information formed in the traditional government management activities, including all levels of government promulgated laws, regulations, and policies. This part can be transformed into digital format, and become part of e-government information resources. The second part is the various digital format government information formed in the various e-government activities. Take the e-government website of People's Republic of China Ministry of Commerce as example, we can see the information about policy, notice, industries, and statistical information related to provinces and cities, country, belonging to the first part of e-government resources. This information is usually formed in the traditional government activities. And the information generated by e-government system which exists as digital format belongs to the second part e-government resources, as well as the information resources generated by public message, public mailbox, online interviews, and online survey.

Based on the sources, E-government information resources can be divided to upper level information, parallel level information, lower level information, internal information, external information, social information and international information.

Upper layer information resources refer to those information that come from the upper layer government, including the policy, route line, indication and instruction by center government, and the report by the national leader, and the document, papers and clippings instituted by upper layer government. Normally the upper layer information is regarding policy and instruction. Parallel information refer to the information that are among the same layer governments, including the work status, work activities, policies, experience sharing, and the suggestion or criticism between deferent departments. The Ministry of finance and commerce has huge scale information data since they locate the core position of both crosswise and longitudinal departments.

Lower layer information resources refer to those information that come from the lower layer government. Some information, like document, report, work activities and statistic data, will be formed during the works of these departments, and used for decision making by leader stuff.

External information resources are formed by the external activities that related the department, such as the information between generated between same layer government departments, or some other

social association. Government can analyze and compare the external information to find out the policy defect, and institute new instrument.

Social information resources refer to the information to serve population, reflex population's suggestion and requirement, including the survey, mail from citizen, and the information about the society.

International information resources refer to the information from abroad, including the status and trend of world politics and economy, the international market information, the management experience, new technologies and so on.

Take the e-government of Ministry of commerce as example (<http://www.mofcom.gov.cn>), we can see the securities law and bill law of P.R. China, belong to upper layer information resources. The information from other ministry belongs to parallel information resources. The information from local department is lower layer information resources. The information from the internal department of commerce ministry is internal information resources. And the commerce information published by China WTO research institute is external information resources. The information from public mail box, public message and online survey are social information resources. The commerce policies of the foreign country are international information resources.

Based on the content, e-government information resources can be divided to instruction type information resources, experience type information resources, dynamic information resources and question type information resources. Instruction type information resources mainly refer to the policy, rule, and instruction of the e-government. Experience type information resources refer to the statistic data and law of government activities. Dynamic information resources refer to the information that will change and update continuously. The question type information resources refer to the questions need to be solved in the government work. Take the e-government of Ministry of commerce as example still, the information in the policy publishing and work notice are instrument type information resources. The statistics of commerce ministry are experience type information resources. The daily commerce news is dynamic information resources. The articles like "Pay attention to the imbalance of coal" are question type information resources.

Based on the process to the information, e-government information resources can be divided into raw information resources and processed information. Based on the date of the information, e-government information resources can also be divided into historic information resources and current information resources and future information resources. And according to the information storage to division, e-government information resources can be divided into the data stored in the database, or stored as files documents.

3. E-GOVERNMENT INFORMATION SERVICE

In addition to the traditional information display function, e-government is increasingly turning to use information technologies (IT) such as wide area networks and the internet to improve the delivery of information and basic services to citizens and businesses. They are realizing that e-government can lower business costs and stimulate private investment.

We can describe e-government information service as three stages, such as shown in table 2.

Table 2. Three stages of e-government information services

Stage of services	Fuction	Technology
First	information display	database and dynamic web technology
Second	form and documentation downloads, online survey, etc.	interface to internal government office automation system
Third	tax filing, voter registration, application and renewal of passport, job listing and/or application, visa application, complaint submission, application and renewal of driver's license, application and renewal of business licenses, order reports and other documents, grant application, application for benefits, document and trademark filing, etc	Web EDI, extranet

In the first stage, the electronic government website provides information display function. The information technology required of this stage is not high. Only database and dynamic web technology need to be used and the messengers regularly updated website data.

In the second stage, the electronic government web site may provide more services, such as provide form and documentation downloads, online survey, etc. The website construction of this stage needs more technology. In addition to the site itself, interface to internal government office automation system may be needed to provide information interaction.

In the third stage, the electronic government website may provide more advanced services, such as tax filing, voter registration, application and renewal of passport, job listing and/or application, visa application, complaint submission, application and renewal of driver's license, application and renewal of business licenses, order reports and other documents, grant application, application for benefits, document and trademark filing, etc. This stage requires higher technology. Some services for enterprise may need to use Web EDI, extranet technology.

At present e-government websites in China provide the basic service of form and document downloading while the majority of other important services are not available.

4. CONCLUSION

Government information has long been seen as a public good. Dissemination of government information educates the citizenry, increases government transparency, and promotes economic development.

An e-government initiative which encourages citizens' participation in government activities does not only act as participatory tools through which citizens can contribute actively in government but could also bolster the core notion of democracy. Therefore, government needs to create awareness among their citizens through literacy campaigns to make them aware of the benefits of e-government services. Creating awareness is not enough, though. Government and non-governmental organizations need to invest in telecommunication, broadband, and associated technologies that can support a robust e-government infrastructure. They also need to invest in human capital needed to maintain ICT infrastructure to implement e-government services and websites. In addition, government needs to adopt a bottom-up approach in the implementation of e-government services and websites. In other words, they need to encourage local governments to have a presence, perhaps in the form of a local e-Government website, followed by integration at the provincial, state, national, and regional levels.

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