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Muhammad Nawaz

### 31. E-government Services Maturity Model with Automated E-services Evaluation/Verification tools

#### Abstract

“E-Government”, refers to the use of Information and Communication Technology (ICT) by government agencies. Like Wide Area Networks, the Internet, and mobile computing that have the ability to transform communications with citizens, businesses, and other arms of government. This technology can provide a variety of services with better delivery of government services. The resulting benefits are eradicating corruption, increased transparency, greater convenience, revenue growth, and cost saving.

Traditionally, the interaction between public and a government took place in a government office. With emerging information and communication technologies it is possible to locate service centers closer to the public. Such centers may consist of an unattended cubicle in the government agency, a service cubicle located close to the public or virtual service by use of a computer at home or in office more friendly.

During the course of research, existing e-government services in Pakistan overviewed with the perspective of their usability and interaction abilities. Some mature e-government services were found but these services still fails to offer real citizens centric services like online payment, obtain a new connection for public amenities without visiting their office, have CNIC without visiting CNIC centre in person, get solve grievances and complaints online etc. Electronic government directorate presented a website with some basic levels training but this directorate fails to up-lift the standard of Pakistan e-government services like other developed countries.

Discussed e-government services are developed by out sourcing e-government projects. The limitation of out-sourcing the software development is the lack of support or future changes required to be implemented by the government. As soon as the outsourcing company winds up its business, the new outsourcing company does not accept the previously developed software and it requires software to be developed altogether from scratch.

In house development of projects is usually done by the permanent staff members, as and when they complete the project, they start planning to improve further because employee take interest

to develop public centric services for which they are compensated in the shape of appreciation promotion and other monetary benefits. Another important reason of inefficient e-government services is lower salary package of I.T professionals in government sector.

Present need is to initiate the culture of in house e-government services development. In Pakistan government, there is no concept or provision of in-house development.

Pakistan is at No.136 on the ranking of e-government services in the world [0]. Situation existing on paper is looks up to the mark; every tier of government related to ICT is fully functional but still fail to facilitate public because e-Government Services in Pakistan are being developed in an adhoc fashion without following any road map that could help to analyze the causes of their failure in meeting the public requirements. In this research we present a road map for Pakistan an e-Government Services which evaluate e-Government Services and identify why their e-Government Services fail to help citizens. An automatic evaluation tool of coherent services also identifies their status of maturity and reasons of the failure to meet public requirements.

In this research, we proposed a four staged model to evaluate the maturity of e-government service. Furthermore, to evaluate the presence of some parameters of an e-service we used a tool named Black Widow. This is an automatic evaluation tool we provide a URL and Black Widow crawl throughout the website and report all the errors, threads, broken links, used e-mails etc. But Black Widow does not tell us the level of maturity of a website. Perhaps we may say Black Widow is only a verification tool.

To evaluate the level of maturity of a website, we have used two different ways; first one is manual evaluation and second one is automatic evaluation by developing a tool named “e-government evaluation and verification tool”. This tool evaluates the proposed level parameters and calculates the level of maturity. Preliminary, this tool enables us to check the maturity level of a page by verifying predetermined parameters. The parameters developed by using scripts. The development of intelligence test is further needed. The intelligence-tests like hit counter used by the third party, java applet or php etc.

In this maturity model, four levels of maturity are outlined while complete structure of level-one is proposed with detailed parameters and attributes. Integration of the used tools is yet required and to develop the remaining three levels for the complete functionality.

Some open issues also exist like integration of the used tools is yet required and to develop the remaining three levels for the complete functionality. The development of intelligence test through “e-government evaluation and verification tool” is further needed. The intelligence-tests like hit counter used by the third party, java applet or php etc.

We have concluded that the impetus for thinking towards public sector's online operations promise dramatic declines in the cost and time. Public sector sought new ways to improve organizational efficiencies, better approaches for managing information technology and the emergence of e-government services promised state of the art public service delivery. This has potential to address some of the key barriers and challenges to face global competition for future growth. It also has capacity to create unprecedented possibilities for sustainable economic development.