CHALLENGES OF INDIAN GOVERNMENT WEBSITE AND COMPLIANCE

Harshali Chaudhari ¹, Nilesh Uke ², Chandrakant Dhutadmal ³

¹Department of Information Technology, ²Department of Information Technology, Pimpri Chinchwad College of Engineering, Pune, ³Centre for Development of Advanced Computing (C-DAC) Pune, India.

ABSTRACT:

Government websites are the first preference to discover information about various Government initiatives. Hence there have been a lot of emphases to make sure that all the Government of India websites complies with certain standard guidelines. Seven years since these guidelines were adopted, a simply 31 of the 957 websites audited were found to be absolutely compliant in step with the newest audit by the Standardization Testing and Quality Certification (STQC) Directorate. But only 3.3% of the websites fully comply with the guidelines. The primary objective of this study is to look at the government websites to evaluate the status of their accessibility and to check whether websites follows Guidelines of Indian Government Websites (GIGW) or not. During this study, our objective is to identify the issues in auditing websites using automated tools and techniques. We have a tendency to additionally make a case for challenges faced in measuring the importance of Indian Government websites.

Keywords: Website compliance, e-Government portal, Web Content Accessibility Guidelines (WCAG), Electronic delivery

[1] INTRODUCTION

Government websites provides additional suitable access to the government’s services and information for citizens and organizations. In other words, e-Governance involves, particularly the internet, to improve the delivery of government services to citizens, businesses and government agencies. It is open to the public sector as well as it includes the management and administration of policies and procedures in private sector. The use of internet delivers the services more rapidly and also brings more transparency among the government and the citizens. For citizens, the government gives right to use their information and services for citizen’s needs fulfillment. Many countries are using web-based services for improvement of government effectiveness along with clearness.

In developing nations like India, where literacy level is near to the ground and most of the individuals are living under poverty line, it is truly not easy for the government to supply its services to such populace by means of internet. For effective use of government website developer should design the website in very simple manner and any one can use that websites
easily without any difficulty. Simultaneously, preliminary expectations about e-government’s life changing potential have undergone an essential assessment. But the distribution of e-government has been slower than usual and the governments are not making complete utilization of the existing technology for reforming governance. Wherever adopted, the impact of e-government has been only cumulative rather than metamorphic.

In India, National Informatics Centre has developed GIGW Guidelines as an initiative beneath the National Portal of India Project. Development of these guidelines occupied a widespread discussion procedure involving representatives from National Informatics Centre (NIC) in addition to various other Indian Government Departments, at the Centre as well as State levels. Established along with standard Guidelines of other countries as well as International bodies like ISO and W3C have also been referred to, while drafting these guidelines. Guidelines present a matrix of 115 compliance items [8]. The GIGW issued in 2009 state 115 metrics to convey in equivalence and uniformity in government websites. As shown in [Figure-1], These 115 metrics are classified into the subsequent nine most significant categories.

Figure: 1. Main Classes of guidelines

**Government of India Identifiers**
The Website is registered beneath "gov.in" or "nic.in" domain. On the homepage ownership information, Emblem/Logo should be displayed. The heading of the homepage be supposed to Complete and self explanatory.

**Building Confidence**
The Website has Hyper Linking Policy, Copyright Policy, Privacy Policy, no "broken links". The Website has an abundant Terms & Conditions declaration, associated from all necessary pages. All electronic commerce transactions are handled through confined way.

**Scope of Content**
The Scope of content can be accomplished by including About us, Schemes, Services, Forms, Acts, Documents, Circulars and Notifications, Tenders and Recruitment, News and Press Releases, Contact us, Presence on the National Portal.

**Quality of Content**
The Department has a Content Review Policy (CRP), Content Contribution, Moderation and Approval Policy (CMAP), Content Archival Policy (CAP) for the website. The words are understandable, straightforward and exempt spelling and grammatical errors.

**Design**
National identity symbols like Flag, National Emblem etc., are in a proper proportion and color. Hindi/local language fonts have been tested on well-liked browsers for any contradiction (loss of layout).
Development
The Website uses Cascading Style Sheets to deal with layouts/styles. The Website is understandable and functional even when style sheets are switched off or not loaded and scripts, applets etc are turned off. Metadata for a page like heading, keywords, portrayal and language is correctly incorporated.

Website Hosting
The Websites are reachable to the predictable audience in a proficient and confined mode that is accessible any time. The Hosting Service provider possesses up to date multi-tier security infrastructure in addition to devices such as firewall and intrusion prevention systems.

Website Promotion
The Website ranks in the first five results on leading search engines when searched with appropriate keywords.

Website Management
Department has chosen a Web Information Manager as defined in the guidelines. The website has a website monitoring policy.

Guidelines are divided into three category viz. compulsory, suggested and voluntary [5][7].

- Compulsory
  The handling of the term 'MUST' be a sign of requirements which can be independently reviewed and which the Departments are supposed to mandatorily comply with.

- Suggested
  The procedure of phrase 'SHOULD' refer to suggested practices or advisories that are considered very crucial and fulfilling but for their plentiful scope and a degree of subjectivity these guidelines would have if not qualified to be mandatory.

- Voluntary
  The convention of the term 'MAY' refers to voluntary put into practice, which can be adopted by a Department if assume to be suitable.

[2] RELATED WORK

The most important center of attention of this paper is to find out issues and challenges associated to e-government Websites This section presents a number of previous studies associated to the issues and challenges to evaluate usability, quality and user-friendliness of different e-government websites.

Websites and portals have emerged as the front end for Government initiatives and companies to convey an assortment of information and services to its customers. Customers have extra expectations associated with security, a privacy of special data and correctness of information. It is therefore imperative to make sure that the management of the website is carried out in an intended and proficient mode, ensuring effective communication and delivery of services. In research [1] there are various web address issues like a privacy of individual information, expediency for the human being who having diverse disability, customer demeanor, e-commerce, and intellectual property. In this paper they dispute on these different issues.

In [2] they used existing web analytical tools online, record of performance considered and reported by this service include size, objects and number of objects (HTML, images,
CSS, scripts), and download times on a 56.6kbps link, a additional online tool http://validator.w3.org/checklink which was develop to decide not working links in the HTML code of the website, Link status (www.linkpopularity.com) is used to found the amount and value of links that are made to a sole website from many websites, while the W3C’s HTML validator (http://validator.w3.org) was used to estimate the HTML code of the websites. Testing by using tawdis tool consist of test for HTML code for detecting whether the webpage can be examine by screen reader, and testing for conscious is there any alternative text for each image, animation, video, and audio in the website. Tawdis software tester can cover up nearly 90% of the item demanded by WCAG as well as GIGW.

The study of estimation of educational Websites in [3], is an computerized tools that worked by snooping the source code of web pages in order to determine the compatibility of web pages with specific approach. This approach may cover typically approved guidelines or guidelines established in a particular society.

[3] ISSUES AND CHALLENGES

In [Figure-2] it illustrates various issues and challenges which take place in development of automated tool.

[3.1] Issues

The various issues related to website compliance are listed below:-

- **User-friendliness for the individual who has different disability:**
  A website should be reachable to every user who has different disabilities. The most significant concern is that website does not easily reach by each user who having different abilities. For this reason different guidelines are recommended by NIC i.e. Guidelines for Indian Government Websites (GIGW).

- **Website Hosting:**
  Guidelines for Indian Government Websites (GIGW) indicate that each and every one government websites must exploit domain names such as gov.in or nic.in. The essential thing is that they should not use any other domain names, for instance .org.in .com, .org etc

- **Make use of Official Email_id:**
  Lots of government member of staff such as superior government officers have their Gmail, Yahoo, Hotmail IDs listed in government websites as their representative emails [4]. Use of such emails, insightful and vital government information is being transmitted and stored on personal servers outside the nation.
Fig 2: Issues and challenges while developing automated tool for validation of website

- Use of Cloud Based System:
While using Gmail, Yahoo, Skype, Google Drive, Google Docs, Amazon cloud, Facebook, Twitter, Google Maps etc. precautions would apply regarding sensitive and confidential government data or citizen private data [4].

- Immoral damage:
A website may cause harm to a site’s user. A site may host a virus that deletes information on the user’s workstation. In this case, the site operator may be responsible for inattention.

- Intellectual belongings:
The content, blueprint, functionality, and domain name of a website may be protected by intellectual property (i.e., copyright, trademarks, and patents). A website has to defend its personal intellectual property [1].

[3.2] Challenges
The challenges to solve above defined issues are listed below:-

- Websites not accessible to varied strata of audience
Various websites of Indian government are not accessible by persons who have different abilities. Most of the websites does not have option (i.e. alternate text) for the non textual content like image or emblem so that screen reader is not capable of identifying that type of content; this is major challenge in website implementation [6].

- Inconsistent design and layout affecting government identity
Many websites are not properly designed, this thing may affect on government identity. For example, if any website whose emblem is not on its specific position or a website uses old emblem instead of new ones then it may arise question mark on that website so no one can trust on the website due to its improper design [6]. Another challenge is Screen contrast which is very poor so contents are not properly visible to a user.

- Citizen centricity is not a priority
The website is design in that way that it should be easily comprehends to every user. Every ultimate website has first precedence that it should be citizen centric; to accomplish this website should be design in very trouble-free approach.

- Helper applications may not be available/may not help at all
Many Government websites does not have help application so if user has query then it does not solve within that site. If website content help application it is not as much as useful for user, proper information is not available on that help application.

- **Navigation is hard**
  Website content links for going to a further page but many times page not found error arise so that it is also important that link should not be broken links. To recognize broken links and eliminate that broken link is also tough task. Ideal website should not content broken links on their page.

- **Availability of keyboard and mouse limited**
  Virtual keyboards are essential while accessing any website for avoids keystroke logging attack but a large amount of the government website does not offer this capability. Due to limited accessibility of keyboard and mouse, a website accessing is tough.

### [4] CONCLUSION

In this paper main focus is on a variety of issues associated with e-Government websites. Issues i.e. provision of security to insightful information of government as well as citizens from cyber attacks, accessibility of website from different strata of an audience, strict use of domain name which is permitted by NIC. Also highlight various challenges to resolve particular issues while developing an automated tool for compliance. There is still issue and challenges to be conquered in the field of website legalization.

### REFERENCES

4. [https://www.maharashtra.gov.in/site/upload/WhatsNew/Advisory%20dated%20300913.pdf](https://www.maharashtra.gov.in/site/upload/WhatsNew/Advisory%20dated%20300913.pdf) [Online]
5. [http://guidelines.gov.in/#&panel1-3](http://guidelines.gov.in/#&panel1-3) [Online]
6. [www.localisation.gov.in](http://guidelines.gov.in/#&panel1-3) [Online]