Core web engineering principles for developing

Technology, Development

Abstract -? developing a web application is not as straight forward as it seems to be. It Is seen that development of web based system Is lacking a systematic approach. Stakeholders most of the time are not satisfied with the progress of system. As web dependency has increased rapidly in a very few time, its reliability and performance has now become a big challenge for web developers. To cope with this all, there Is a need to follow a universally used systematic approach based on effective scientific, engineering and management principles.

In order to avoid a possible Web crisis and achieve greater success in development and applications of complex Web-based systems, there is a pressing need for disciplined approaches and new methods and tools for development, deployment and evaluation of Web-based systems. Importantly, such approaches and techniques must be observed 1) The unique features of the new medium. 2) The operational environments 3) Scenarios and multiplicity of user profile.) The skills and knowledge of the people building Web-based Systems. These results as the additional challenges to Web-based application development 1) Ad-hoc Development 2) Early systems were often developed in a rather muddled and haphazard manner, relying entirely on the skills and experience of the individual staff members performing the work. Today, many organizations still practice Ad-hoc Development either entirely or for a certain subset of their development (e. G. Small projects).) The Software Engineering Institute at Carnegie Mellon University points out that with Ad-hoc Process Models, " process capability is unpredictable because the Schedules, budgets, functionality, and product quality are generally inconsistent. Performance depends on the

capabilities of individuals and varies with their innate skills, knowledge, and his motivation. Quality Function Deployment SF is a method for answering important questions during the requirement analysis, architectural design, technological assessment and implementation planning.

In the absence of a disciplined approach to Web-based system development, we will find sooner or later that Web based applications are not delivering desired performance and quality, and that development process becomes Increasingly complex and difficult to manage and refine and also expensive and grossly behind schedule. Web Engineering, an emerging new discipline, advocates a process and a systematic approach to development of High quality Internet- and Web-based systems. In a broader perspective web engineering can be defined as: Web engineering is the establishment and use of sound scientific, engineering and

Management principles and disciplined and systematic approaches to the successful development, deployment and maintenance of high quality Web-based systems and applications. Web engineering principles and approaches can bring the potential chaos in Web- based system development under Control, minimize risks, and enhance Web Engineering: A Multidisciplinary Field Building a large, complex Web-based system calls for knowledge and expertise from many different disciplines and requires a diverse team of people with expertise in different areas.

Web engineering is multidisciplinary and encompasses contributions room diverse areas: systems analysis and design, software engineering, hypermedia/ hypertext engineering, requirements engineering, human-

computer interaction, user interface, information engineering, information indexing and retrieval, testing, modeling and simulation, project management, and graphic design and presentation. Contrary to the perception of some professionals, Web Engineering is not a clone of software engineering, although both involve programming and software development " While Web Engineering uses software engineering principles, it encompasses new approaches, methodologies, tools, techniques, and guidelines to meet the unique requirements of Web-based systems. As previously stated, development of Web- based systems is much more than traditional software development. There are subtle differences in the nature and lifestyle of Web-based and software systems, as well as the way in which they're developed and maintained. Web development is a mixture between print publishing and software development, marketing and computing, between internal communications and external relations, and between art and technology' Conclusion: From all the above discussions and facts, it is hence concluded that web based systems which are build by using a strong inbuilt approach are much more reliable, efficient and their performance is far better than those systems which are build by using dados approaches.