

Breakthrough the short slab during the government website construction: A case study

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Abstract—Web accessibility is attracted by more and more government which is not only required by information equity but also a basic line of a democratic society. The big problem faced our government is how to build an accessible website. The article takes Yangzhou city government accessible website as an example, explain the process of the construction, analyze the method they used and make a conclusion at last, with the hope to enlighten other government website.

Keywords—web accessibility; government website; end user; information-equality

I. INTRODUCTION

The development of information communication technology (ICT) makes the Web becoming one of the basic ways in information's accessing and communicating. Not all of the people can use the information on the Web for some inner factor or some outsider factor. Web accessibility thus comes into being.¹ E-government changed the channel and the way that the government used to deliver their information. More and more government began to deliver their service and information by Web. Some people such as the disability and the old can not use the information from the E-government, which is against the principle of the social equality seriously.

Web accessibility means that anyone using any kind of Web browsing technology must be able to visit any site and get a full and complete understanding of the information contained there, as well as have the full and complete ability to interact with the site.²

Government web site accessibility is the token of the progress of the civilization which embodies the concern of a state to the weak groups. With the improvement of the function and influence of a government, web accessibility will become a key factor in measuring the public service of a government website, which is also a short slab of our government website.

Nowadays, there are many departments of our government begin to consider web accessibility in the construction and maintenance of a website. However, how to construct an accessible government web site is a big problem.

Some websites that claimed them the accessible websites were not pass the examination in the end.³ Why and how this happened? One of the reasons is that the website owners do not know what is meaning of web accessibility and how to fulfill with it. Yangzhou City successfully finished their website construction which involves the web accessibility prosperity. This article takes Yangzhou City government website as an example, to explain the process of the construction, analyze the model they used and make a conclusion at last, with the hope to enlighten other government website.

In April 2011, Information Management Center of Yangzhou city began to the preparation for the rebuilding of the government websites, and at that time government web accessibility became the core of their consideration. After five months investigation, In September, they began to design and develop the websites. Three months later, on December 3, 2011, the new website of Yangzhou city government was finished building and began to try out. The new-built websites passed web accessibility examination. The website improves the efficiency and accuracy for the blind and weak sight group. At the same time the accessibility of the web does not change the style and function of the general web site and does not influence the normal users in browsing the web and access the information.

The whole process of the website construction was divided into four parts: determine the web constructors, training the constructors, develop the accessible website and maintenance of the website.

II. DETERMINE THE WEB CONSTRUCTOR

Web constructor is in charge of design and develops the whole website. Usually during the development of a web, users need not attend in it, for the web developer can well know the common needs and so they can design and develop the web that is easily used by most of the users. Considering the characteristics of Web accessibility, the constructor of the web should know the usage and requirement of the special web user. In reality, most general web developers do not know the special users' habits in using the web and their special needs. So in order to build a successful accessible website, the special users should involve in the website

¹ Zhao Fang.(2011). On the Government Web Accessibility Research in Foreign Country and Its Enlightenments. Library and Information, 2011(4), 53-57.

² Letourneau, C. "Accessible web design – a definition." [EB/OL]. [2014-03-12].<http://www.starlingweb.com/webac.htm>.

³ Zhaofang.(2013) A survey on the government web site accessibility status in China. Archives Science Study, 2013(1), 66-71.

construction. In addition to attend the design and development of the website, the special user should also involve in the process of test and examination. Only the web is accessible for the special user, can the website be accessible for all.

III. TRAIN THE WEB CONSTRUCTOR

Web accessibility is a new field in both theory and practice and it is a new try for both the web developer and user. So before constructing an accessible website, it is necessary to train the web constructor, namely both the web developer and the special user in the aspect of web accessibility.

The goal of the training is to educate the web constructor to know more of web accessibility, with the hope of improving their awareness of web accessibility and then direct them to consider web accessibility actively in the construction.

The contents of the training include three parts, general training for all constructors, technical training for the web developers and the assistant technology training for the special users. The general training is mainly about the basic meaning of web accessibility, the importance of web accessibility, the basic methods in constructing accessible website and some guidelines for web content accessibility. The technology training is mainly about the methods used in realizing the web accessibility, web accessibility testing tools, and special technology used in solving some common web accessibility problems. The assistant technology training is mainly about how to use some screen reader soft wares. Through training makes the user knowing the function of the assistant technology, such as screen reader and can use it freely and then access the information from the website.

Web accessibility is only part of the construction of the whole website, but it is the basic of the whole construction. To consider web accessibility later will add cost in developing and rebuilding. So the best schedule of the training is set before the web construction. Once determine the web constructor, the training should follow it.

IV. DEVELOP THE ACCESSIBLE WEBSITE

The developing of accessible website has three phases: collecting the requirement, strategy determined and developing the website.

The first phase is collecting the requirement. There are two types of users who access the government website. One is the user who provides the information and service through government website, the other is the end user who uses the information and service from the government website. So the requirements should be collected from these two sources. The core of the requirement is from the destine user. The whole web accessibility will include all kinds of users, but usually the web site will solve some problems of accessibility with some kinds of users, such as the blind. After determining the destine user, their special requirements need collect.

The second phase is strategy determined. According the requirements collected from the users, the web owner should make decision in the following aspects. Firstly is to

determine the extent of the web accessibility. Secondly is to choose the platform for delivering the information and service which support the web accessibility. The last one is to choose the web developing technology which is compatible with most explore, operate system and assistant technology.

The last Phase is developing the website. Most websites use content management system to realize sharing the resource, managing the content, exchanging data and centralizing the safe mechanism. Content management is the core of web site development. Only accessible content management system can ensure accessible website. During the development, using standard web technology and obey the standard of web content accessibility are very important. :

V. EVALUATE WEB ACCESSIBILITY AND MAINTENANCE.

During the whole phases of the development, whenever and wherever possible, testing the web accessibility is necessary. User test of course is the best one but is inconvenient for test more times. Assistant technology can be used to test the web easily and can instead of user test. Some special software that used to test the web accessibility is also very useful.

After finishing the development of the website, there should have a web accessibility evaluation. The common evaluation has three tests: auto software test, user test and experts test.

Auto software test has limited capability in testing the web accessibility, but it is easy to use especially to check the whole website. So auto software test is very helpful in analyzing the level of whole web site accessibility. User test firstly choose some destine user and then ask them to answer some check questions. According to their answers, the web accessibility level can be measured. Expert test belongs to manual test, which need the expert, who has rich web accessibility knowledge, to check certain web page one by one.

After synthesizing the results of the three tests above and compared with the standard of web content accessibility it is easy to judge the web accessibility level.

In order to make the website accessibility sustained, the scheduled test is necessary. The scheduled test includes test time, test method and test scope. In some special situation, such as refresh the content of the web page, add new web page, the web should be tested. Footnotes

VI. CONCLUSION

Yangzhou city government website, through all the efforts mentioned above, partly reached web accessibility standard, which level improved greatly than before. It can be easily seen from the different scores of the auto software test. Before rebuilding the government website, the score is 38.07 and after the rebuilding, the score is 94.11. The vast improvement surely certified the method that Yangzhou city government website used in constructing the accessible website is feasible.

During the construction of the website, some problems showed out too. The first one is the homepage of our government web site always contain too much information,

which influence the web accessibility greatly. The second is about the interest of web accessibility is only noticed by few people. Without compulsory law to regulate the web master, few government website will reach the accessibility standard.

In a word, the method of fulfilling the web accessibility is important but the most import is to have all the websites are built into accessibility actively.

The article was funded by The university of philosophy and social science foundation of Jiangsu province, On the web accessibility of China government web sites. (2012SJD870008)

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